



ASSUMPTION UNIVERSITY

CAD / CAM FOR SUSPENSION ASSEMBLY MANUFACTURING

by

MR. PRAKIT TEACHABURANATEPAPORN

Final Report of the Three - Credit Course
CS 6098 System Development Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer Information Systems
Assumption University

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PROJECT TITLE : CAD/CAM for Suspension Assembly Manufacturing

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The Graduate School of Assumption University had approved this final report of the three-credit course, CS 6398 System Development Project, Submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer Information System.

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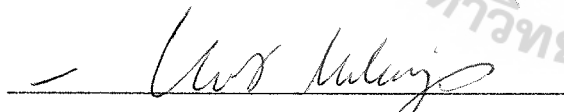
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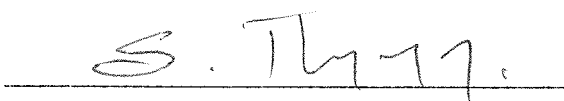
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October 1992

ABSTRACT

Suspension assembly manufacturing operations make commitments to their customers regarding the quantities of specific products they will produce and deliver by certain dates at a stated cost and level of quality. For a company, to compete in today's modern Industrial environment, its manufacturing operation must not only meet its current commitments, but it must also continue to improve its performance. For example, to improve manufacturing efficiency is to shorten production cycle times and increasing the use of equipment. It must be under control, continuously monitored and analyzed for opportunities to make improvements. This is required a lot of data handling for control and analysis. This is why the computerized information system is such a critical tool.

The computerized areas are creation and maintenance of customer's products, die set and packaging information. CAD/CAM software packages can increase the productivity of Engineering designers and speed up the process of product development, and numerical control (NC) tools control programs.

The new system would provide on-line queried response, increase productivity of the designer, reduce time of designing to manufacturing, lower designing and production costs, and improve control of design changes.

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1. INTRODUCTION

1.1 BACKGROUND

Precision Co., Ltd. is a vertical integrated volume manufacturer of suspension assemblies of hard disk drives and other precise metal parts. It is three shifts operation, provides employment for more than 350 workers.

To improve a manufacturing operations constantly, the emphasis is on the R & D Engineering and Machine shop department. The existing system of R & D Engineering is processed by manual. The main function of the R & D Engineering department is designed product, product development and cost analysis, but there are many complaints of its efficiency from its interaction with other functional areas such as Production and Machine shop department.

While the problem of Machine shop department is the limited capability of machine and tools which operated by manual. Most designed tools, die sets and jigs take much time in production and modified by vendors.

This system development project propose a computerized system which addressed the R & D Engineering and Machine shop department problems in handling and processing customer's products data and applies CAD/CAM application software in order to improve the manufacturing operations. Thus, the project will investigate the possibility of its utilization in undertaking a feasibility study.

1.2 OBJECTIVES

The objectives of this system development project are :-

- To design the computer based system of the R & D Engineering and the Machine shop department.
- To select CAD/CAM application software to support the R & D Engineering and the Machine shop department.

1.3 SCOPE

The scope of this project includes;

1. Analysis of the existing system of the R & D Engineering and Machine shop department.
2. Designing and implement a new system for computerization to support specific R & D Engineering and Machine shop department.
3. Cost/benefit analysis.
4. Analysis CAD/CAM application software for economic cost comparison.

1.4 METHODOLOGY

The methodology use during the analysis stage follows the structure analysis techniques while the detailed system design combines both the structured and traditional design techniques.

(Gantt chart of the project study is shown on Figure 1-1.)

| PROJECT PLAN | MONTH NUMBER | | | | | | | | | | | | | | | |
|--|--------------|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|
| ACTIVITIES | 1 | | | | 2 | | | | 3 | | | | 4 | | | |
| | 7 | 14 | 21 | 28 | 7 | 14 | 21 | 28 | 7 | 14 | 21 | 28 | 7 | 14 | 21 | 28 |
| 1. Problem Definition | | x | x | | | | | | | | | | | | | |
| 2. General information on area under study | | | x | x | | | | | | | | | | | | |
| 3. Understanding existing system | | | x | x | | | | | | | | | | | | |
| 4. Define new system requirement | | | | | x | x | | | | | | | | | | |
| 5. Request for proposal from vendors | | | | | | x | x | x | | | | | | | | |
| 6. Design new system | | | | | | | x | x | x | x | | | | | | |
| 7. Design system control | | | | | | | | | x | x | x | | | | | |
| 8. Economic cost comparision | | | | | | | | | | x | x | x | | | | |
| 9. Programming & testing | | | | | | | | | | x | x | x | | | | |
| 10. Preparation of the final report | | | | | | | | | | | x | x | x | x | x | |

Figure 1-1. Gantt chart of the System development project plan

2. EXISTING SYSTEM

2.1 BACKGROUND OF THE ORGANIZATION

There are Finance & administration vice president and Manufacturing & production vice president to assist the president. Finance & administration VP. is responsible for financial control, investment project, accounting and marketing & sales. Manufacturing & production VP. is responsible for quality assurance, production control, production, R & D Engineering and Machine shop.

The R & D Engineering department manager is responsible for the designing and development to support production department.

The department responsibility is covered to cost analysis and customer support.

Machine shop department is responsible for the machines, tools, design and fabricate to support production department.

The detail of the existing of R & D Engineering and Machine shop department sub organization is illustrated on the Figure 2-1.

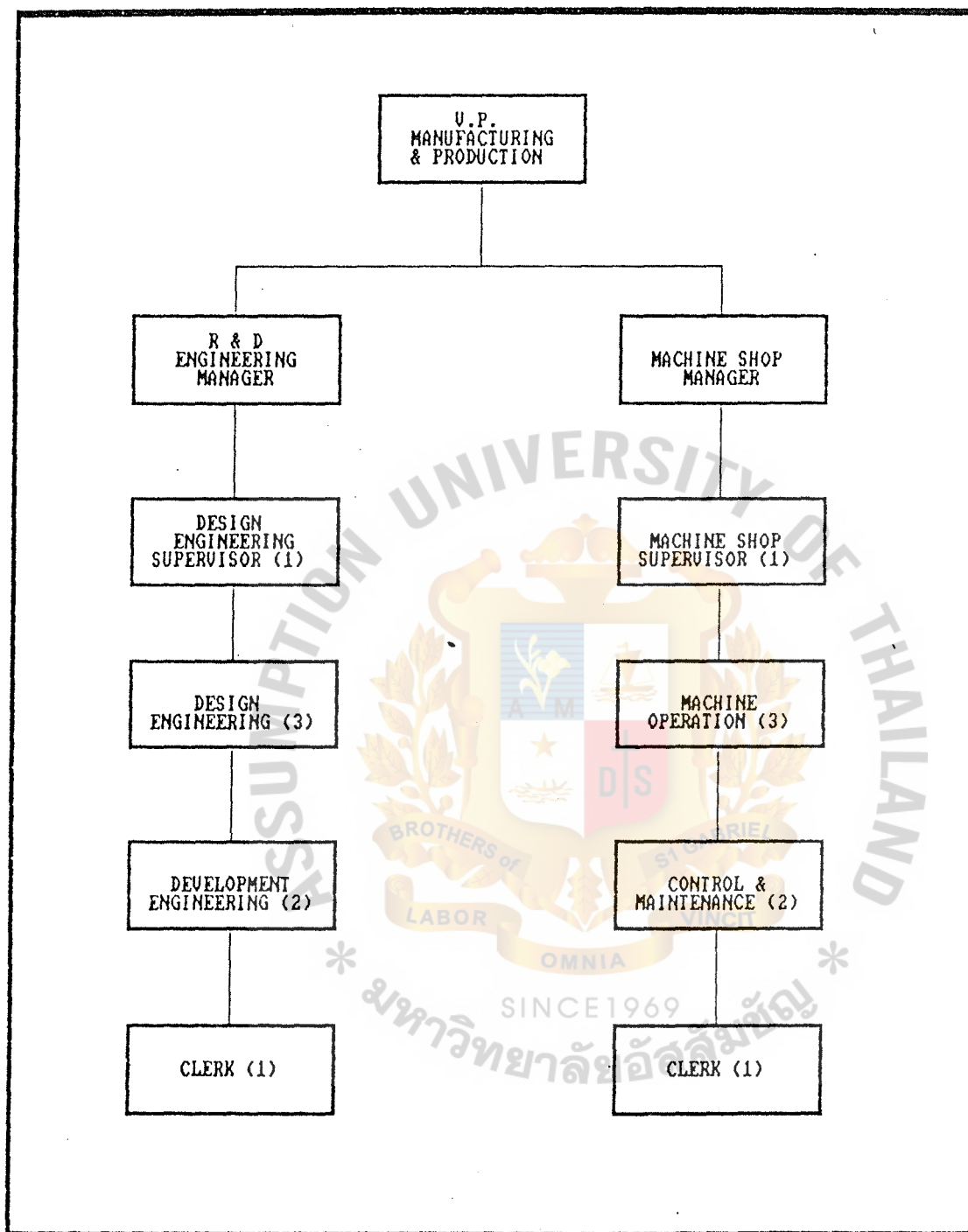


Figure 2-1 Sub-organization chart of PRECISION CO.,LTD. (existing system)

2.2 EXISTING FUNCTION

R & D Engineering's main function :-

- Cost analysis and estimation.
- Production design and development.
- Control customer's technical information and drawing.
- Test and inspection the designed products.
- Provide customer service.

Machine shop's main function :-

- Design and development tools and die sets.
- Cost analysis to the customer's die set and tools
- Control and provide technical data to the vendors.
- Test and inspection of the die set and tools.
- Cost analysis and estimation

After sales department get new drawing and specification of products from the customers. They have to pass them to R & D Engineering department, R & D and Machine shop managers will verify the specification and estimate the cost of precise die sets, jigs and accessory tools for the mass production of the new products. Then they send details of the cost estimating and list of precise die sets, jigs and tools to sales department.

- Design and development

If the customers accept the cost estimating, R & D Engineering manager will assign job to design engineering supervisor for development. Design engineering supervisor and his engineers will develop as following :-

- Part of product.
- Assembly parts of the product.
- Die sets for stamping arm, gimbal and plate.
- Jigs for welding.
- Precision tools for measurement.

They will send all details of draft drawing to redraw and proof until it is all correct.

(Interview Notes are shown on Appendix A., and R & D Engineering's procedure is shown in Appendix B.)

- Design and develop the die sets and tools

Machine shop have to support R & D Engineering and Production department as following :-

- To fabricate and modify die sets, jigs and tools which machine shops has the capability to support.
- To support purchasing section to verify quotation and select new vendors.

In case that Machine shop have the capability to fabricate or modify die sets, jigs and tools, R & D Engineering department will issue requisition order and attach drawing and specification for their reference. Machine shop supervisor will verify the order, drawings and specification, then he will order raw material and fabricate die sets, jigs and tools according to the drawings and specifications. When they finished these precise tools, they will recheck all critical dimension before delivering to R & D Engineering department.

(Machine shop's procedure is shown on Appendix B.)

2.3 EXISTING INFORMATION SYSTEMS

The existing information system in the R & D Engineering and Machine shop are almost all manually operated.

(Context diagram and data flow diagram logical model of existing system are shown on Figures 2-2. and 2-3.)

2.4. CURRENT PROBLEM AND AREA FOR IMPROVEMENT

This section addresses problems related to the current operations at R & D and Machine shop department. The problems are analyzed and categorized into the following areas :-

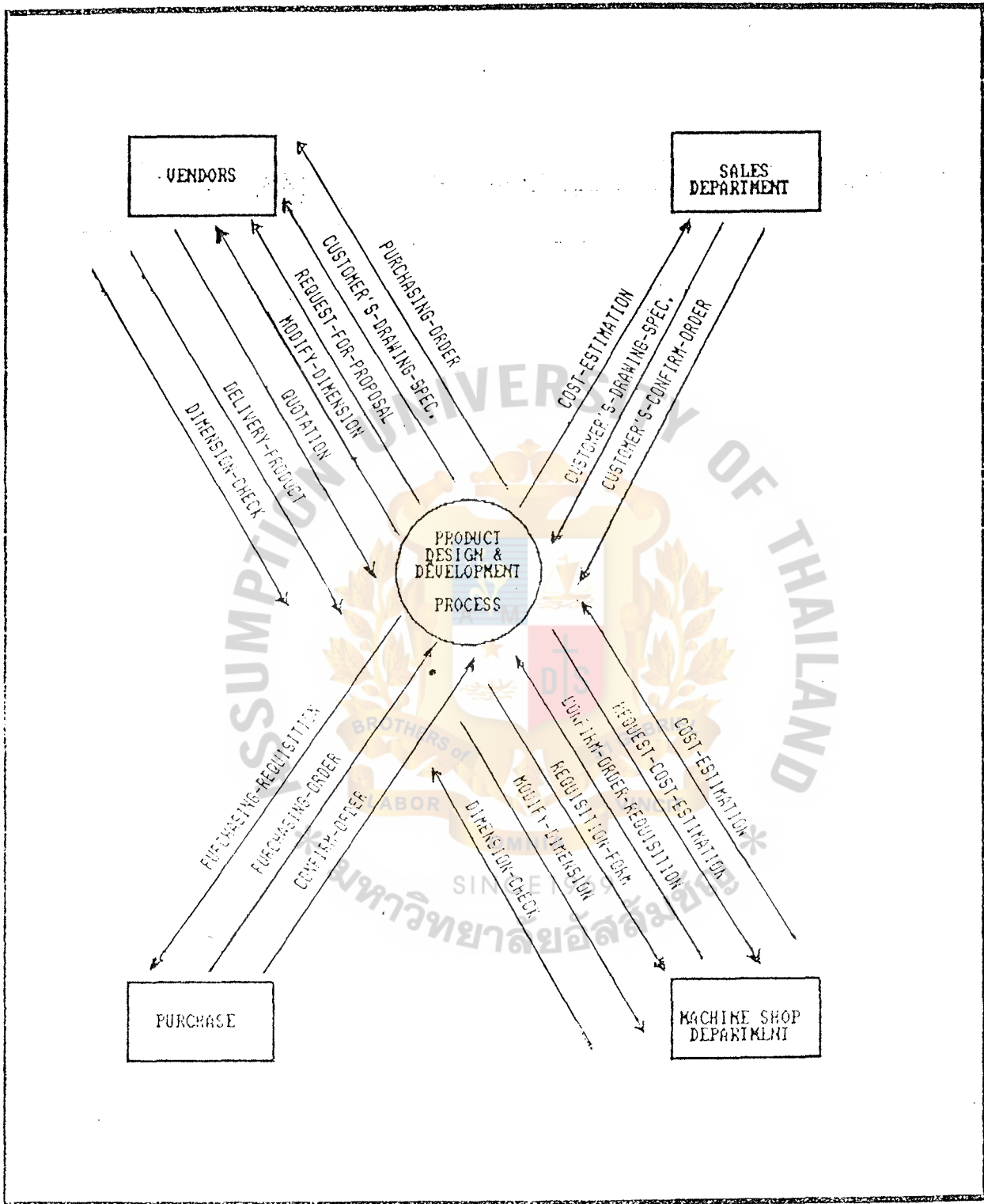


Figure 2-2 Context diagram product design and development processing system (manual system)
(existing system)

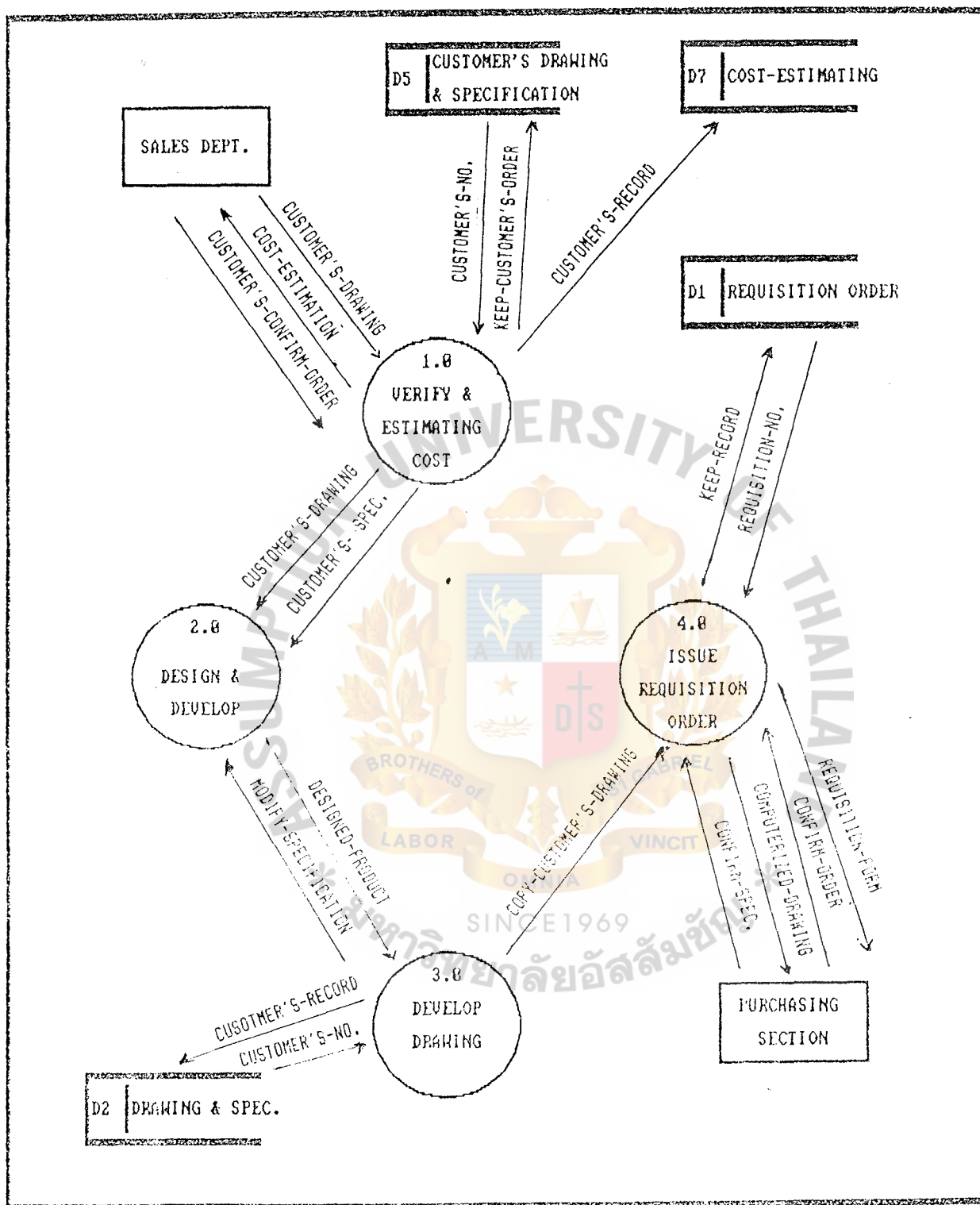


Figure 2-3 Data flow diagram of design and development process by R&D Engineering and Machine shop department (existing system)

- Lack of ability to share customers' information within the interaction department. The current system does not provide immediate access or share required data between interaction department such as Accounting, Sales and Purchasing department. Sometime they are neglected of updating information system.
- Increasing work load and costly action on the drawing job. Engineers and draftsman have to design and draft the drawing by manual. To correct and redraw again, it takes much time and costly action.
- Lack of ability to support to interaction area of the Machine shop. It has limit capability of machine and tools, thus most of the precise die sets, jigs and tools have to hire vendors to produce. They could not complete their jobs on time.

(Problem reports form are shown on Appendix C.)

3. THE PROPOSED SYSTEM

3.1 USER REQUIREMENT

The main objective of the proposed system is to assist R & D Engineering and Machine shop in the computerization of its work using appropriate software and hardware to achieve the following

- To design customer's information system to support R & D Engineering and Machine shop department.
- To computerize the design and drawing of customers' products.
- To computerize the development of Customers' die sets, jigs and tools.
- To generate the required periodic reports.

3.2. SYSTEM DESIGN

The proposed system will introduce the use of stand-alone computers, design and appropriate software to manage the customers' products information system, computerize design & development drawing, and Numeric computer programs for R & D Engineering and Machine shop department.

(The data flow diagram logical model of new system is shown on Figures 3-1. and 3-2.)

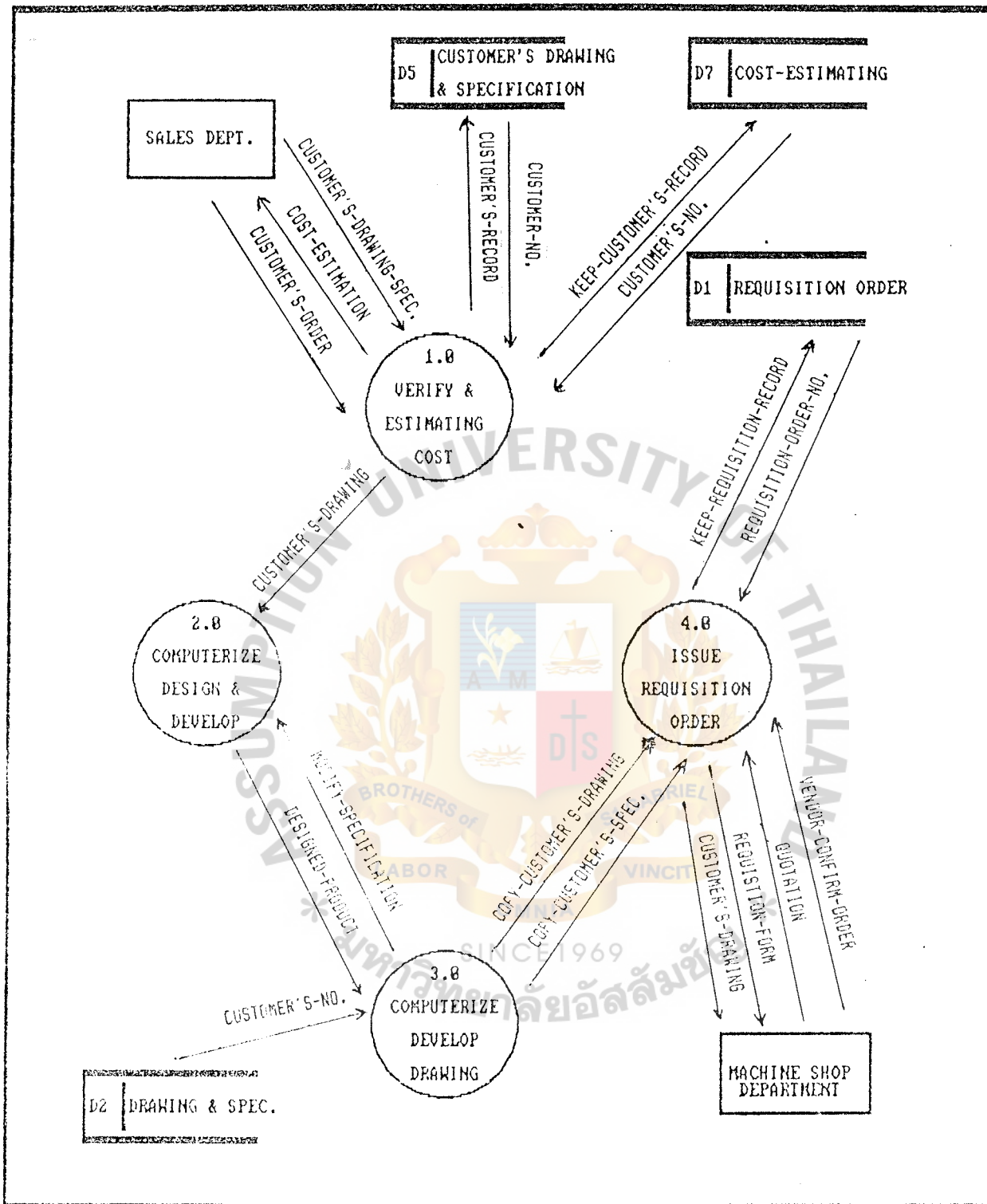


Figure 3-1 Data flow diagram of the computerize design and development (CAD process)
by R&D Engineering Department (new system)

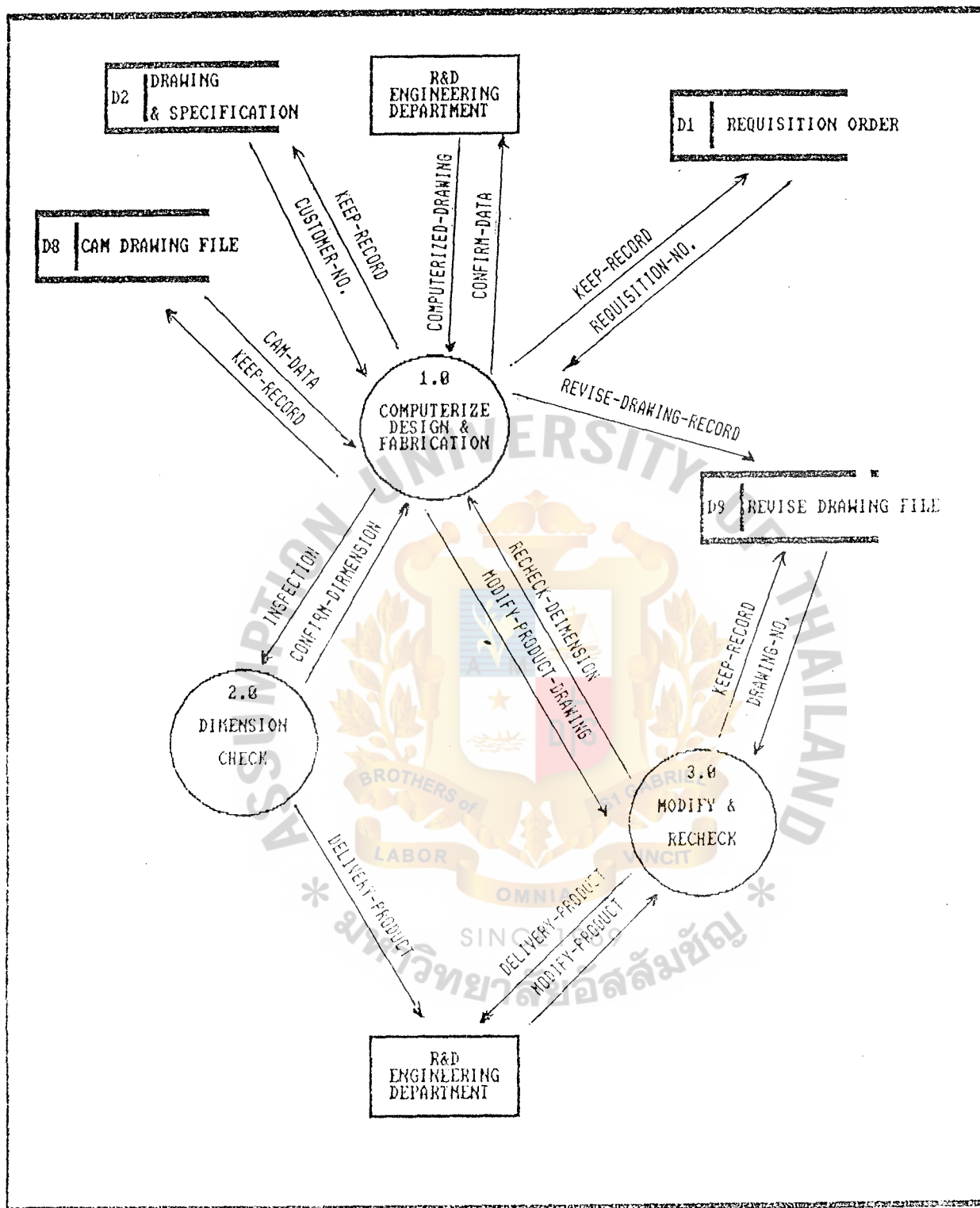


Figure 3-2 Data flow diagram of computerize design and fabrication processing (CAM process)
by Machine shop department (new system)

The following are required to ensure an efficient operation of the proposed system :-

Computerized Design and Development Process

- The R & D Engineering have to input Customer's products, die set and packaging information

(Data structure is shown on Appendix F. Data structure and Program listing)

- The R & D Engineering have to print out hard copy of the periodic reports and distribute to the interaction department such as Sales, Accounting and Production department.

(Sample of report is shown on Appendix G.)

- ACAD, or Cadkey is recommended as an application software to support computerized design and development. Computer Aided Design and Drafting can provide hard copy of product, die sets, jigs and tools as well as vector file to support Machine shop department.

(High-end CADD Application program summary of features are shown on Appendix I, Sample of product and packaging are shown on Appendix J)

- Design Engineers and Development Engineers will be trained as CAD Engineers and take responsibility of computerizing design and development.

(The new sub-organization chart is shown on Figure 3-3.)

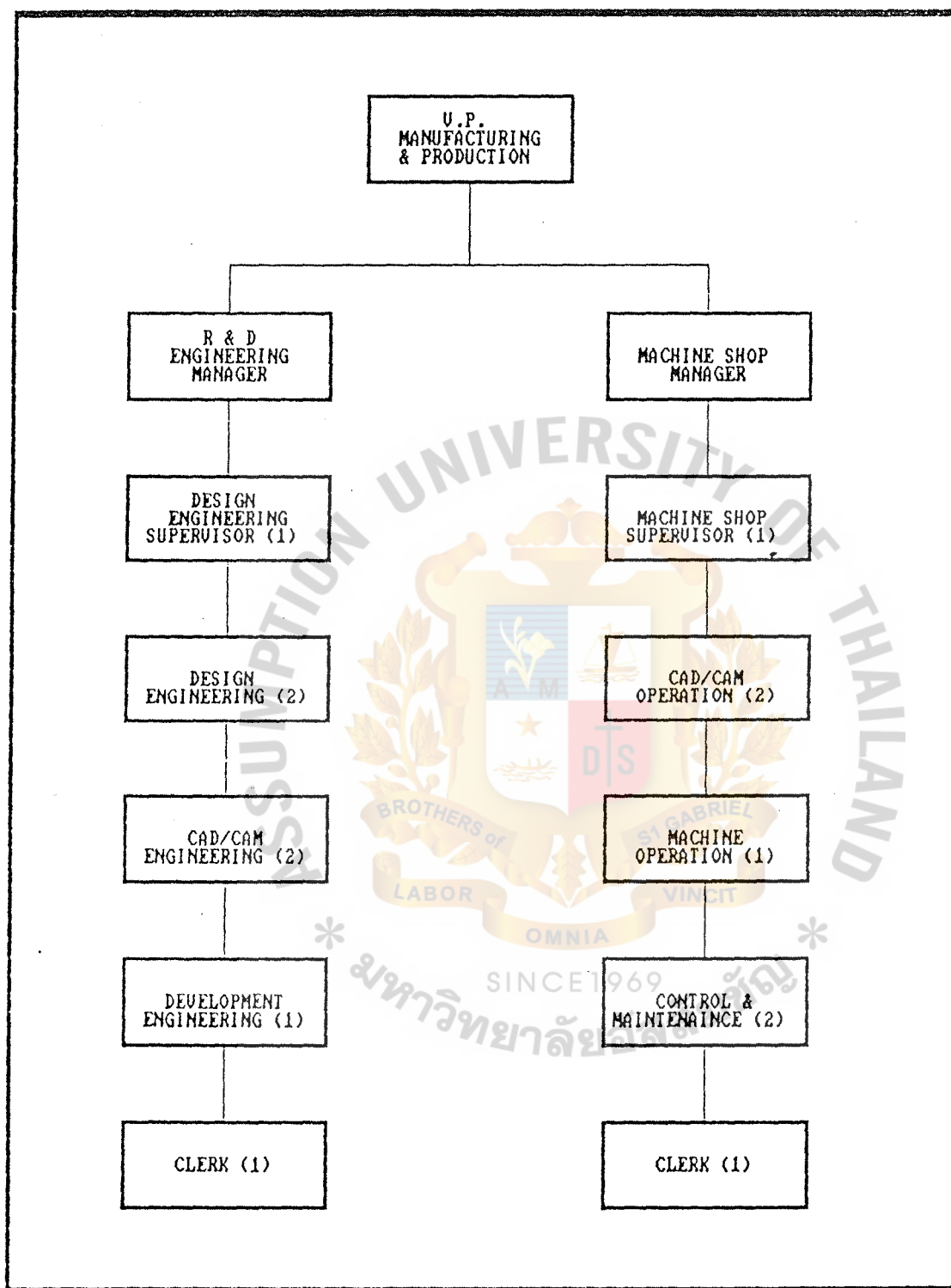


Figure 3-3 Sub-organization chart of PRECISION CO.,LTD. (new system)

- The Machine shop have to input Customer's product and die set information.
- The Machine shop have to print out hard copy of the periodic report and distribute to the interaction department
- The **Smart CAM** or **CAMAX** is recommended as an application software to develop accurate Numerical control programs for all NC machines needed to complete the mold, die sets or production parts.

(Diagram of CAD/CAM process is shown on Figure 3-4.)

- The Machine Operators will be trained as CAM Engineers and take responsibility of Computerized Aided Manufacturing Engineering.



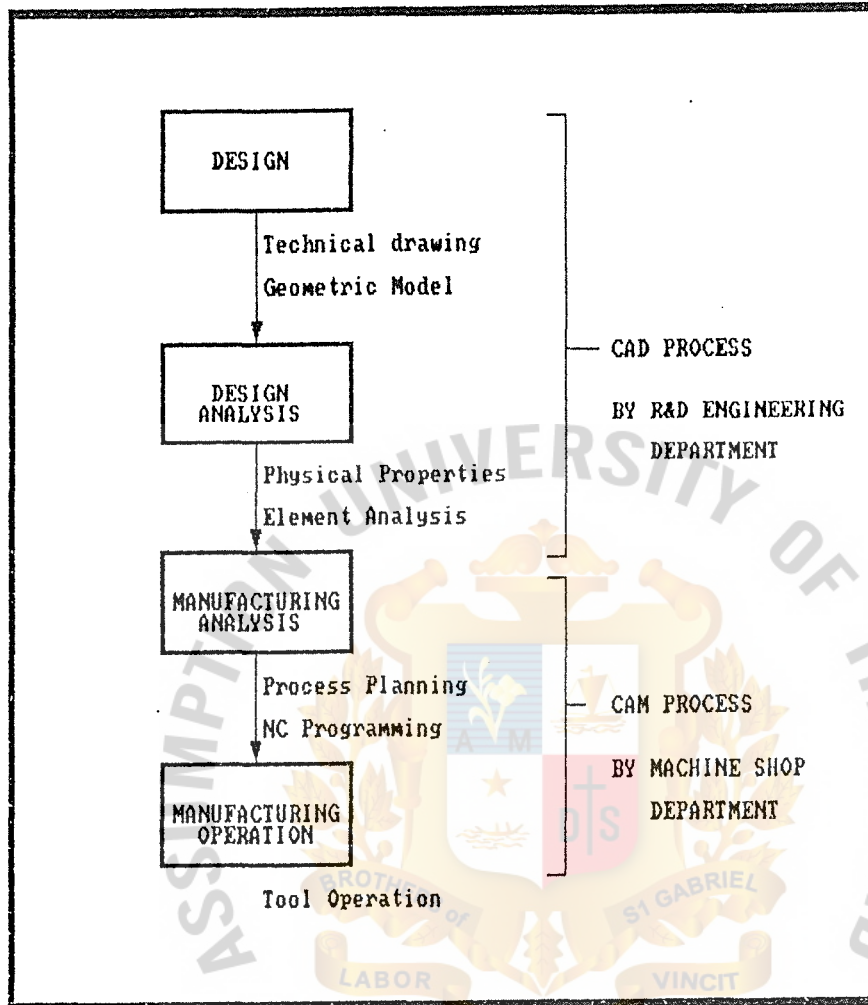


Figure 3-4 Concept diagram of the CAD/CAM process (new system)

3.3 HARDWARE AND SOFTWARE REQUIREMENT

The proposed system hardware and software requirements are shown as following;

Hardware Requirement :-

1. The 80386-33 System 33 MHz 6 Units
 - 80387-33 Math co-processor.
 - 4MB RAM (Expandable to 8 MB) on Board.
 - 64 KB Cache Memory on Board.
 - 1 X 1.2 MB floppy disk drive.
 - 1 X 1.44 MB floppy disk drive.
 - Hard disk drive 200 MB.
 - Multi I/O with 2 serial and 1 parallel ports
 - VGA color monitor 14".
 - Enhanced AT - style keyboard 101 Thai/English
 - Power supply 200 watts
2. Micro UPS (1 KVA) 1 Unit

Battery back up time 30 minutes.
3. Printer LQ +1050 2 Units
4. Digitizer 4 Units
5. Plotter 1 Unit

Software Requirement :-

| | |
|------------------------------------|---|
| Operation system | : MS-DOS version 5.0 |
| System Development software | : Dbase VI or Foxbase + |
| Computer Aided Design and Drafting | : ACAD release 10 : or Cadkey (optional) |
| Computer Aided Manufacturing | : Smart CAM : or CAMAX (optional) |
| Utilities application software | : Norton Commander |



3.4 SECURITY AND CONTROL

Security aspects to be considered are physical security of equipment, protection of the integrity of the system and data, security of data.

Physical security of equipment :-

- Only authorized personnel can access the system and control all equipment.
- To prevent loss of data during a power failure, a UPS is recommended.
- All computer hardware must be locked every office closing time and the key must be stored in a secure place.
- The office must be kept securely locked when no one is inside.

Protection of the integrity of the system and security of data :-

- Data entry must be double checked.
- Data entry, modification, and corrections must be made by only those that are authorized.
- A copy of programs and data files must be kept in secondary medium storage such as diskette to ensure system operation in case of program running failure.
- Backup data files should be created every time the database is updated or modified.

- To label all the backup copies.
- To control the distribution of report to ensure they are sent only to the interaction department.
- To produce only the required number of output reports and drawing.



3.5 COST/BENEFIT ANALYSIS

Cost Analysis

The cost of the proposed system is shown as the following;

Hardware cost :-

| | | |
|----------------------------------|-------------|----------------|
| - Micro computer 80836-33 system | 6 sets Baht | 360,000 |
| - Plotter | 1 set | 160,000 |
| - Printer | 2 sets | 50,000 |
| - UPS | 1 set | 40,000 |
| - Digitizer | 4 set | 12,000 |
| Total hardware cost | | <u>622,000</u> |

Software cost :-

| | | |
|---------------------|------|----------------|
| - ACAD | Baht | 80,000 |
| - Smart CAM | | 160,000 |
| Total software cost | | <u>240,000</u> |

Peopleware cost :-

| | | |
|---------------------------------|----------------|---------------|
| - System analyst and programmer | 2 persons Baht | 50,000 |
| Total peopleware cost | | <u>50,000</u> |

Benefit expected

Tangible benefits :-

| | | |
|--|------|----------------|
| 1. Elimination of increasing draftsman overhead or manual operation | Baht | 240,000 |
| 2. Faster response time | | 20,000 |
| 3. Effective cost reduction due to less waste and less time | | 30,000 |
| Total Annual cost saving | | <u>290,000</u> |

Intangible benefit :-

- Increase productivity of the designer.
- Reduced time from design to manufacturing.
- Lower design and production cost.
- Provide greater accuracy and quality of design.
- More standardization of design.
- Improve control of design changes.

Economic Cost Comparison

I. Payback Period to install the new system :-

Using the basic formula for after tax pay back of;

$$\text{Payback period} = \frac{I}{(1 - T) R}$$

I = Investment or capital expenditure = Baht 862,000

T = Tax rate 35 %

R = Annual saving realized by investment = Baht 290,000

$$\begin{aligned}\text{Payback Period} &= \frac{862,000}{(1 - 0.35) 290,000} \\ &= 4.5 \text{ years}\end{aligned}$$

II. Present value of the proposed system :-

Using the basic formula for net present value

NPV = net present value

PV = cost of the new system = Baht 862,000

R = cash flow (saving) = 290,000

k = cost of money (interest rate) = 9%

n = number of years saving available = 5

$$\text{NPV} = \frac{R_1}{(1 + k)^1} + \frac{R_2}{(1 + k)^2} + \dots + \frac{R_n}{(1 + k)^n} - \text{PV}$$

$$\text{NPV} = \frac{290,000}{(1.09)} + \frac{290,000}{(1.19)} + \frac{290,000}{(1.30)} + \frac{290,000}{(1.41)} + \frac{290,000}{(1.54)} - 862,000$$

$$\text{NPV} = 264,812 \text{ (at the end of fifth year)}$$

Since the Net Present Value is positive with a value of Baht 264,812 it can be concluded that the implementation of the proposed system is justifiable.

4. DETAIL SYSTEM DESIGN

4.1 CAD/CAM TECHNICAL DESCRIPTION OF THE NEW SYSTEM

Computer Aided Design Process : this is an approach of using computers and computer graphics to aided engineering design tasks. The basic CAD process, from the initial design concept through the programming of the manufacturing tools, in the following sequence step :-

1. A sketch or drawing of the basic design concept may be put on the screen using manual drawing like techniques with a digitizer tablet
2. Checks may be conducted to interface and fit with mating parts in an assembly.
3. Engineering analysis may be performed to determine physical or structural properties.
4. The design may be edited to correct error or problems.
5. Drawings are detailed and finalized with dimensions, notes and symbols.
6. The finished drawing are stored in a database and printed the hard copies.
7. The other Engineers uses the designed data to prepare the parts of manufacturing. (eg. tools design or NC programming)

Computer Aided Manufacturing Process : this is an advancing approach to the manufacturing which uses the computer to handling the designed data to prepare the parts of manufacturing as well as the physical operation in the process. The basic CAM Process are as following :-

1. To establishing a geometric model of the part in the designed database. (convert from the CAD database)
2. To select the tools and sequence process from the process plan.
3. To establish a tool parameter database with all the unique characteristics and capabilities of each machines available to the production.
4. To input the machining requirements for each operation (eg. tape of cutting tool and areas to be machined.)
5. CAM generates programming system which creates a tool-path program bases on the input requirements and geometric model.
6. To verify the tool-path program by simulating it in the graphic display.
7. To translate the high-level NC program into the language uses by the machine tool.
8. To down load the NC program to the machine tool on the factory floor for the operation.

CAD/CAM Process can also provides data security and control features that would be difficult to implement in manual system. The use of access codes and approval requirements can assure both the security and the integrity of the design. The features can permit to access only those which are authorized to review or change the design. They can also prevent a design from being finalized until all required approval are received.

(CAD/CAM criteria selection is provided in Appendix I.)

4.2 PROGRAMS OF THE CUSTOMER'S PRODUCT,DIE SET, PACKAGING

The programs written for the new system are found in an Appendix F. manual & programme listing. Programs were written with comment notes to allow modification easier in the future. The technical documentation of the system includes;

- Data structure.
- Programme listing
- Program tree diagram
- Program flow chart
- Data dictionary

4.3 PROGRAMME SPECIFICATION

| Programme Specification | |
|-------------------------|---|
| Programme Name | : Customer's Product |
| Description | : Report of Customer's products |
| Input | : Customer product type, Customer no., Customer name, Assy, Plate, Arm, Gimbal drawing no., drawing cost, approval date |
| Output | : Customer's products report |
| Process | : Input data, edit, delete, display and print periodic reports |
| File | : Product |

Figure 4-1 Programme specification for Customer's product

| Programme Specification | |
|-------------------------|---|
| Programme Name | : Customer's Die set |
| Description | : Report of Customer's die set |
| Input | : Customer product type, Customer no., Customer, name Plate, Arm, Gimbal, Welding drawing no., Vendor name, Cost/unit, Recieve date |
| Output | : Customer's die set report |
| Process | : Input data, edit, delete, display and print periodic reports |
| File | : Die |

Figure 4-2 Programme specification for Customer's die set

| Programme Specification | |
|-------------------------|---|
| Programme Name | : Customer's Packaging |
| Description | : Report of Customer's packaging |
| Input | : Customer product type, Customer no., Customer, name Pack drawing no., Cost, Vendor name, Cost/unit, approval date |
| Output | : Customer's packaging report |
| Process | : Input data, edit, delete, display and print periodic reports |
| File | : Pack |

Figure 4-3 Programme specification for Customer's packaging

Programme Specification

| | |
|----------------|---|
| Programme Name | : Customer's Die set of Machine shop |
| Description | : Report of Customer's die set |
| Input | : Customer product type, Customer no., Customer, name Plate, Arm, Gimbal, Welding drawing no., material cost, labor cost, Cost/unit, Recieve date |
| Output | : Customer's die set report |
| Process | : Input data, edit, delete, display and print periodic reports |
| File | : Mdie |

Figure 4-4 Programme specification for Customer's die set (Machine shop)

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Following is the summary of the whole system development project. The entire study is conducted to improve the existing R & D Engineering and Machine shop information system and their operations. The necessity of study is brought about by the users who have expressed the need for computerized of both information system and product design & development.

The analysis phases are conducted using the structural analysis technique such as the context diagram, data flow diagram and data dictionary. Although the analysis phases cover the entire work at the study areas, the computer system is designed and developed in order to meet the users' requirement.

The proposed system is conclusion as following :-

- Customers information system
- CAD/CAM system

CAD/CAM Process increases the productivity of designer and speeds up the process of product development. It is used throughout the design process, including conceptual development detailed design, analysis, documentation. CAD permits changes to be quick and complex designs to be implemented without errors.

The principle difference between CAD/CAM process and a drafting process are the modeling and analysis capabilities of the computerized system. The major activities involve the operation of a CAD/CAM process, model building, model viewing and built data. CAD is an intensive data process. Much more computer power is required for computation and data handling than for generating graphic output.

CAD process establishes a database which can be shared by other organizations in development and manufacturing to perform engineering tasks. It produces outputs for manufacturing in addition to the design itself (eg. NC programming data).

While CAM process is an advancing approach the manufacturing which uses the computer to handling designed data to prepare the parts for manufacturing as well as the physical operation in the process.

The characteristic of CAD/CAM system can be described as the following;

- Application type : Mechanical model (for design parts and assemblies)
: Facilities (eg. layout, utilities)
- System configuration : Stand-alone or distributed (eg. workstation with internal processor)
- Model of operation : Interactive (permit user to interact during design process)

CAD/CAM software : the major propose function of CAD/CAM system of this assemblies and manufacturing is mechanical design. Mechanical design usually requires detailed drawing with dimension, notes and multiple views. The minimum which a mechanical design CAD/CAM system must do, therefore, is to provide drafting tool for the designers. However, CAD/CAM software features should be considered on :-

- Generated primitive graphic elements. (eg. lines, arcs, surfaces)
- Performing geometric transformations (eg. translation, rotation)
- Constructing alternative view (including assemblies)
- Editing abilities (eg. moving, changing, deleting)
- Converting data to NC. programming.

CAD/CAM hardware : the computer hardware features should be consider on;

- High performance and lower cost computer of stand-alone/ workstation which can provide more efficient design tools and integrated functions to more designer.
- Intelligent terminal with 32 bits processor or larger amounts of memories can increase the power and capabilities of the total CAD/CAM system.
- High-density data storage (eg. hard disk drive) can provide faster access to the designed data.

Micro-computer (stand-alone) is introduced in the new system of data processing, and CAD/CAM process. It can also be developed or expanded to on-line data processing system with PC-LAN (local area network) in the future.

The new system has more advantage than the old one. Some part of the manual system's problems would be easily solved by the new system. For example : Sales and Engineering can easily check the customers' products data and generate report whenever they require. For product drawing, Engineers can easily correct or change the wrong dimension and printed whenever they required.

Benefits that can be realized by implementation CAD/CAM system:-

- Shorter manufacturing cycle times.
- Improve product quality.
- Shared use of design and manufacturing data.
- Improve validity and consistency of data.
- Flexibility in design and manufacturing operation.
- Faster introduction of new products and changes into manufacturing
- More efficient data collection and communication.
- Improve management control.

5.2 RECOMMENDATIONS

The analyst also proposes key elements for effective system implementation as follows :-

- The attitudes and perceptions of the management responsible for decision making and CAD/CAM project planning can have a significant effect on their success. Management should think about the CAD/CAM system as a strategic effort to improve the productivity of the entire manufacturing operation, not just as a solution to some immediate operation problems.
- Economic justification should be considered on an absolute cost, cash flow requirement, and productivity improvement.
- Hardware and software turn-key vendors are considered more acceptable, despite the relative higher cost, because the high quality of training and service maintenance support provided by the vendors.
- To develop a training program to train the staffs and all potential users of the departments.
- It is recommended that the plan be reviewed periodically for status and change in priorities to fit the real situation.

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Appendix A : Interview Notes



| INTERVIEW NOTES | | |
|--|-------------------------------------|------------------------------------|
| PERSON INTERVIEWED Vice president of Manufacturing | | DATE OF INTERVIEW |
| DEPARTMENT - | LOCATION/ROOM Factory/ VP | TELEPHONE/EXTENSION /720 |
| HOW INTERVIEWEE RELATES TO PROBLEM VP of manufacturing who needs computer based system to support the R & D engineering and Machine shop departments. | | |
| INTERVIEW NOTES His policy about R & D engineering and Machine shop departments is to improve their capability and efficiency. He commended that CAD and computer based system are suitable for R & D engineering department, especially on designing and drawing jobs. He said that he has decided to purchase new machines in order to support Machine shop department, so that they will have more ability to produce die set and jigs. With Computer numerical control (CNC) machines are driving machine tools to higher levels of productivity. The machine shop department need Computer aided manufacture (CAM) software which can interface with CNC machine to improve turnaround on prototyping and accelerating the designing of production cycle. | | |
| INPUTS | | OUTPUTS |
| RELEVANT FORM:- | | |

Figure :A-1 Interview notes of Vice president of Manufacturing & Production

| | | |
|--|---|------------------------------------|
| INTERVIEW NOTES | | |
| PERSON INTERVIEWED R & D Engineering Manager | | DATE OF INTERVIEW |
| DEPARTMENT R & D Engineering | LOCATION/ROOM Factory/Manager | TELEPHONE/EXTENSION /725 |
| HOW INTERVIEWEE RELATES TO PROBLEM R & D Engineering Manger who is effected by the manual system | | |
| INTERVIEW NOTES <p>R & D Engineering is the department which is responsible for product researching, designing and development. The main function is to research and design the customers' products.</p> <p>The Department is complained about its efficiency because the department can not design and develop the tools in time to response the Production Department.</p> <p>The drawback of the existing system is the manual designing and drafting which consume almost 80 % of working days. His idea is to apply CAD to design and draft jobs and try to apply these CAD data files to be able to process by CAM. Thus, the system would be full cycle by computer bases system.</p> | | |
| INPUTS | | OUTPUTS |
| RELEVANT FORM:- | | |

Figure :A-2 Interview notes of R & D Engineering Department

| INTERVIEW NOTES | | |
|---|--|-----------------------------|
| PERSON INTERVIEWED Machine Shop Manager | | DATE OF INTERVIEW |
| DEPARTMENT Machine Shop | LOCATION/ROOM Factory / M/C Manager | TELEPHONE/EXTENSION /726 |
| HOW INTERVIEWEE RELATES TO PROBLEM Machine Shop Manager who is effected by existing machine system | | |
| <p>INTERVIEW NOTES</p> <p>Machine Shop is responsible for supporting Production and R & D Engineering Departments in producing tools, die sets and jigs. But the existing machines and tools have limited capability to produce those mentioned tools. Thus, most of precision tools have to be produced by vendors. The Department is also complained by R & D Engineering and Production about its efficiency.</p> <p>He said that the vice president of manufacturing and he have decided to purchase new machines to solve this problem for exampling CNC wire cut and Vertical Machining center.</p> <p>The machines will be deliver in April, 1992. He is interested in CAD/CAM to fulfill the manufacturing system. There are one or two vendors' of CAM software, they have demonstrated their products and provided information for supporting decision.</p> | | |
| INPUTS | | OUTPUTS |
| RELEVANT FORM:- | | |

Figure :A-3 Interview notes of Machine shop Department

Appendix B : Procedures

(existing system)



R&D Engineering's Procedure

After sales department gets new drawing and specification products from the customers, the products will be delivered to R&D Engineering department in order to verify the specification of drawing and do estimation cost of precision die set, jigs and accessory tools. Then, the details of cost estimated and list of necessary precision die sets, jigs and tools will be delivered to sales department.

If the customers accept the quotation, R&D manager will assign job to design engineering supervisor to develop.

Design engineering supervisor and his engineers will develop as the following details:-

1. Part of product
2. Assembly parts of the product
3. Die sets for stamping arm, gimbal and plate
4. Jig for welding
5. Precision tools for measurement

After the above process, all details of drawing will be delivered to the draftman to redraw and proof until it is all correct.

1. Parts and assembly parts of the drawings products', R&D Engineering and sales manager will discuss them with the customers until it is clear and agreed on every critical points. If the agreement is made and the customers will prove on the drawings and its specifications.
2. Die sets for stamping arm, gimbal and plate, jigs for welding and precision tools of measuring, R&D manager will discuss them with the Machine shop manager whether any die sets, jigs and precision tools they can made by themselves or they need to send to make by local or oversea vendors.

In case that the Machine shop has a capability to make or modify die sets, jigs and precision tools, R&D Engineering supervisor will issue requisition order to fabricate or modify to the machine shop department. When they have already made or modify them, R&D Engineering will check, setup and test these tools until they are qualified for mass production.

In case that Die sets, jigs and precision tools have to be made by local or overseas vendors, R&D Engineering supervisor will issue purchasing requisition order with attached drawings and specifications to purchasing section. Purchasing manager will contact and send detail of drawings and their specifications to vendors. When they already verify and quote their cost, purchasing manager will discuss with R&D and Machine shop manager in order to select the vendors. Purchasing department will issue purchasing order to that vendor.

When the vendor has finished his jobs, he will deliver them. R&D engineering supervisor and his engineering will check the dimension of these tools and their specifications. If it is incorrect, it will be rejected and return to vendor. If it is correct, R&D engineering will setup and test until it is ready for mass production.

Machine shop's Procedure :-

Machine shop has to support R&D Engineering, Production department, and Purchasing section as following :-

1. To make and modify die sets, jigs and tools which machine shop has the capability to support.
2. To support purchasing section to check quotation and select new vendors.

In case that Machine shop have a capability to make or modify die sets, jigs and tools, R&D Engineering department will issue Requisition order and attached with drawings and specifications for their references. Machine shop supervisor will verify the order, drawings and specifications, then he will issue purchasing requisition order for raw materials or tools to purchasing section.

After he has received raw materials and tools, they will make or modify these die sets, jigs and tools according to the drawings and specifications. When they have finished these precision tools, they will recheck all critical dimension before sending to the requestioner.

Machine shop supervisor will issue receiving form attached with these precision tools and a copy to cost accounting of the accounting department.

Appendix C : Problem Report Form



PROBLEM REPORT FORM

STATEMENT OF THE PROBLEM

Since the existing machine and tools of Machine Shop Department has limited capability of supporting both Production and R & D Engineering Department, the machine and tools could not produce high precision tools, die sets and jigs. Thus, most designed tools have to hire the vendors to produce.

INCIDENT SURROUNDING THE PROBLEM

There are too many inconvenience to contact vendors as well as defining the detail of the specific of drawing tools. If vendors are misunderstanding, incorrect dimension would be occurred and it would take more long time to modify and get a new one.

WHY YOU ARE REPORTING THIS PROBLEM

I would like to improve the Department efficiency and expand business line of the manufacturing to be able to produce precision tools to support both Production and other clients.

| | | |
|-------------------------------------|----------------------------|------|
| NAME :- Machine shop Manager | DEPARTMENT Machine Shop | |
| TITLE Existing Machine and tools | TELEPHONE 726 | DATE |

Figure : C-1 Problem Report of Machine shop

| PROBLEM REPORT FORM | | |
|---|---|--------------------|
| <p>STATEMENT OF THE PROBLEM</p> <p>Because of the manual system and increasing workload, design engineering and draftman can not do the assigned jobs in time.</p> | | |
| <p>INCIDENT SURROUNDING THE PROBLEM</p> <p>Design engineering and draftman have to design and draft the drawing by manual. So almost 80% of time is used to drawing, correcting and redrawing. And they can not complete the jobs in time. Since the department has planed to increase manpower but the limited amount of tools and accessory are the obstacle of this plan.</p> | | |
| <p>WHY YOU ARE REPORTING THIS PROBLEM</p> <p>I have become awaring of a general morale problem within the department arising from the existing operation system and the increasing of the workload. I feel that a solution of this problem can improve the Department's performance in processing in time and more efficient.</p> | | |
| <p>NAME :-</p> <p>R & D Engineering Manager</p> | <p>DEPARTMENT</p> <p>R & D Engineering</p> | |
| <p>TITLE</p> <p>Problem of Design and drafting</p> | <p>TELEPHONE</p> <p>725</p> | <p>DATE</p> |

Figure : C-2 Problem Report of R & D Engineering Department

Appendix D : Sample of Report

(existing system)



| R E Q U I S I T I O N F O R M | |
|--|--|
| <p>TO : Machine Shop Manager</p> <p>FROM : R & D Engineering Manager</p> <p>REF : Job No. :</p> <p style="padding-left: 40px;">: Drawing No.:</p> <p>DATE :</p> | |
| <p>Please analyse this job as per attached Drawing No.</p> <p>and specification.</p> <p>Consideration status :-</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><input type="checkbox"/> Machine shop accepts this job</p> <p>Estimate cost :..... Baht.</p> <p>Estimate time of process :... Days.</p> <p>Require Raw Material:-</p> <ol style="list-style-type: none"> 1. 2. 3. 4. 5. <p>Accessory :-</p> <ol style="list-style-type: none"> 1. 2. 3. 4. 5. </div> <div style="width: 45%;"> <p><input type="checkbox"/> Please contact external vendors</p> <p>Estimate cost :..... Baht.</p> <p><input type="checkbox"/> Others..</p> <p>Remark :-</p> <p>.....</p> <p>.....</p> <p>.....</p> </div> </div> | |
| <p>Requisitioner by :</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(../../..)</p> <p>Approval by :</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(../../..)</p> | <p>Engineering by :</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(../../..)</p> <p>Approval by :</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(../../..)</p> |

Figure D-1 Requisition form (existing form)

RECEIVING FORM

TO :
FROM : MACHINE SHOP
CC : ACCOUNTING DEPT.

R.F. NO.:
DATE :

Refer to your R.O. No :- on date :-
We have finished your order on drawing No :
total part : pcs.

Cost calculation :-

| | | |
|------------------------------|---|------|
| Cost of raw material P/O No. | : | Baht |
| Over head cost (hour) | : | Baht |
| Other expenses | : | Baht |
| Total | : | Baht |

(this expenses amount will charge on your dept account)

Machine shop supervisor

Authorized signature

Here by receiving Part in good condition and specification :-

Received by :-

Authorized signature

Date / /

Figure D-2 Receiving form (existing system)

| PRECISION CO., LTD. PURCHASING REQUISITION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------|---------------------|--------------|------|----------|-------------|--------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| TO : PURCHASING MANAGER | | PR NO.:-0001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM : _____ | | DATE : _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">ITEM</th> <th style="width: 15%;">PART NO:</th> <th style="width: 55%;">DESCRIPTION</th> <th style="width: 20%;">UNIT MEASURE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | | | | ITEM | PART NO: | DESCRIPTION | UNIT MEASURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITEM | PART NO: | DESCRIPTION | UNIT MEASURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| PURPOSE :- _____ _____ _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <hr/> VENDOR/SUPPLIER NAME : _____ REF LASTES P/O No.: _____ REQUIRED DATE : _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <hr/> REQUISITIONER : _____ AUTHORIZED : _____ DATE : _____ DATE : _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure D-3 Purchasing requisition form (exisiting system)

PURCHASING ORDER

TO : _____ PO NO.: -0001
ADDRESS : _____ DATE : _____
TEL NO : _____ FAX NO.: _____ PAYMENT : _____

[illegible]

REMARK :- DATE REQUIRED :

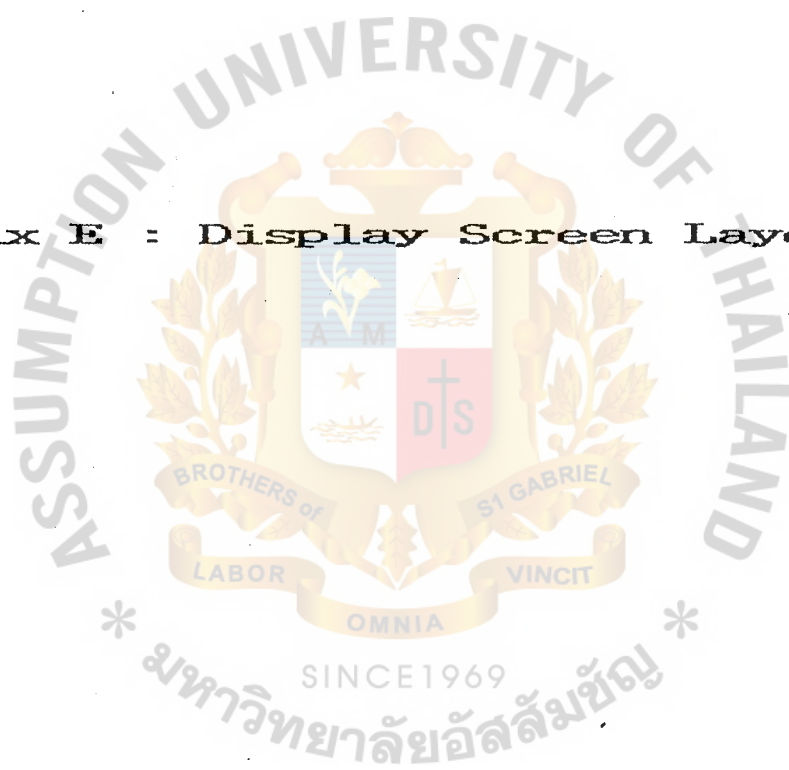
PLEASE SUPPLY GOODS IN GOODS CONDITION AND QUNATITY.

PREPARED BY : _____ AUTHORIZED BY : _____
DATE : _____ DATE : _____

COPY CC. TO A/C, REQUISITIONER, /STORE, PURCHASING FILE

D - 4

Appendix E : Display Screen Layout



| DISPLAY SCREEN LAYOUT | | | | | | | |
|--------------------------|--|--|--|-------------------------|--|--|--|
| TITLE : MAIN MENU | | | | DATE : 28/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : Prakit T. | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
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PRECISION CO., LTD.

R&D ENGINEERING DEPARTMENT 99/99/99

MAIN MENU

- 1) PRODUCT
- 2) DIE SET/ JIG
- 3) PACKAGING
- 4) QUIT

Press ↑ or ↓ to move highlight, and press ← to select

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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|----------|
| REMARK : |
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Figure E-1 Display screen layout of main menu

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|--------------------------|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : SUBMENU | | | | DATE : 20/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD

R&D ENGINEERING DEPARTMENT

99/99/99

SUBMENU

1) UPDATE/ADD NEW RECORD

2) EDIT/CORRECT RECORD

3) DELETE RECORD

4) DISPLAY RECORD

5) PRINT

6) Exit to Main Menu

Press ↑ or ↓ to move highlight, and press ↵ to select

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SINCE 1969

REMARK :

Figure E-2 Display screen layout of Sub menu

E - 2

DISPLAY SCREEN LAYOUT

TITLE : UPDATE/ADD NEW RECORD PRODUCT

DATE : 20/12/91

SYSTEM : R&D ENGINEERING

DESIGNED BY : MR. PRAKIT

PROGRAM NAME :

REVIEWED BY :

1234567890123456789012345678901234567890123456789012345678901234567890

PRECISION CO., LTD.

R&D ENGINEERING DEPARTMENT

99/99/99

PRODUCTS

PRODUCT TYPE :- [99999]

CUSTOMER NO :- [99999]

CUSTOMER NAME :- [X-----25-----X]

ASSEMBLY DRAWING NO :- [99999]

DRAWING COST :[99999]

APP.DATE :[99/99/99]

PLATE DRAWING NO :- [99999]

DRAWING COST :[99999]

APP.DATE :[99/99/99]

ARM DRAWING NO :- [99999]

DRAWING COST :[99999]

APP.DATE :[99/99/99]

GIMBAL DRAWING NO :- [99999]

DRAWING COST :[99999]

APP.DATE :[99/99/99]

TO CONTINUE Y/N?

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REMARK :

Figure E-3 Display screen layout Update/add new record of Product

E - 3

| | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG PLATE | | | | DATE : 20/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAXIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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| | | | | | | | |
|----|--|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | PRECISION CO., LTD. | | | | | | 1 |
| 2 | R&D ENGINEERING DEPARTMENT | | | | | | 2 |
| 3 | 99/99/99 | | | | | | 3 |
| 4 | DIE SET / JIG | | | | | | 4 |
| 5 | PRODUCT TYPE :- [99999] | | | | | | 5 |
| 6 | CUSTOMER NO :- [9999] | | | | | | 6 |
| 7 | CUSTOMER NAME :- [X-----25-----X] | | | | | | 7 |
| 8 | PLATE : DRAWING NO :- [9999999P] | | | | | | 8 |
| 9 | DRAWING COST :- [99999] | | | | | | 9 |
| 10 | VENDOR NAME :- [X-----30-----X] | | | | | | 10 |
| 11 | QUANTITY ORDER :- [99] | | | | | | 11 |
| 12 | COST/UNIT :- [999999] | | | | | | 12 |
| 13 | RECEIVE DATE :- [99/99/99] | | | | | | 13 |
| 14 | 123456789012345678901234567890123456789012345678901234567890 | | | | | | 14 |
| 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

REMARK :

Figure E-4 Display screen layout Update/add new record of Die set

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG ARM | | | | DATE : 20/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD.

R&D ENGINEERING DEPARTMENT
99/99/99

D I E S E T / J I G

PRODUCT TYPE :- [99999]
CUSTOMER NO :- [9999]

CUSTOMER NAME :- [X-----25-----X]

ARM : DRAWING NO :- [9999999A]
DRAWING COST :- [99999]

VENDOR NAME :- [X-----30-----X]

QANTITY ORDER :- [99]

COST/UNIT :- [999999]

RECEIVE DATE :- [99/99/99]

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

REMARK :

Figure E-5 Display screen layout Update/add new record of Die set

| DISPLAY SCREEN LAYOUT | | | | | | | |
|--|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG GIMBAL | | | | DATE : 28/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD.
R&D ENGINEERING DEPARTMENT

DIE SET / JIG

PRODUCT TYPE :- [999999]
CUSTOMER NAME :- [X-----25-----X]

GIMBAL : DRAWING NO :- [9999999G]
VENDOR NAME :- [X-----30-----X]
QUANTITY ORDER :- [99]
COST/UNIT :- [9999999]
RECEIVE DATE :- [99/99/99]

CUSTOMER NO :- [9999]
DRAWING COST :- [999999]

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REMARK :

Figure E-6 Display screen layout Update/add new record of Die set

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG WELDING | | | | DATE : 28/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="margin: 0;">PRECISION CO., LTD.</p> <p style="margin: 0;">R&D ENGINEERING DEPARTMENT</p> </div> <div style="width: 45%; text-align: right;"> <p style="margin: 0;">99/99/99</p> </div> </div> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: center; margin: 0;">D I E S E T / J I G</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="margin: 0;">PRODUCT TYPE :- [999999]</p> <p style="margin: 0;">CUSTOMER NAME :- [X-----25-----X]</p> <p style="margin: 0;">WELDING: DRAWING NO :- [99999999W]</p> <p style="margin: 0;">VENDOR NAME :- [X-----30-----X]</p> <p style="margin: 0;">QUANTITY ORDER :- [99]</p> <p style="margin: 0;">COST/UNIT :- [9999999]</p> <p style="margin: 0;">RECEIVE DATE :- [99/99/99]</p> </div> <div style="width: 45%; text-align: right;"> <p style="margin: 0;">CUSTOMER NO :- [9999]</p> <p style="margin: 0;">DRAWING COST :- [999999]</p> </div> </div> <p style="text-align: center; margin: 0;">TO CONTINUE Y/N?</p> | | | | | | | |
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| REMARK : |
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Figure E-7 Display screen layout Update/ add new record of Die set

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD PACKAGING | | | | DATE : 20/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD.

R&D ENGINEERING DEPARTMENT

99/99/99

P A C K A G I N G

PRODUCT TYPE :- [999999] CUSTOMER NO :- [99999]

CUSTOMER NAME :- [X-----25-----X]

PACKAGING: DRAWING NO :- [9999999K] DRAWING COST :- [999999]

APPROVAL DATE :- [99/99/99]

VENDOR NAME :- [X-----30-----X]

COST/UNIT :- [9999.99]

TO CONTINUE Y/N?

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REMARK :

Figure E-8 Display screen layout Update/add new record of Packaging

| DISPLAY SCREEN LAYOUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| TITLE : EDIT RECORD | | | | DATE : 28/12/91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr></thead><tbody><tr><td colspan="8">123456789012345678901234567890123456789012345678901234567890</td></tr></tbody></table> | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 123456789012345678901234567890123456789012345678901234567890 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 123456789012345678901234567890123456789012345678901234567890 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><tbody><tr><td>1</td><td colspan="6">PRECISION CO., LTD.</td><td>1</td></tr><tr><td>2</td><td colspan="6">R&D ENGINEERING DEPARTMENT</td><td>2</td></tr><tr><td>3</td><td colspan="6">99/99/99</td><td>3</td></tr><tr><td>4</td><td colspan="6">EDIT RECORD</td><td>4</td></tr><tr><td>5</td><td colspan="6">PRODUCT TYPE : [999999]</td><td>5</td></tr><tr><td>6</td><td colspan="6">TO CONTINUE Y/N?</td><td>6</td></tr><tr><td>7</td><td colspan="6"></td><td>7</td></tr><tr><td>8</td><td colspan="6"></td><td>8</td></tr><tr><td>9</td><td colspan="6"></td><td>9</td></tr><tr><td>10</td><td colspan="6"></td><td>10</td></tr><tr><td>11</td><td colspan="6"></td><td>11</td></tr><tr><td>12</td><td colspan="6"></td><td>12</td></tr><tr><td>13</td><td colspan="6"></td><td>13</td></tr><tr><td>14</td><td colspan="6"></td><td>14</td></tr><tr><td>15</td><td colspan="6"></td><td>15</td></tr><tr><td>16</td><td colspan="6"></td><td>16</td></tr><tr><td>17</td><td colspan="6"></td><td>17</td></tr><tr><td>18</td><td colspan="6"></td><td>18</td></tr><tr><td>19</td><td colspan="6"></td><td>19</td></tr><tr><td>20</td><td colspan="6"></td><td>20</td></tr><tr><td>21</td><td colspan="6"></td><td>21</td></tr><tr><td>22</td><td colspan="6"></td><td>22</td></tr><tr><td>23</td><td colspan="6"></td><td>23</td></tr><tr><td>24</td><td colspan="6"></td><td>24</td></tr></tbody></table> | | | | | | | | 1 | PRECISION CO., LTD. | | | | | | 1 | 2 | R&D ENGINEERING DEPARTMENT | | | | | | 2 | 3 | 99/99/99 | | | | | | 3 | 4 | EDIT RECORD | | | | | | 4 | 5 | PRODUCT TYPE : [999999] | | | | | | 5 | 6 | TO CONTINUE Y/N? | | | | | | 6 | 7 | | | | | | | 7 | 8 | | | | | | | 8 | 9 | | | | | | | 9 | 10 | | | | | | | 10 | 11 | | | | | | | 11 | 12 | | | | | | | 12 | 13 | | | | | | | 13 | 14 | | | | | | | 14 | 15 | | | | | | | 15 | 16 | | | | | | | 16 | 17 | | | | | | | 17 | 18 | | | | | | | 18 | 19 | | | | | | | 19 | 20 | | | | | | | 20 | 21 | | | | | | | 21 | 22 | | | | | | | 22 | 23 | | | | | | | 23 | 24 | | | | | | | 24 |
| 1 | PRECISION CO., LTD. | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | R&D ENGINEERING DEPARTMENT | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 99/99/99 | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | EDIT RECORD | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | PRODUCT TYPE : [999999] | | | | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | TO CONTINUE Y/N? | | | | | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 19 | | | | | | | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 23 | | | | | | | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"><tbody><tr><td colspan="8">123456789012345678901234567890123456789012345678901234567890</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr></tbody></table> | | | | | | | | 123456789012345678901234567890123456789012345678901234567890 | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| REMARK : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure E-9 Display screen layout Edit/correct record

| | | | | | | | |
|--------------------------|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : DELETE | | | | DATE : 28/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD.

R&D ENGINEERING DEPARTMENT

99/99/99

DELETE RECORD

PRODCUT TYPE : [999999]

TO CONTINUE Y/N?

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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| REMARK : | | | | | | | |
|----------|--|--|--|--|--|--|--|

Figure E-10 Display screen layout Delete record

DISPLAY SCREEN LAYOUT

TITLE : DISPLAY
SYSTEM : R&D ENGINEERING
PROGRAM NAME :

DATE : 20/12/91
DESIGNED BY : MR. PRAKIT
REVIEWED BY :

1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

| | | |
|----|----------------------------|----|
| 1 | PRECISION CO., LTD. | 1 |
| 2 | | 2 |
| 3 | R&D ENGINEERING DEPARTMENT | 3 |
| 4 | | 4 |
| 5 | | 5 |
| 6 | | 6 |
| 7 | | 7 |
| 8 | | 8 |
| 9 | | 9 |
| 10 | DISPLAY RECORD | 10 |
| 11 | | 11 |
| 12 | 1. DISPLAY ALL RECORD | 12 |
| 13 | | 13 |
| 14 | 2. DISPLAY SPECIFIC RECORD | 14 |
| 15 | | 15 |
| 16 | | 16 |
| 17 | | 17 |
| 18 | 3. Exit to Main menu | 18 |
| 19 | | 19 |
| 20 | | 20 |
| 21 | | 21 |
| 22 | | 22 |
| 23 | | 23 |
| 24 | | 24 |

123456789012345678901234567890123456789012345678901234567890
1 2 * 3 4 OMI 5 6 7 * 8

REMARK :

Figure E-11 Display screen layout Display Submenu

DISPLAY SCREEN LAYOUT

TITLE : DISPLAY MENU
SYSTEM : R&D ENGINEERING
PROGRAM NAME :

DATE : 20/12/91
DESIGNED BY : MR. PRAKIT
REVIEWED BY :

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|----------------------------|---|---|---|---|---|----|
| 123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| 1 | PRECISION CO., LTD. | | | | | | 1 |
| 2 | R&D ENGINEERING DEPARTMENT | | | | | | 2 |
| 3 | 99/99/99 | | | | | | 3 |
| 4 | | | | | | | 4 |
| 5 | | | | | | | 5 |
| 6 | | | | | | | 6 |
| 7 | | | | | | | 7 |
| 8 | | | | | | | 8 |
| 9 | | | | | | | 9 |
| 10 | DISPLAY SPECIFIC RECORD | | | | | | 10 |
| 11 | | | | | | | 11 |
| 12 | | | | | | | 12 |
| 13 | | | | | | | 13 |
| 14 | | | | | | | 14 |
| 15 | PRODUCT TYPE : I999999I | | | | | | 15 |
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| 18 | | | | | | | 18 |
| 19 | | | | | | | 19 |
| 20 | | | | | | | 20 |
| 21 | | | | | | | 21 |
| 22 | | | | | | | 22 |
| 23 | | | | | | | 23 |
| 24 | | | | | | | 24 |
| 123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| REMARK : | | | | | | | |

Figure E-12 Display screen layout Display specific record

| DISPLAY SCREEN LAYOUT | | | | | | | | | | | | | | | |
|--|--|--|--|--------------------------|--|--|--|----------|--|--|--|--|--|--|--|
| TITLE : PRINT MAIN | | | | DATE : 28/12/91 | | | | | | | | | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | | | | | | | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | | | | | | | | | |
| <div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div><div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div><div><div>PRECISION CO., LTD.</div><div>R&D ENGINEERING DEPARTMENT99/99/99</div><div>PRINT RECORD</div><div>1. PRINT ALL RECORD</div><div>2. PRINT SPECIFIC RECORD</div><div>3. Exit to Main Menu</div><div>Press ↑ or ↓ to move highlight, and press ← to select</div></div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div></div></div> <tr><td colspan="8">REMARK :</td></tr> | | | | | | | | REMARK : | | | | | | | |
| REMARK : | | | | | | | | | | | | | | | |

Figure E-13 Display screen layout Print record

| DISPLAY SCREEN LAYOUT | | | | | | | |
|--------------------------|--|--|--|--------------------------|--|--|--|
| TITLE : PRINT SUBMENU | | | | DATE : 20/12/91 | | | |
| SYSTEM : R&D ENGINEERING | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|--|---|---|---|---|---|---|
| 123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 | <div style="display: flex; justify-content: space-between;"> <div>PRECISION CO., LTD.</div> <div>99/99/99</div> </div> <hr/> <div style="text-align: center;"> <p>PRINT SPECIFIC RECORD</p> <p>PRODUCT TYPE :- [999999]</p> <p>TO CONTINUE Y/N?</p> </div> | | | | | | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 |
| 123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

REMARK :

Figure E-14 Display screen layout Print specific record

DISPLAY SCREEN LAYOUT

TITLE : MAIN MENU
 SYSTEM : MACHINE SHOP
 PROGRAM NAME :

DATE : 28/12/91
 DESIGNED BY : MR. PRAKIT
 REVIEWED BY :

1 2 3 4 5 6 7 8
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| | | |
|----|---------------------------|----|
| 1 | PRECISION CO., LTD | 1 |
| 2 | | 2 |
| 3 | | 3 |
| 4 | MACHINE SHOP DEPARTMENT | 4 |
| 5 | | 5 |
| 6 | | 6 |
| 7 | | 7 |
| 8 | | 8 |
| 9 | | 9 |
| 10 | MAIN MENU (DIE SET / JIG) | 10 |
| 11 | 1) UPDATE/ADD NEW RECORD | 11 |
| 12 | 2) EDIT/CORRECT RECORD | 12 |
| 13 | 3) DELETE RECORD | 13 |
| 14 | 4) DISPLAY RECORD | 14 |
| 15 | 5) PRINT RECORD | 15 |
| 16 | 6) QUIT | 16 |
| 17 | | 17 |
| 18 | | 18 |
| 19 | | 19 |
| 20 | | 20 |
| 21 | | 21 |
| 22 | | 22 |
| 23 | | 23 |
| 24 | | 24 |

Press ↑ or ↓ to move highlight, press ← to select

1234567890123456789012345678901234567890123456789012345678901234567890

1 2 3 4 5 6 7 8

REMARK :

Figure E-15 Display screen layout Main menu Die set of Machine shop

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---------------------|--|--|--|--|--|--|--|-------------------------|--|--|--|----------|--|--|--|---------------|--|--|--|--|--|--|--|--------------------------|--|--|--|------------------------|--|--|--|-----------------------------------|--|--|--|--|--|--|--|------------------------------------|--|--|--|------------------------|--|--|--|--------------------------|--|--|--|--|--|--|--|------------------------|--|--|--|----------------------------|--|--|--|--|--|--|--|------------------------|--|--|--|--------------------------|--|--|--|----------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG PLATE | | | | DATE : 20/12/91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td colspan="8">PRECISION CO., LTD.</td></tr><tr><td colspan="4">MACHINE SHOP DEPARTMENT</td><td colspan="4">99/99/99</td></tr><tr><td colspan="8">DIE SET / JIG</td></tr><tr><td colspan="4">PRODUCT TYPE :- [999999]</td><td colspan="4">CUSTOMER NO :- [99999]</td></tr><tr><td colspan="8">CUSTOMER NAME :- [X-----25-----X]</td></tr><tr><td colspan="4">PLATE : DRAWING NO :- [99999999PM]</td><td colspan="4">QUANTITY ORDER :- [99]</td></tr><tr><td colspan="4">DRAWING COST :- [999999]</td><td colspan="4"></td></tr><tr><td colspan="4">COST/UNIT :- [9999999]</td><td colspan="4">MATERIAL COST :- [9999999]</td></tr><tr><td colspan="4"></td><td colspan="4">LABOR COST :- [999999]</td></tr><tr><td colspan="4">START DATE :- [99/99/99]</td><td colspan="4">RECEIVE DATE :- [99/99/99]</td></tr></table> | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | PRECISION CO., LTD. | | | | | | | | MACHINE SHOP DEPARTMENT | | | | 99/99/99 | | | | DIE SET / JIG | | | | | | | | PRODUCT TYPE :- [999999] | | | | CUSTOMER NO :- [99999] | | | | CUSTOMER NAME :- [X-----25-----X] | | | | | | | | PLATE : DRAWING NO :- [99999999PM] | | | | QUANTITY ORDER :- [99] | | | | DRAWING COST :- [999999] | | | | | | | | COST/UNIT :- [9999999] | | | | MATERIAL COST :- [9999999] | | | | | | | | LABOR COST :- [999999] | | | | START DATE :- [99/99/99] | | | | RECEIVE DATE :- [99/99/99] | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRECISION CO., LTD. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MACHINE SHOP DEPARTMENT | | | | 99/99/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIE SET / JIG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRODUCT TYPE :- [999999] | | | | CUSTOMER NO :- [99999] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUSTOMER NAME :- [X-----25-----X] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLATE : DRAWING NO :- [99999999PM] | | | | QUANTITY ORDER :- [99] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAWING COST :- [999999] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COST/UNIT :- [9999999] | | | | MATERIAL COST :- [9999999] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | LABOR COST :- [999999] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| START DATE :- [99/99/99] | | | | RECEIVE DATE :- [99/99/99] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 2 3 4 5 6 7 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REMARK : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure E-16 Display screen layout Update/add new record Die set of Machine shop

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG PLATE | | | | DATE : 20/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

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PRECISION CO., LTD.

MACHINE SHOP DEPARTMENT 99/99/99

D I E S E T / J I G

PRODUCT TYPE :- [999999]
CUSTOMER NO :- [99999]

CUSTOMER NAME :- [X-----25-----X]

GIMBAL : DRAWING NO :- [99999999GM]
QANTITY ORDER :- [99]

DRAWING COST :- [999999]

COST/UNIT :- [9999999]

MATERIAL COST :- [9999999]
LABOR COST :- [999999]

START DATE :- [99/99/99]
RECEIVE DATE :- [99/99/99]

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

| |
|----------|
| REMARK : |
|----------|

Figure E-17 Display screen layout Update/add new record Die set of Machine shop

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG PLATE | | | | DATE : 28/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---|---|---|---|---|---|---|
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">PRECISION CO., LTD.</p> <p>MACHINE SHOP DEPARTMENT 99/99/99</p> <hr/> <p style="text-align: center;">D I E S E T / J I G</p> <p>PRODUCT TYPE :- [999999] CUSTOMER NO :- [99999]</p> <p>CUSTOMER NAME :- [X-----25-----X]</p> <p>ARM : DRAWING NO : - [99999999AM] QANTITY ORDER :- [99]</p> <p style="padding-left: 100px;">DRAWING COST : - [999999]</p> <p style="padding-left: 100px;">COST/UNIT : - [999999] MATERIAL COST :- [9999999]</p> <p style="padding-left: 100px;">LABOR COST :- [999999]</p> <p>START DATE : - [99/99/99] RECEIVE DATE :- [99/99/99]</p> </div> | | | | | | | |
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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| REMARK : |
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Figure E-18 Display screen layout Update/add new record Die set of Machine shop

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| TITLE : UPDATE/ADD NEW RECORD DIE SET/JIG PLATE | | | | DATE : 20/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAXIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

| | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

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PRECISION CO., LTD.

MACHINE SHOP DEPARTMENT

99/99/99

D I E S E T / J I G

PRODUCT TYPE :- [999999]
CUSTOMER NO :- [99999]

CUSTOMER NAME :- LX-----25-----XJ

WELDING: DRAWING NO :- [99999999MM]
QANTITY ORDER :- [99]

DRAWING COST :- [999999]

COST/UNIT :- [9999999]

MATERIAL COST :- [9999999]

LABOR COST :- [999999]

START DATE :- [99/99/99]
RECEIVE DATE :- [99/99/99]

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

REMARK :

Figure E-19 Display screen layout Update/add new record Die set of Machine shop

| | | | | | | | |
|-----------------------|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : EDIT RECORD | | | | DATE : 20/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | |

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|-------------------------|---|---|---|----------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| PRECISION CO., LTD. | | | | | | | |
| MACHINE SHOP DEPARTMENT | | | | 99/99/99 | | | |
| EDIT RECORD | | | | | | | |
| PRODUCT TYPE : [999999] | | | | | | | |
| TO CONTINUE Y/N? | | | | | | | |

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890123456789012345678901234567890123456789012345678901234567890 | | | | | | | |

REMARK :

Figure E-20 Display screen layout Edit/correct record Die set of Machine shop

DISPLAY SCREEN LAYOUT

TITLE : DELETE
SYSTEM : MACHINE SHOP
PROGRAM NAME :

DATE : 20/12/91
DESIGNED BY : MR. PRAKIT
REVIEWED BY :

1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

| | | |
|----|------------------------------|----|
| 1 | PRECISION CO., LTD. | 21 |
| 2 | | 22 |
| 3 | MACHINE SHOP DEPARTMENT | 23 |
| 4 | | 24 |
| 5 | | 25 |
| 6 | 99/99/99 | 26 |
| 7 | | 27 |
| 8 | | 28 |
| 9 | | 29 |
| 10 | DELETE RECORD (DIE SET/ JIG) | 30 |
| 11 | | 31 |
| 12 | | 32 |
| 13 | PRODUCT TYPE : [999999] | 33 |
| 14 | | 34 |
| 15 | | 35 |
| 16 | | 36 |
| 17 | | 37 |
| 18 | | 38 |
| 19 | | 39 |
| 20 | | 40 |
| 21 | | 41 |
| 22 | | 42 |
| 23 | TO CONTINUE Y/N? | 43 |
| 24 | | 44 |

123456789012345678901234567890123456789012345678901234567890

1 2 * 3 4 OMNI 5 6 * 7 8

REMARK :

Figure E-21 Display screen layout Delete record Die set of Machine shop

| DISPLAY SCREEN LAYOUT | | | | | | | |
|-----------------------|--|--|--|--------------------------|--|--|--|
| TITLE : DISPLAY MENU | | | | DATE : 20/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAXIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

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PRECISION CO., LTD.

MACHINE SHOP DEPARTMENT 99/99/99

DISPLAY RECORD

1. DISPLAY ALL PRODUCT
2. DISPLAY SPECIFIC PRODUCT
3. Exit to Main menu

Press ↑ or ↓ to move highlight, press ← to select

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|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 | 1234567890 |

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| REMARK : |
|----------|

Figure E-22 Display screen layout Submenu Display record Die set of Machine record

| | | | | | | | |
|-----------------------|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : DISPLAY | | | | DATE : 20/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |

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PRECISION CO., LTD.

MACHINE SHOP DEPARTMENT99/99/99

DISP L A Y S P E C I F I C R E C O R D

PRODUCT TYPE : [999999]

TO CONTINUE Y/N?

123456789012345678901234567890123456789012345678901234567890

12345678

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|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|

REMARK :

Figure E-23 Display screen layout Display Specific record Die set of Machine shop

E - 23

| DISPLAY SCREEN LAYOUT | | | | | | | |
|---|--|--|--|--|--|--|--|
| TITLE : PRINT MAIN SYSTEM : MACHINE SHOP PROGRAM NAME : | DATE : 28/12/91 DESIGNED BY : MR. PRAKIT REVIEWED BY : | | | | | | |
| <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> 12345678 </div> <div style="border: 1px solid black; padding: 10px; margin: 0 auto; width: 80%;"> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> PRECISION CO., LTD. 99/99/99 </div> <hr style="border: 0.5px solid black;"/> <p style="text-align: center; margin: 10px 0;">PRINT RECORD</p> <ol style="list-style-type: none"> 1. PRINT ALL RECORD 2. PRINT SPECIFIC RECORD 3. Exit to Main Menu <p style="text-align: center; margin-top: 10px;">Press ↑ or ↓ to move highlight, press ← to select</p> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> 12345678 </div> | | | | | | | |
| REMARK : | | | | | | | |

Figure E-24 Display screen layout Sub menu Print record Die set of Machine shop

| | | | | | | | |
|---|--|--|--|--------------------------|--|--|--|
| DISPLAY SCREEN LAYOUT | | | | | | | |
| TITLE : PRINT SUBMENU | | | | DATE : 28/12/91 | | | |
| SYSTEM : MACHINE SHOP | | | | DESIGNED BY : MR. PRAKIT | | | |
| PROGRAM NAME : | | | | REVIEWED BY : | | | |
| <div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div><div><div>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24</div><div><div>PRECISION CO., LTD.</div><div>MACHINE SHOP DEPARTMENT99/99/99</div><div>PRINT SPECIFIC RECORD</div><div>PRODUCT TYPE :- [999999]</div><div>TO CONTINUE Y/N?</div></div><div>1234567890123456789012345678901234567890123456789012345678901234567890</div><div>12 3 4 5 6 7 8</div></div></div> | | | | | | | |
| REMARK : | | | | | | | |

Figure E-25 Display screen layout Print specific record Die set of Machine shop



**Appendix F : Manual &
Programme Listing**

APPENDIX F

Manual & Programme listing

1. Data Structure :-

Product file :- No of field 15

| Field Name | Type | Width | Dec. |
|------------------|-----------|-------|------|
| 1. Product_type | Numeric | 5 | |
| 2. Customer_no | Numeric | 4 | |
| 3. Customer_name | Character | 25 | |
| 4. Assy_dr_no | Numeric | 5 | |
| 5. Plat_dr_no | Numeric | 5 | |
| 6. Gimb_dr_no | Numeric | 5 | |
| 7. Arm_dr_no | Numeric | 5 | |
| 8. Assy_dcost | Numeric | 4 | |
| 9. Plat_dcost | Numeric | 4 | |
| 10. Gimb_dcost | Numeric | 4 | |
| 11. Arm_dcost | Numeric | 4 | |
| 12. As_ap_date | Date | 8 | |
| 13. Pl_ap_date | Date | 8 | |
| 14. Gi_ap_date | Date | 8 | |
| 15. Ar_ap_date | Date | 8 | |
| Total | | 103 | |

Die file :- No of field 27

| Field Name | Type | Width | Dec. |
|------------------|-----------|-------|------|
| 1. Product_type | Numeric | 5 | |
| 2. Customer_no | Numeric | 4 | |
| 3. Customer_name | Character | 25 | |
| 4. Pl_didw_no | Character | 8 | |
| 5. Pl_di_cost | Numeric | 5 | |
| 6. Pl_vd_name | Character | 30 | |
| 7. Pl_qty_ord | Numeric | 2 | |
| 8. Pl_cost_un | Numeric | 6 | |
| 9. Pl_rc_date | date | 8 | |
| 10. Ar_didw_no | Character | 8 | |
| 11. Ar_di_cost | Numeric | 5 | |
| 12. Ar_vd_name | Character | 30 | |
| 13. Ar_qty_ord | Numeric | 2 | |
| 14. Ar_cost_un | Numeric | 6 | |
| 15. Ar_rc_date | date | 8 | |
| 16. Gi_didw_no | Character | 8 | |
| 17. Gi_di_cost | Numeric | 5 | |
| 18. Gi_vd_name | Character | 30 | |

| | | |
|----------------|-----------|----|
| 19. Gi_qty_ord | Numeric | 2 |
| 20. Gi_cost_un | Numeric | 6 |
| 21. Gi_rc_date | date | 8 |
| 22. We_didw_no | Character | 8 |
| 23. We_di_cost | Numeric | 5 |
| 24. We_vd_name | Character | 30 |
| 25. We_qty_ord | Numeric | 2 |
| 26. We_cost_un | Numeric | 6 |
| 27. We_rc_date | date | 8 |

| | | |
|-------|--|-----|
| Total | | 271 |
|-------|--|-----|

Pack file : No of field 8

| Field Name | Type | Width | Dec. |
|------------------|-----------|-------|------|
| 1. Product_type | Numeric | 5 | |
| 2. Customer_no | Numeric | 4 | |
| 3. Customer_name | Character | 25 | |
| 4. Pack_dr_no | Character | 8 | |
| 5. Pk_dr_cost | Numeric | 5 | |
| 6. Pk_ap_date | Date | 8 | |
| 7. Pk_vendor | Character | 30 | |
| 8. Pk_cost_un | Numeric | 6 | |
| Total | | 92 | |

Mdie file : No of field 35

| Field Name | Type | Width | Dec. |
|------------------|-----------|-------|------|
| 1. Product_type | Numeric | 5 | |
| 2. Customer_no | Numeric | 4 | |
| 3. Customer_name | Character | 25 | |
| 4. Pl_didw_no | Character | 8 | |
| 5. Pl_di_cost | Numeric | 5 | |
| 6. Pl_qty_ord | Numeric | 2 | |
| 7. Pl_cost_un | Numeric | 6 | |
| 8. Pl_ma_cost | Numeric | 6 | |
| 9. Pl_la_cost | Numeric | 5 | |
| 10. Pl_st_date | Date | 8 | |
| 11. Pl_rc_date | Date | 8 | |
| 12. Ar_didw_no | Character | 8 | |
| 13. Ar_di_cost | Numeric | 5 | |
| 14. Ar_qty_ord | Numeric | 2 | |
| 15. Ar_cost_un | Numeric | 6 | |
| 16. Ar_ma_cost | Numeric | 6 | |
| 17. Ar_la_cost | Numeric | 5 | |
| 18. Ar_st_date | Date | 8 | |
| 19. Ar_rc_date | Date | 8 | |
| 20. Gi_didw_no | Character | 8 | |
| 21. Gi_di_cost | Numeric | 5 | |

| | | |
|----------------|-----------|---|
| 22. Gi_qty_ord | Numeric | 2 |
| 23. Gi_cost_un | Numeric | 6 |
| 24. Gi_ma_cost | Numeric | 6 |
| 25. Gi_la_cost | Numeric | 5 |
| 26. Gi_st_date | Date | 8 |
| 27. Gi_rc_date | Date | 8 |
| 28. We_didw_no | Character | 8 |
| 29. We_di_cost | Numeric | 5 |
| 30. We_qty_ord | Numeric | 2 |
| 31. We_cost_un | Numeric | 6 |
| 32. We_ma_cost | Numeric | 6 |
| 33. We_la_cost | Numeric | 5 |
| 34. We_st_date | Date | 8 |
| 35. We_rc_date | Date | 8 |

Total 227

2. Processing :-

Command of the process are as following :-

2.1 Update : to input new record as per data structure record

2.2 Edit : to correct or change existing records

2.3 Delete : to eliminate (absolute) records and relative data file such as Product, die and pack

2.4 Display: to display the existing records (all record and specific record)

2.5 Print : to print hard copy of existing records (all record and specific record)

To operate the programme press arrow up or down to move highlight and press enter to select the command

3. Programme listing :-

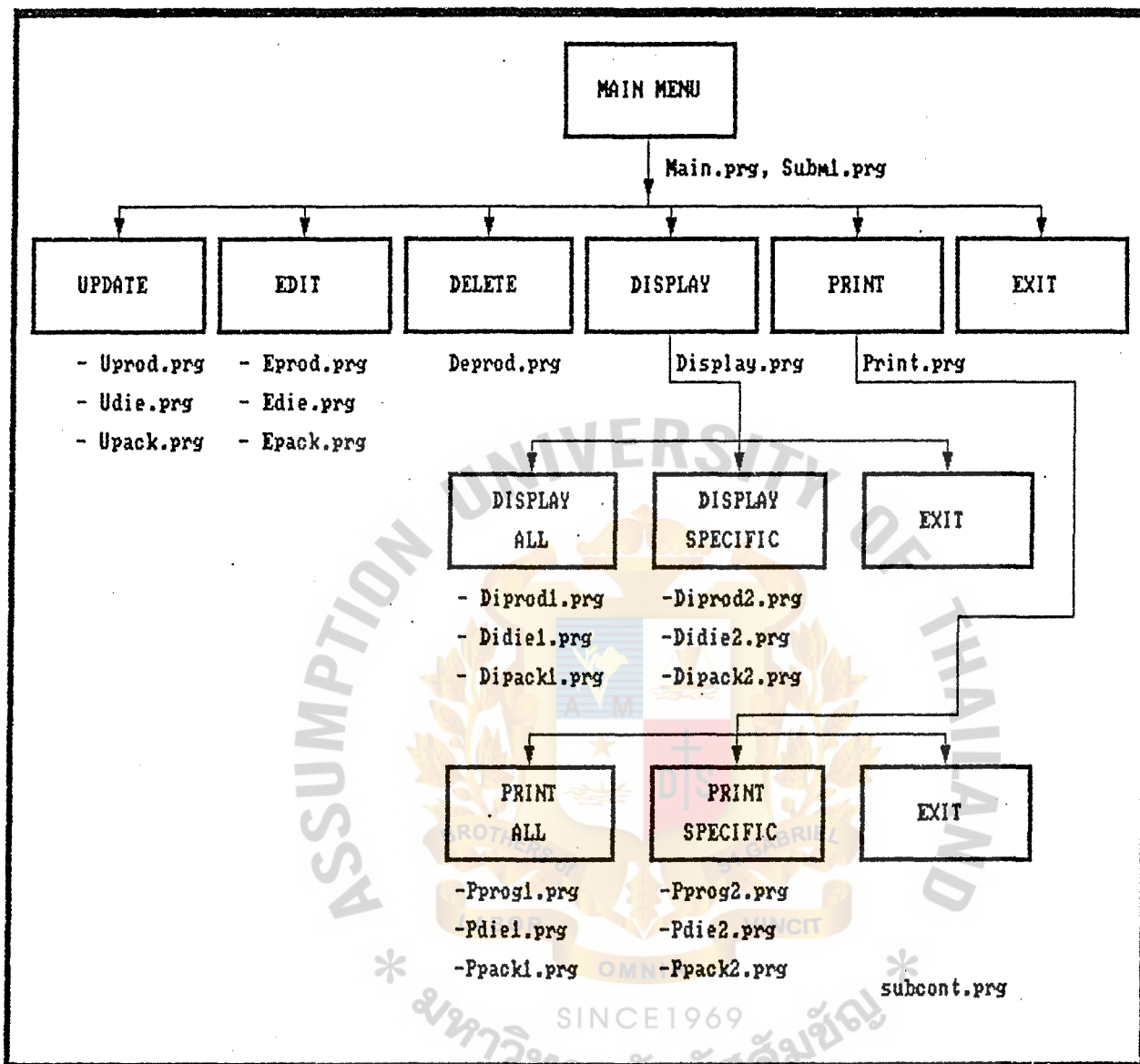


Figure F-1 Main System flowchart of R&D Engineering

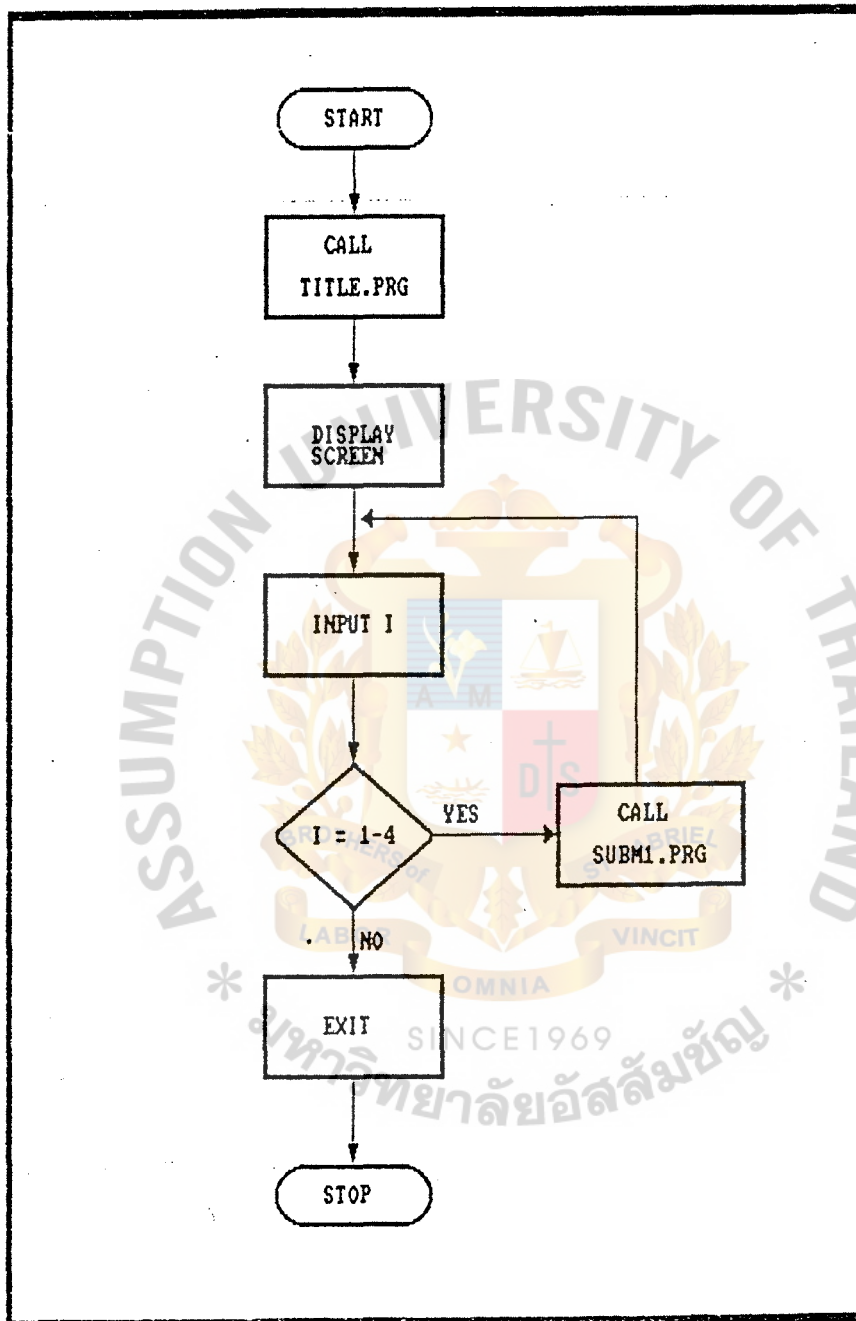


Figure F-2 Program flowchart of main menu (R&D Engineering system)

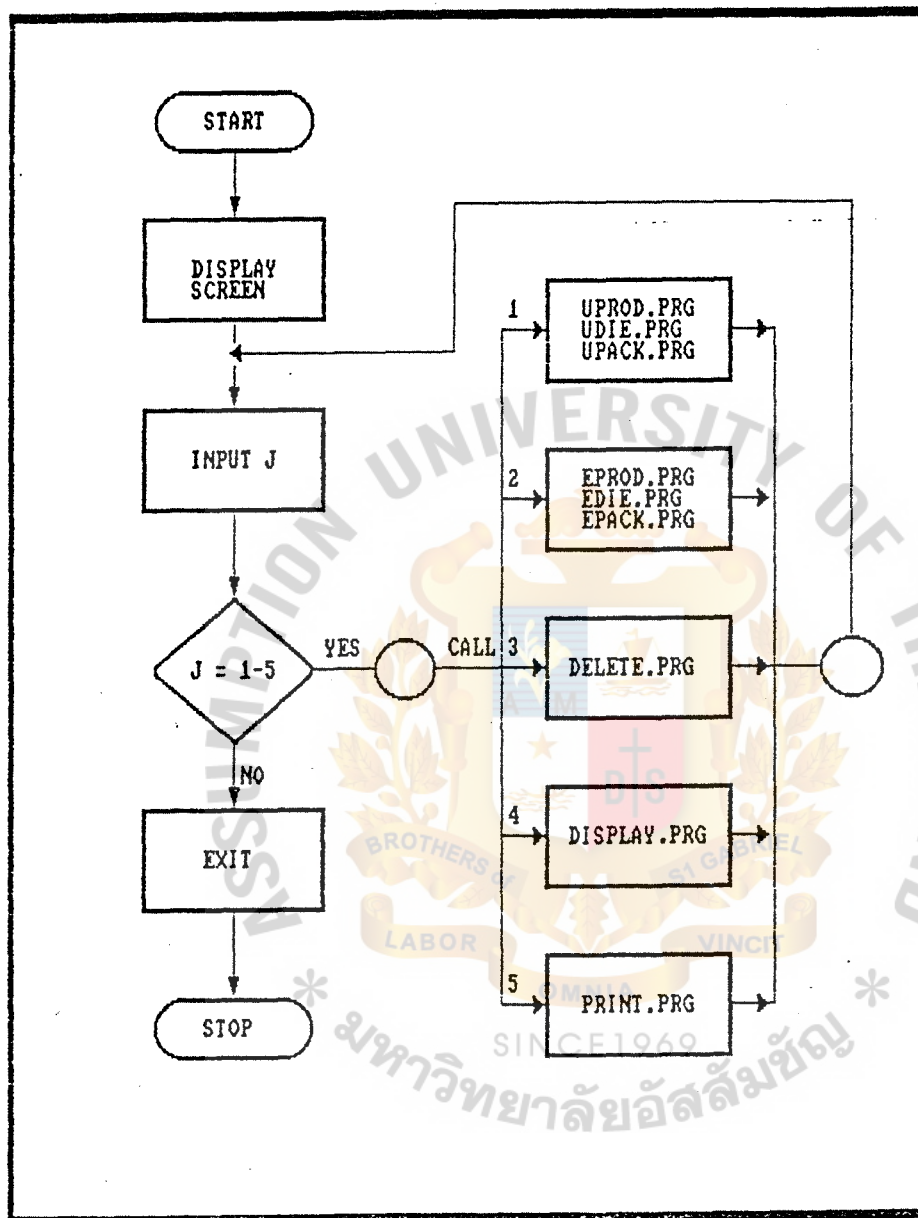


Figure F-3 Program flowchart of Submenu (R&D Engineering system)

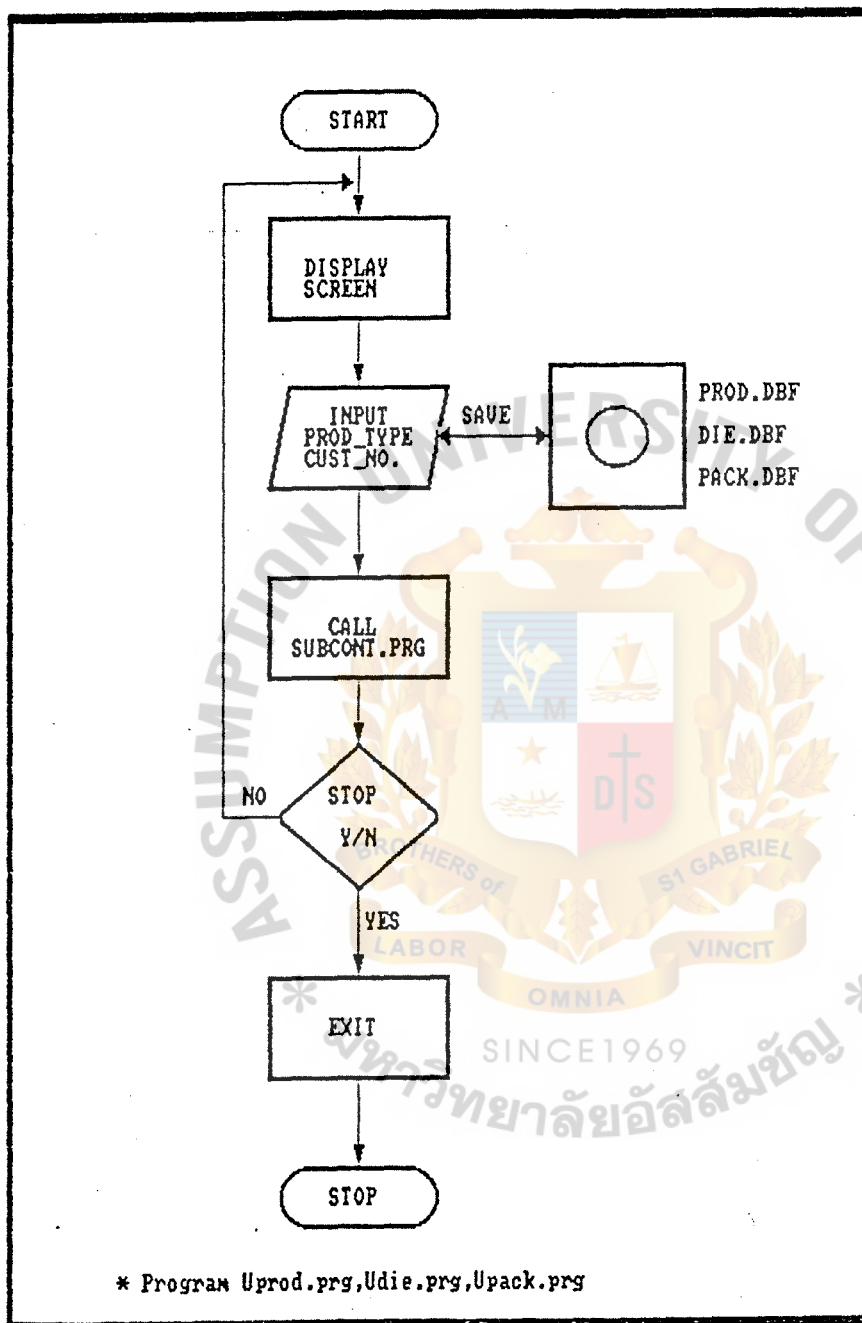


Figure F-4 Program flowchart of Update/add new record Product.dbf
Die.dbf, Pack.dbf (R&D Engineering system)

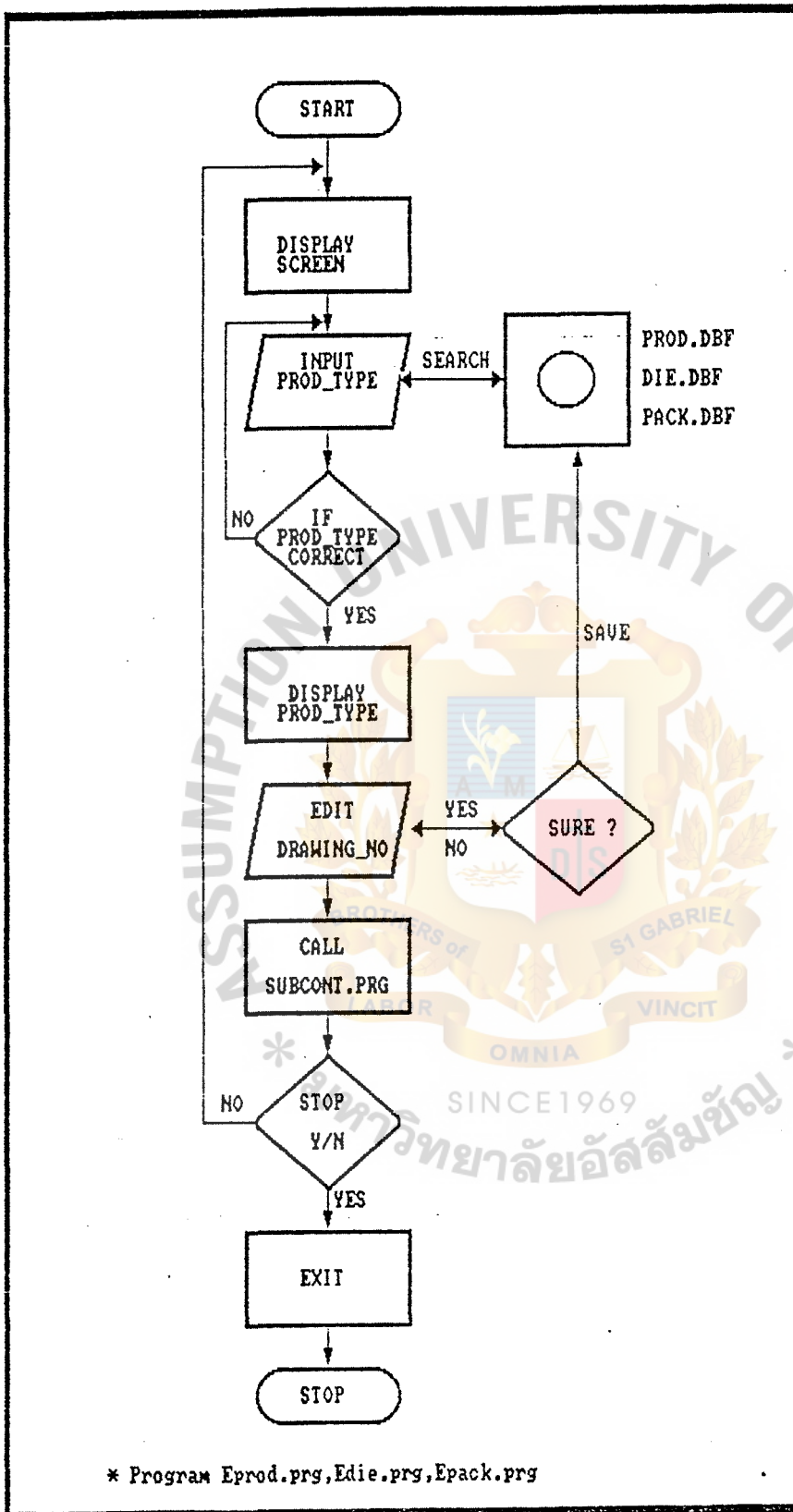


Figure F-5 Program flowchart of Edit/correct record Product.dbf
Die.dbf, Pack.dbf (R&D Engineering system)

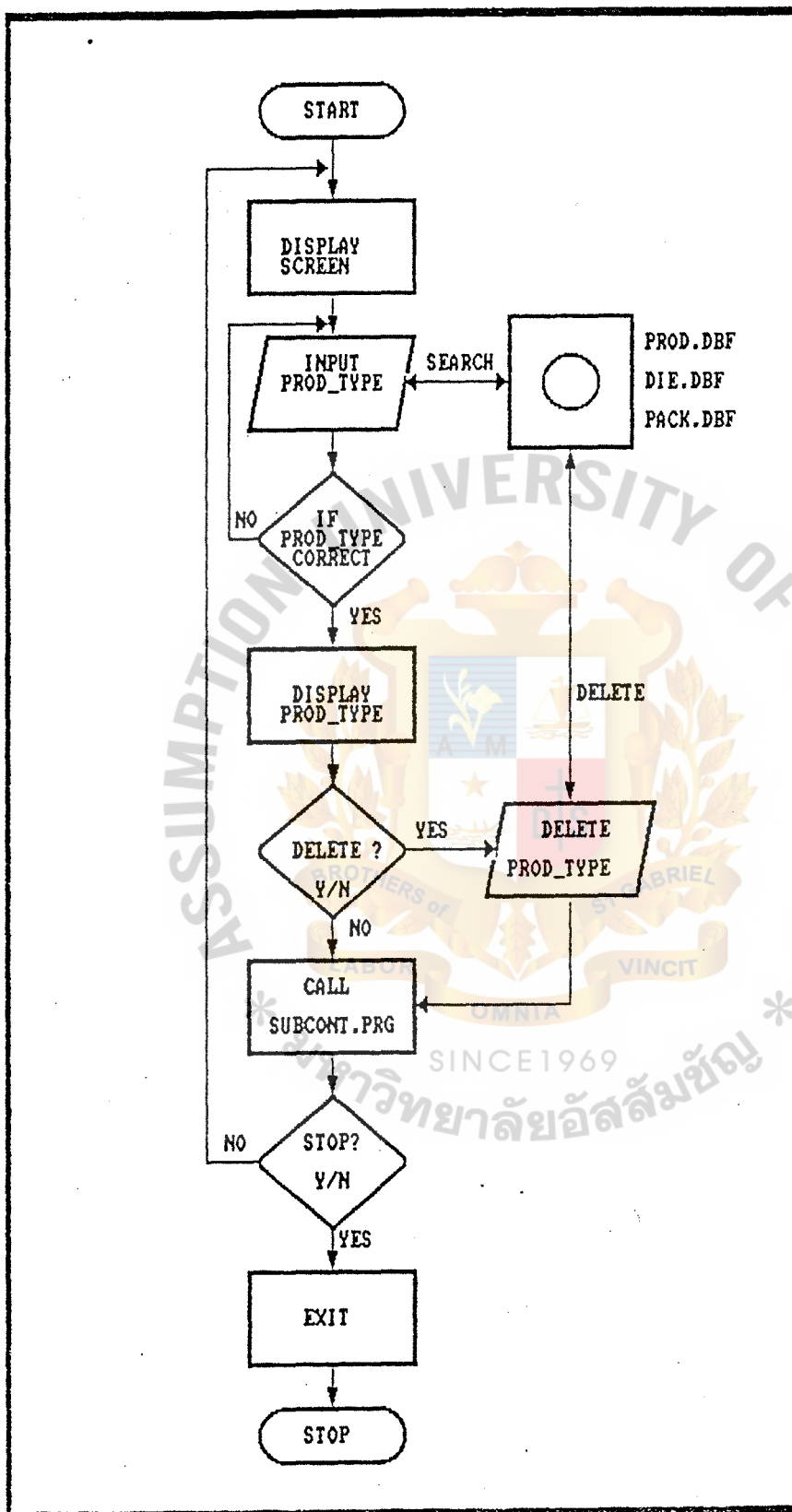


Figure F-6 Program flowchart of Delete record (R&D Engineering system)

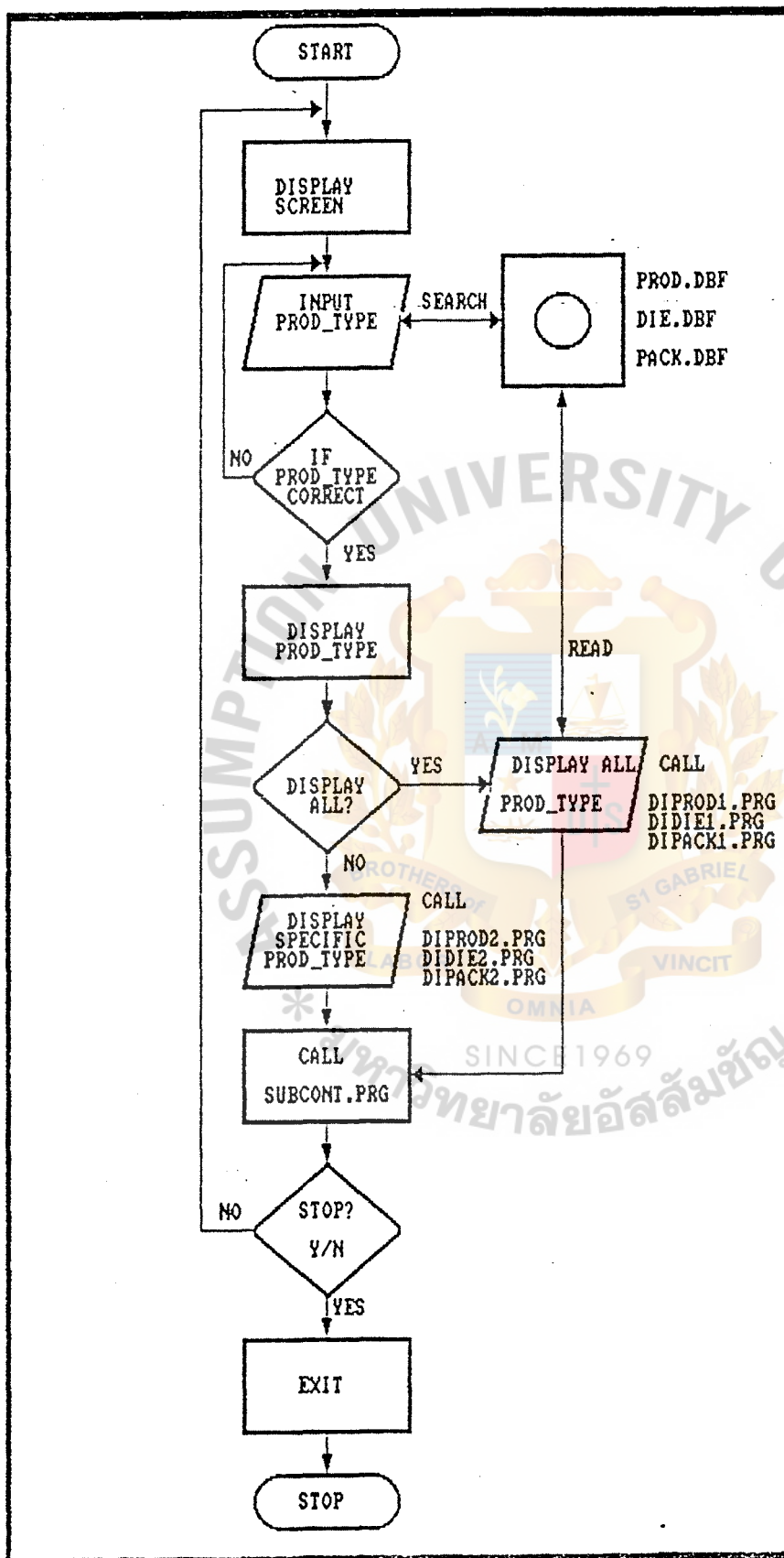


Figure F-7 Program flowchart of Display record (R&D Engineering system)

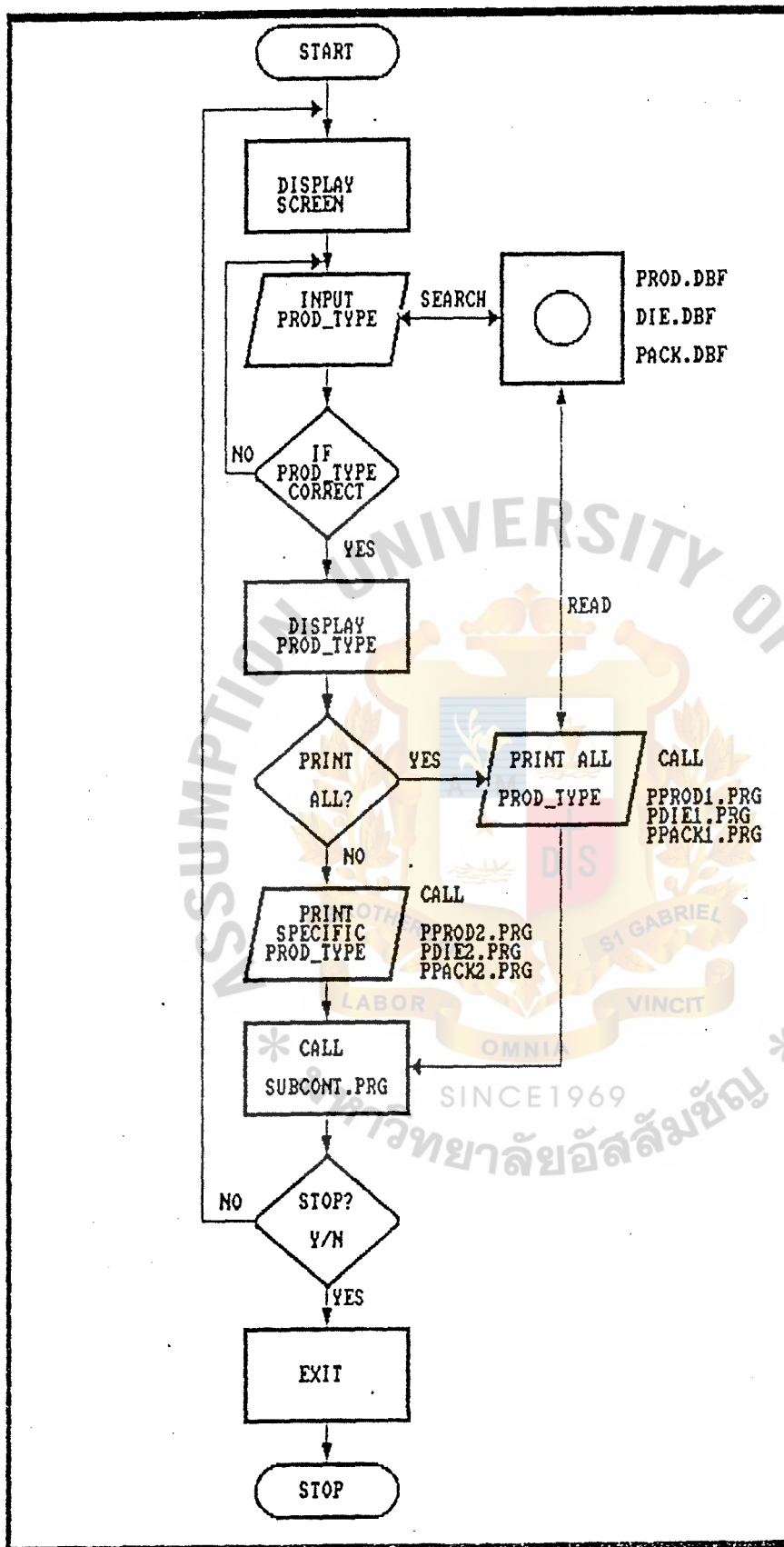


Figure F-8 Program flowchart of Print record (R&D Engineering system)

```

**MAIN.PRg***
*PURPOSE TO DISPLAY MAIN MENU****
CLEAR
SET TALK OFF
SET ECHO OFF
SET STAT OFF
IF ISCOLOR()
    Normal = "W/B"
    Inverse = "GR/W"
ELSE
    Normal = "W"
    Inverse = "/W"
ENDIF
PUBLIC i,
i = 1
Title1 = "PRECISION CO., LTD"
Title2 = "R&D ENGINEERING DEPARTMENT"
Title3 = "M A I N   M E N U"
c1 = "1. PRODUCT   "
c2 = "2. DIE SET/JIG"
c3 = "3. PACKAGING  "
c4 = "4. Quit       "
DO WHILE i#4
    r = 13
    Choice = "c1"
    SET COLOR TO &Normal
    DO Title WITH Title1,Title2
    Length = LEN(Title3)
    Col = INT((80-Length)/2)
    @8,Col SAY Title3
    SET COLOR TO &Normal
    @ 13,36 SAY c1
    @ 15,36 SAY c2
    @ 17,36 SAY c3
    @ 19,36 SAY c4
    SET COLOR TO &Normal+
    @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
    + " to move highlight, and press ";
    + CHR(17) + CHR(217) + " to select"
    SET COLOR TO &Inverse
    @ r, 36 SAY &Choice
    x = 0
DO WHILE x #13
    x = 0
    DO WHILE x = 0
        x = INKEY()
    ENDDO
    SET COLOR TO &Normal
    @ r,36 SAY &Choice
DO CASE
    CASE x = 24
        r = r + 2
        r = IIF (r>19,13,r) 1 2

```



```

i = VAL (RIGHT(Choice,1))+1
i = IIF (i>4,1,i)
choice = "c" + STR(i,1)
SET COLOR TO &Inverse
@r,36 SAY &Choice
CASE x = 5
r = r - 2
r = IIF (r<13,19,r)
i = VAL (RIGHT(Choice,1))-1
i = IIF (i<1,4,i)
Choice = "c" + STR(i,1)
SET COLOR TO &Inverse
@r,36 SAY &Choice
CASE x = 13
SET COLOR TO &Inverse
@r,36 SAY &Choice
STORE SPACE(25) to Sub,Sub1,Sub2,Sub3,
Sub4,Sub5,Sub6
Sub1 = "1. UPDATE/ADD NEW RECORD"
Sub2 = "2. EDIT/CORRECT RECORD"
Sub3 = "3. DELETE RECORD"
Sub4 = "4. DISPLAY RECORD"
Sub5 = "5. PRINT"
Sub6 = "6. Exit To Main Menu"
x1 = 8+2*(i-1)
y1 = 40
x2 = x1 + 1
y2 = 67
DO CASE
CASE i = 1
Sub = "SUB MENU :- P R O D U C T"
Subx = "SUB MENU :- DISPLAY PRODUCT"
Suby = "SUB MENU :- PRINT PRODUCT"
CASE i = 2
Sub = "SUB MENU :- DIE SET/ JIG"
Subx = "SUB MENU :- DISPLAY DIE SET/ JIG"
Suby = "SUB MENU :- PRINT DIE SET/ JIG"
CASE i = 3
Sub = "SUB MENU :- PACKAGING"
Subx = "SUB MENU :- DISPLAY PACKAGING"
Suby = "SUB MENU :- PRINT PACKAGING"
CASE i = 4
EXIT
ENDCASE
SET COLOR TO &Normal
DO Subm1 WITH Sub,Sub1,Sub2,Sub3,Sub4,
Sub5,Sub6,Subx,Suby
ENDCASE
ENDDO
SET COLOR TO &Normal
CLEAR ALL

```

```

**SUBM1.PRG**
PARAMETER Sub,Sub1,Sub2,Sub3,Sub4,Sub5,Sub6,Subx,Suby
PUBLIC j
j = 1
Normal = "W"
Inverse = "I"
DO WHILE j#6
  j = 1
  r = 11
  Choice2 = "Sub1"
  CLEAR
  DO Title WITH Title1,Title2
  Length = LEN(Sub)
  Col = INT((80-Length)/2)
  @ 8 ,Col SAY Sub
  SET COLOR TO &Normal
  @ 11,30 SAY Sub1
  @ 13,30 SAY Sub2
  @ 15,30 SAY Sub3
  @ 17,30 SAY Sub4
  @ 19,30 SAY Sub5
  @ 21,30 SAY Sub6
  SET COLOR TO &Normal+
  @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
  + " to move highlight, and press ";
  + CHR(17) + CHR(217) + " to select"
  SET COLOR TO &Inverse
  @ r, 30 SAY &Choice2
  x = 0
  DO WHILE x #13
    x = 0
    DO WHILE x = 0
      x = INKEY()
    ENDDO
    SET COLOR TO &Normal
    @ r,30 SAY &Choice2
    DO CASE
      CASE x = 24
        r = r + 2
        r = IIF (r>21,11,r)
        j = VAL (RIGHT(Choice2,1))+1
        j = IIF (j>6,1,j)
        Choice2 = "Sub" + STR(j,1)
        SET COLOR TO &Inverse
        @r,30 SAY &Choice2
      CASE x = 5
        r = r - 2
        r = IIF (r<11,21,r)
        j = VAL (RIGHT(Choice2,1))-1
        j = IIF (j<1,6,j)
        Choice2 = "Sub" + STR(j,1)
        SET COLOR TO &Inverse
        @r,30 SAY &Choice2
    ENDCASE
  ENDDO
  j = j + 1

```

```

CASE x = 13
  SET COLOR TO &Inverse
  @r,30 SAY &Choice2
  IF j = 6
    EXIT
  ENDIF
DO CASE
  CASE i = 1
    DO CASE
      CASE j = 1
        DO Uprod
      CASE j = 2
        DO Eprod
      CASE j = 3
        DO Deprod
      CASE j = 4
        DO Display WITH Subx
      CASE j = 5
        DO Print WITH Suby
      CASE j = 6
        EXIT
    ENDCASE
  CASE i = 2
    DO CASE
      CASE j = 1
        DO Udie
      CASE j = 2
        DO Edie
      CASE j = 3
        DO Deprod
      CASE j = 4
        DO Display WITH Subx
      CASE j = 5
        DO Print WITH Suby
      CASE j = 6
        EXIT
    ENDCASE
  CASE i = 3
    DO CASE
      CASE j = 1
        DO Upack
      CASE j = 2
        DO Epack
      CASE j = 3
        DO Deprod
      CASE j = 4
        DO Display WITH Subx
      CASE j = 5
        DO Print WITH Suby
      CASE j = 6
        EXIT
    ENDCASE
ENDCASE

```

ENDCASE
ENDDO
ENDDO
SET COLOR TO &Normal
@1,0 CLEAR TO 23,79
RETURN
END OF PROGRAM



```

***UPROD.PRG***
SET CONFIRM OFF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
CLOSE ALL
CLEAR
SELECT 1
USE Product INDEX Iprod
c="Y"
DO WHILE c="Y"
    @23,0 CLEAR TO 24,79
    STORE SPACE(25) TO T_name
    STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
    STORE 0 TO T_arm,T_arwr,T_gim,T_gdrw
    STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
    DO Title WITH Title1,Title2
    Title3 = "UPDATE :- P R O D U C T "
    Length = LEN(Title3)
    Col=INT((80-Length)/2)
    @8,Col SAY Title3
    @10,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
    @10,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
    @12,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@"
    @15,5 SAY "ASSEMBLY DRAWING NO:-" GET T_ass PICT "99999"
    @15,37 SAY "DRAWING COST :- " GET T_adrw PICT "9999"
    @15,58 SAY "APP. DATE :- " GET T_adate
    @17,5 SAY "PLATE DRAWING NO:-" GET T_plate PICT "99999"
    @17,37 SAY "DRAWING COST :- " GET T_pdrw PICT "9999"
    @17,58 SAY "APP. DATE :- " GET T_pdate
    @19,5 SAY "ARM DRAWING NO :- " GET T_arm PICT "99999"
    @19,37 SAY "DRAWING COST :- " GET T_arwr PICT "9999"
    @19,58 SAY "APP. DATE :- " GET T_ardate
    @21,5 SAY "GIMBAL DRAWING NO:-" GET T_gim PICT "99999"
    @21,37 SAY "DRAWING COST :- " GET T_gdrw PICT "9999"
    @21,58 SAY "APP. DATE :- " GET T_gdate
    READ
    APPEND BLANK
    REPLACE product_ty WITH T_prod,custom_no WITH T_cus
    REPLACE cust_name WITH T_name
    REPLACE assy_dr_no WITH T_ass,assy_dcost WITH T_adrw
    REPLACE as_ap_date WITH T_adate
    REPLACE plat_dr_no WITH T_plate,plat_dcost WITH T_pdrw
    REPLACE pl_ap_date WITH T_pdate
    REPLACE arm_dr_no WITH T_arm,arm_dcost WITH T_adrw
    REPLACE ar_ap_date WITH T_ardate
    REPLACE gimb_dr_no WITH T_gim,gimb_dcost WITH T_gdrw
    REPLACE gi_ap_date WITH T_gdate
    DO Subcont
ENDDO
USE
ERASE Iprod.ndx

```


USE Product
INDEX ON product_ty TO Iprod
USE
RETURN
END OF PROGRAM



```

***EDIE.PRG***
*PURPOSE :TO EDIT OR CORRECT DATA OF DIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "E D I T   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title6
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Die INDEX Idie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE SPACE(8) TO T_pldrw,T_arldr,T_gldr,T_wedr
        STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
        STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
        STORE 0 TO T_plord,T_arord,T_giord,T_weord
        STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
        STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
        STORE ar_didw_no TO T_arldr
        STORE gi_didw_no TO T_gldr
        STORE we_didw_no TO T_wedr
        STORE pl_di_cost TO T_plcost
        STORE ar_di_cost TO T_arcost
        STORE gi_di_cost TO T_gicost
        STORE we_di_cost TO T_wecost
        STORE pl_vd_name TO T_plname
    
```

```

STORE ar_vd_name TO T_arname
STORE gi_vd_name TO T_giname
STORE we_vd_name TO T_wename
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_rc_date TO T_pldate
STORE ar_rc_date TO T_ardate
STORE gi_rc_date TO T_gidate
STORE we_rc_date TO T_wedate
@7,0 CLEAR TO 23,79
@7,Col SAY Title6
@9,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
@9,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
@11,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@!"
@13,5 SAY"PLATE:DRAWING NO:-"GET T_pldrw PICT"XXXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_plcost PICT "9999"
@15,13 SAY "VENDOR NAME :- " GET T_plname PICT "@!"
@17,13 SAY "QUANTITY ORDER:- " GET T_plord PICT "99"
@19,13 SAY "COST/UNIT :- " GET T_plunit PICT "999999"
@21,13 SAY "RECIEVE DATE :- " GET T_pldate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY "ARM:DRAWING NO:"GET T_ardrw PICT "XXXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_arcost PICT "9999"
@15,13 SAY "VENDOR NAME :- " GET T_arname PICT "@!"
@17,13 SAY "QUANTITY ORDER:- " GET T_arord PICT "99"
@19,13 SAY "COST/UNIT :- " GET T_arunit PICT "999999"
@21,13 SAY "RECIEVE DATE :- " GET T_ardate
READ
@13,0 CLEAR TO 23,79
@13,5SAY"GIMBAL:DRAWING NO:-"GET T_gidrw PICT"XXXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_gicost PICT "9999"
@15,14 SAY "VENDOR NAME :- " GET T_giname PICT "@!"
@17,14 SAY "QUANTITY ORDER:- " GET T_giord PICT "99"
@19,14 SAY "COST/UNIT :- " GET T_giunit PICT "999999"
@21,14 SAY "RECIEVE DATE :- " GET T_gidate
READ
@13,0 CLEAR TO 23,79
@13,5SAY"WELDING DRAWING NO:-"GET T_wedrw PICT"XXXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_wecost PICT "9999"
@15,14 SAY "VENDOR NAME :- " GET T_wename PICT "@!"
@17,14 SAY "QUANTITY ORDER:- " GET T_weord PICT "99"
@19,14 SAY "COST/UNIT :- " GET T_weunit PICT "999999"
@21,14 SAY "RECIEVE DATE :- " GET T_wedate
READ
REPLACE product_ty WITH T_prod,custom_no WITH T_cus

```

```

REPLACE cust_name WITH T_name
REPLACE pl_didw_no WITH T_pldrw,ar_didw_no WITH T_arldr
REPLACE gi_didw_no WITH T_gldr,we_didw_no WITH T_wldr
REPLACE pl_di_cost WITH T_plcost,
      ar_di_cost WITH T_arcost
REPLACE gi_di_cost WITH T_gicost,
      we_di_cost WITH T_wecost
REPLACE pl_vd_name WITH T_plname,
      ar_vd_name WITH T_arname
REPLACE gi_vd_name WITH T_giname,
      we_vd_name WITH T_wename
REPLACE pl_qty_ord WITH T_plord,
      ar_qty_ord WITH T_arord
REPLACE gi_qty_ord WITH T_giord,
      we_qty_ord WITH T_weord
REPLACE pl_cost_un WITH T_plunit,
      ar_cost_un WITH T_arunit
REPLACE gi_cost_un WITH T_giunit,
      we_cost_un WITH T_weunit
REPLACE pl_rc_date WITH T_pldate,
      ar_rc_date WITH T_ardate
REPLACE gi_rc_date WITH T_gidate,
      we_rc_date WITH T_wedate
DO Subcont
ENDIF
ENDDO
USE
ERASE Idie.ndx
USE die
INDEX ON product_ty TO Idie
USE
RETURN
**END OF PROGRAM**

```

```

**UPACK.PRG***
*PURPOSE :TO EDIT OR CORRECT DATA OF PACK.DBF
SET CONFIRM OFF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
CLOSE ALL
CLEAR
SELECT 1
USE Pack INDEX Ipack
c="Y"
DO WHILE c="Y"
    @23,0 CLEAR TO 24,79
    STORE SPACE(25) TO T_name
    STORE SPACE(30) TO T_vname
    STORE SPACE(8) TO T_drno
    STORE 0 TO T_prod,T_cus,T_drcost,T_costun
    STORE CTOD('') TO T_apdate
    DO Title WITH Title1,Title2
    Title9 = "UPDATE :- P A C K A G I N G"
    Length = LEN(Title9)
    Col=INT((80-Length)/2)
    @8,Col SAY Title9
    @10,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
    @10,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
    @12,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@!"
    @15,5 SAY "PACKAGING DRAWING NO:-"GET T_drno PICT"XXXXX!"
    @15,45 SAY "DRAWING COST :- " GET T_drcost PICT "99999"
    @17,16 SAY "APPROVAL DATE:- " GET T_apdate
    @19,16 SAY "VENDOR NAME :- " GET T_vname PICT "@!"
    @21,16 SAY "COST/UNIT :- " GET T_costun PICT "9999.99"
    READ
    APPEND BLANK
    REPLACE product_ty WITH T_prod,custom_no WITH T_cus
    REPLACE cust_name WITH T_name
    REPLACE pack_dr_no WITH T_drno,pk_dr_cost WITH T_drcost
    REPLACE pk_ap_date WITH T_apdate
    REPLACE pk_vendor WITH T_vname
    REPLACE pk_cost_un WITH T_costun
    DO Subcont
ENDDO
USE
ERASE Ipack.ndx
USE Pack
INDEX ON product_ty TO Ipack
USE
RETURN
**END OF PROGRAM**

```



```

*EPROG.PRG**
*PURPOSE :TO EDIT OR CORRECT DATA OF PRODUCT.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title3 = "E D I T   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title3)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title3
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Product INDEX Iprod
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
        STORE 0 TO T_arm,T_aradrw,T_gim,T_gdrw
        STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE assy_dr_no TO T_ass
        STORE assy_dcost TO T_adrw
        STORE as_ap_date TO T_adate
        STORE plat_dr_no TO T_plate
        STORE plat_dcost TO T_pdrw
        STORE pl_ap_date TO T_pdate
        STORE arm_dr_no TO T_arm
        STORE arm_dcost TO T_aradrw
        STORE ar_ap_date TO T_ardate
        STORE gim_dr_no TO T_gim
        STORE gim_dcost TO T_gdrw
        STORE gi_ap_date TO T_gdate
        @9,0 CLEAR TO 23,79
        @10,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
    
```

```

@10,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
@12,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@"
@15,5 SAY "ASSEMBLY DRAWING NO:-" GET T_ass PICT "99999"
@15,37 SAY "DRAWING COST :- " GET T_adrw PICT "9999"
@15,58 SAY "APP. DATE :- " GET T_adata
@17,5 SAY "PLATE DRAWING NO:-" GET T_plate PICT "99999"
@17,37 SAY "DRAWING COST :- " GET T_pdrw PICT "9999"
@17,58 SAY "APP. DATE :- " GET T_pdate
@19,5 SAY "ARM DRAWING NO :- " GET T_arm PICT "99999"
@19,37 SAY "DRAWING COST :- " GET T_adrw PICT "9999"
@19,58 SAY "APP. DATE :- " GET T_adata
@21,5 SAY "GIMBAL DRAWING NO:-" GET T_gim PICT "99999"
@21,37 SAY "DRAWING COST :- " GET T_gdrw PICT "9999"
@21,58 SAY "APP. DATE :- " GET T_gdate
READ
REPLACE product_ty WITH T_prod, custom_no WITH T_cus
REPLACE cust_name WITH T_name
REPLACE assy_dr_no WITH T_ass, assy_dcost WITH T_adrw
REPLACE as_ap_date WITH T_adata
REPLACE plat_dr_no WITH T_plate, plat_dcost WITH T_pdrw
REPLACE pl_ap_date WITH T_pdate
REPLACE arm_dr_no WITH T_arm, arm_dcost WITH T_adrw
REPLACE ar_ap_date WITH T_adata
REPLACE gimb_dr_no WITH T_gim, gimb_dcost WITH T_gdrw
REPLACE gi_ap_date WITH T_gdate
DO Subcont
ENDIF
USE
HDDO
USE
ERASE Iprod.ndx
USE Product
INDEX ON product_ty TO Iprod
USE
RETURN
**END OF PROGRAM**

```

```

*EDIE.PRG
*PURPOSE :TO EDIT OR CORRECT DATA OF DIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "E D I T   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title6
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Die INDEX Idie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE SPACE(8) TO T_pldrw,T_arwr,T_gidrw,T_wedrw
        STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
        STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
        STORE 0 TO T_plord,T_arord,T_giord,T_weord
        STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
        STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
        STORE ar_didw_no TO T_arwr
        STORE gi_didw_no TO T_gidrw
        STORE we_didw_no TO T_wedrw
        STORE pl_di_cost TO T_plcost
        STORE ar_di_cost TO T_arcost
        STORE gi_di_cost TO T_gicost
        STORE we_di_cost TO T_wecost
        STORE pl_vd_name TO T_plname
        STORE ar_vd_name TO T_arname
    
```

```

STORE gi_vd_name TO T_giname
STORE we_vd_name TO T_wename
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_rc_date TO T_pldate
STORE ar_rc_date TO T_ardate
STORE gi_rc_date TO T_gidate
STORE we_rc_date TO T_wedate
@7,0 CLEAR TO 23,79
@7,Col SAY Title6
@9,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
@9,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
@11,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@!"
@13,5 SAY "PLATE:DRAWING NO:-" GET T_pldrw PICT "XXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_plcost PICT "9999"
@15,13 SAY "VENDOR NAME :- " GET T_plname PICT "@!"
@17,13 SAY "QUANTITY ORDER:- " GET T_plord PICT "99"
@19,13 SAY "COST/UNIT :- " GET T_plunit PICT "999999"
@21,13 SAY "RECIEVE DATE :- " GET T_pldate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY "ARM:DRAWING NO:-" GET T_ardrw PICT "XXXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_arcost PICT "9999"
@15,13 SAY "VENDOR NAME :- " GET T_arname PICT "@!"
@17,13 SAY "QUANTITY ORDER:- " GET T_arord PICT "99"
@19,13 SAY "COST/UNIT :- " GET T_arunit PICT "999999"
@21,13 SAY "RECIEVE DATE :- " GET T_ardate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY "GIMBAL:DRAWING NO:-" GET T_gidrw PICT "XXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_gicost PICT "9999"
@15,14 SAY "VENDOR NAME :- " GET T_giname PICT "@!"
@17,14 SAY "QUANTITY ORDER:- " GET T_giord PICT "99"
@19,14 SAY "COST/UNIT :- " GET T_giunit PICT "999999"
@21,14 SAY "RECIEVE DATE :- " GET T_gidate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY "WELDING:DRAWING NO:-" GET T_wedrw PICT "XXXXX!"
@13,40 SAY "DRAWING COST :- " GET T_wecost PICT "9999"
@15,14 SAY "VENDOR NAME :- " GET T_wename PICT "@!"
@17,14 SAY "QUANTITY ORDER:- " GET T_weord PICT "99"
@19,14 SAY "COST/UNIT :- " GET T_weunit PICT "999999"
@21,14 SAY "RECIEVE DATE :- " GET T_wedate
READ
REPLACE product_ty WITH T_prod,custom_no WITH T_cus
REPLACE cust_name WITH T_name

```



```

REPLACE pl_didw_no WITH T_pldr,ar_didw_no WITH T_ar,drw
REPLACE gi_didw_no WITH T_gidr,we_didw_no WITH T_we,drw
REPLACE pl_di_cost WITH T_plcost,
      ar_di_cost WITH T_arcost
REPLACE gi_di_cost WITH T_gicost,
      we_di_cost WITH T_wecost
REPLACE pl_vd_name WITH T_plname,
      ar_vd_name WITH T_arname
REPLACE gi_vd_name WITH T_giname,
      we_vd_name WITH T_wename
REPLACE pl_qty_ord WITH T_plord,
      ar_qty_ord WITH T_arord
REPLACE gi_qty_ord WITH T_giord,
      we_qty_ord WITH T_weord
REPLACE pl_cost_un WITH T_plunit,
      ar_cost_un WITH T_arunit
REPLACE gi_cost_un WITH T_giunit,
      we_cost_un WITH T_weunit
REPLACE pl_rc_date WITH T_pldate,
      ar_rc_date WITH T_ardate
REPLACE gi_rc_date WITH T_gidate,
      we_rc_date WITH T_wedate
DO Subcont
ENDIF
ENDDO
USE
ERASE Idie.ndx
USE die
INDEX ON product_ty TO Idie
USE
RETURN
**END OF PROGRAM**

```



```

*EPACK.PRG
*PURPOSE :TO EDIT OR CORRECT DATA OF PACKAGE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title10 = "E D I T   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title10)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title10
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Pack INDEX Ipack
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE SPACE(30) TO T_vname
        STORE SPACE(8) TO T_drno
        STORE 0 TO T_prod,T_cus,T_drcost,T_costun
        STORE CTOD('') TO T_apdate
        @8,0 CLEAR TO 23,79
        @8,Col SAY Title10
        @10,5 SAY "PRODUCT TYPE :- "
        @10,46 SAY "CUSTOMER NO :- "
        @12,5 SAY "CUSTOMER NAME:- "
        @15,5 SAY "PACKAGING DRAWING NO   :- "
        @15,45 SAY "DRAWING COST :- "
        @17,16 SAY "APPROVAL DATE:- "
        @19,16 SAY "VENDOR NAME :- "
        @21,16 SAY "COST/UNIT :- "
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pack_dr_no TO T_drno
        STORE pk_dr_cost TO T_drcost
        STORE pk_ap_date TO T_apdate
    
```

```

STORE pk_vendor TO T_vname
STORE pk_cost_un TO T_costun
@10,21 SAY T_prod PICT "99999"
@10,62 SAY T_cus PICT "9999"
@12,21 SAY T_name PICT "@!"
@15,32 SAY T_drno PICT "XXXXXXX!"
@15,60 SAY T_drcost PICT "99999"
@17,32 SAY T_update
@19,32 SAY T_vname PICT "@!"
@21,32 SAY T_costun PICT "9999.99"
@10,21 GET T_prod PICT "99999"
@10,62 GET T_cus PICT "9999"
@12,21 GET T_name PICT "@!"
@15,32 GET T_drno PICT "XXXXXXX!"
@15,60 GET T_drcost PICT "99999"
@17,32 GET T_update
@19,32 GET T_vname PICT "@!"
@21,32 GET T_costun PICT "9999.99"
READ
REPLACE product_ty WITH T_prod,custom_no WITH T_cus
REPLACE cust_name WITH T_name
REPLACE pack_dr_no WITH T_drno,pk_dr_cost WITH T_drcost
REPLACE pk_ap_date WITH T_update
REPLACE pk_vendor WITH T_vname
REPLACE pk_cost_un WITH T_costun
DO Subcont
ENDIF
USE
ENDDO
USE
ERASE Ipack.ndx
USE Ipack
INDEX ON product_ty TO Ipack
USE
RETURN
**END OF PROGRAM***

```

```

*DEPROD.PRG
*PURPOSE :TO DELET RECORD OF PRODUCT, DIE, AND PACK.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title16 = "D E L E T E   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title16)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title16
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Product INDEX Iprod
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        @9,0 CLEAR TO 23,79
        @10,5 SAY "PRODUCT TYPE :- "
        @10,46 SAY "CUSTOMER NO :- "
        @12,5 SAY "CUSTOMER NAME:- "
        SET COLOR TO &Normal+
        @10,21 SAY T_prod
        @10,62 SAY T_cus
        @12,21 SAY T_name
        STORE " " TO ans
        @20,16 SAY "IT WILL DELETE RECORD OF DIE & PACKAGING"
        @18,28 SAY "ARE YOU SURE ?" GET ans PICT "!"
        SET COLOR TO &Normal
        READ
        IF ans = "Y"
            DELE

```

```

PACK
SELECT 2
USE Die INDEX Idie
GO TOP
SEEK T_edit
DELE
PACK
SELECT 3
USE Pack INDEX Ipack
GO TOP
SEEK T_edit
DELE
PACK
ELSE
    @18,0 CLEAR TO 21,79
ENDIF
DO Subcont
ENDIF
USE
ENDDO
@9,0 CLEAR TO 23,79
SET COLOR TO &Normal+
@18,35 SAY "PLEASE WAITING..."
SET COLOR TO &Normal
CLOSE ALL
ERASE Iprod.ndx
USE Product
INDEX ON product_ty TO Iprod
USE
ERASE Idie.ndx
USE Die
INDEX ON product_ty TO Idie
USE
ERASE Ipack.ndx
USE Pack
INDEX ON product_ty TO Ipack
CLOSE ALL
RETURN
**END OF PROGRAM**

```

```

**DISPLAY.PRG**
PARAMETER Subx
Subx1 = "1. DISPLAY ALL RECORD"
Subx2 = "2. DISPLAY SPECIFIC RECORD"
Subx3 = "3. Exit to Submenu"
PUBLIC f
f = 1
Normal = "W"
Inverse = "I"
SET COLOR TO &Normal
DO WHILE f#3
    f = 1
    r = 11
    Choice14 = "Subx1"
    CLEAR
    DO Title WITH Title1,Title2
    Length = LEN(Subx)
    Col = INT((80-Length)/2)
    @ 8 ,Col SAY Subx
    SET COLOR TO &Normal
    @ 11,30 SAY Subx1
    @ 13,30 SAY Subx2
    @ 15,30 SAY Subx3
    SET COLOR TO &Normal+
    @ 23,15 SAY "Press " + CHR(24) + "★" or " + CHR(25);
        + " to move highlight, and press ";
        + CHR(17) + CHR(217) + " to select"
    SET COLOR TO &Inverse
    @ r, 30 SAY &Choice14
    x = 0
    DO WHILE x #13
        x = 0
        DO WHILE x = 0
            x = INKEY()
        ENDDO
        SET COLOR TO &Normal
        @ r,30 SAY &Choice14
    DO CASE
        CASE x = 24
            r = r + 2
            r = IIF (r>15,11,r)
            f = VAL (RIGHT(Choice14,1))+1
            f = IIF (f>3,1,f)
            Choice14 = "Subx" + STR(f,1)
            SET COLOR TO &Inverse
            @r,30 SAY &Choice14
        CASE x = 5
            r = r - 2
            r = IIF (r<11,15,r)
            f = VAL (RIGHT(Choice14,1))-1
            f = IIF (f<1,3,f)

```



```

Choice14 = "Subx" + STR(f,1)
SET COLOR TO &Inverse
    @r,30 SAY &Choice14
CASE x = 13
    SET COLOR TO &Inverse
    @r,30 SAY &Choice14
    IF f = 3
        EXIT
    ENDIF
    DO CASE
        CASE i = 1
            DO CASE
                CASE f = 1
                    DO Diprod1
                CASE f = 2
                    DO Diprod2
                CASE f = 3
                    EXIT
            ENDCASE
        CASE i = 2
            DO CASE
                CASE f = 1
                    DO Didie1
                CASE f = 2
                    DO didie2
                CASE f = 3
                    EXIT
            ENDCASE
        CASE i = 3
            DO CASE
                CASE f = 1
                    DO Dipack1
                CASE f = 2
                    DO Dipack2
                CASE f = 3
                    EXIT
            ENDCASE
    ENDCASE
ENDCASE
ENDDO
SET COLOR TO &Normal
    @1,0 CLEAR TO 23,79
RETURN
**END OF PROGRAM**

```

```

**DIPROG1.PRG
*PURPOSE :TO DISPLAY ALL DATA OF PRODUCT.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D   (PRODUCT)"
SELECT 1
USE Product INDEX Iprod
GO TOP
CLEAR
Length = LEN(Title4)
Col = INT((80-Length)/2)
DO Title WITH Title1,Title2
@8,Col SAY Title4
STORE SPACE(25) TO T_name
STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
STORE 0 TO T_arm,T_aradrw,T_gim,T_gdrw
STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
@10,5 SAY "PRODUCT TYPE :- "
@10,46 SAY "CUSTOMER NO :- "
@12,5 SAY "CUSTOMER NAME:- "
@15,5 SAY "ASSEMBLY DRAWING NO :- "
@15,35 SAY "DRAWING COST :- "
@15,58 SAY "APP. DATE :- "
@17,5 SAY "PLATE DRAWING NO :- "
@17,35 SAY "DRAWING COST :- "
@17,58 SAY "APP. DATE :- "
@19,5 SAY "ARM DRAWING NO :- "
@19,35 SAY "DRAWING COST :- "
@19,58 SAY "APP. DATE :- "
@21,5 SAY "GIMBAL DRAWING NO :- "
@21,35 SAY "DRAWING COST :- "
@21,58 SAY "APP. DATE :- "
DO WHILE c = "Y"
    STORE product_ty TO T_prod
    STORE custom_no TO T_cus
    STORE cust_name TO T_name
    STORE assy_dr_no TO T_ass
    STORE assy_dcost TO T_adrw
    STORE as_ap_date TO T_adate
    STORE plat_dr_no TO T_plate
    STORE plat_dcost TO T_pdrw
    STORE pl_ap_date TO T_pdate
    STORE arm_dr_no TO T_arm
    STORE arm_dcost TO T_aradrw
    STORE ar_ap_date TO T_ardate
    STORE gimb_dr_no TO T_gim
    STORE gimb_dcost TO T_gdrw
    STORE gi_ap_date TO T_gdate
    SET COLOR TO &Normal+

```

```

@10,21 SAY T_prod
@10,62 SAY T_cus
@12,21 SAY T_name
@15,28 SAY T_ass PICT "99999"
@15,51 SAY T_adrw PICT "9999"
@15,71 SAY T_adate
@17,28 SAY T_plate PICT "99999"
@17,51 SAY T_pdrw PICT "9999"
@17,71 SAY T_pdate
@19,28 SAY T_arm PICT "99999"
@19,51 SAY T_ardrw PICT "9999"
@19,71 SAY T_ardate
@21,28 SAY T_gim PICT "99999"
@21,51 SAY T_gdrw PICT "9999"
@21,71 SAY T_gdate
SET COLOR TO &Normal
IF .NOT. EOF()
    DO Subcont
    SKIP
ELSE
    SET COLOR TO &Normal+
    C = "N"
    @23,20 SAY "END OF FILE (ANY KEY TO Submenu)"
    SET COLOR TO &Normal
    WAIT " "
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```

```

**DIDIE1.PRG
*PURPOSE :TO DISPLAY ALL DATA OF DIE.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title7 = "D I S P L A Y   R E C O R D   (DIE)"
SELECT 1
USE Die INDEX Idie
GO TOP
CLEAR
Length = LEN(Title7)
Col = INT((80-Length)/2)
DO Title WITH Title1,Title2
  @7,Col SAY Title7
  STORE SPACE(25) TO T_name
  STORE 0 TO T_prod,T_cus
  STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
  STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
  STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
  STORE 0 TO T_plord,T_arord,T_giord,T_weord
  STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
  STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
  @8,0 CLEAR TO 23,79
  @9,5 SAY "PRODUCT TYPE :- "
  @9,46 SAY "CUSTOMER NO :- "
  @11,5 SAY "CUSTOMER NAME:- "
DO WHILE c = "Y"
  STORE product_ty TO T_prod
  STORE custom_no TO T_cus
  STORE cust_name TO T_name
  STORE pl_didw_no TO T_pldrw
  STORE ar_didw_no TO T_ardrw
  STORE gi_didw_no TO T_gidrw
  STORE we_didw_no TO T_wedrw
  STORE pl_di_cost TO T_plcost
  STORE ar_di_cost TO T_arcost
  STORE gi_di_cost TO T_gicost
  STORE we_di_cost TO T_wecost
  STORE pl_vd_name TO T_plname
  STORE ar_vd_name TO T_arname
  STORE gi_vd_name TO T_giname
  STORE we_vd_name TO T_wename
  STORE pl_qty_ord TO T_plord
  STORE ar_qty_ord TO T_arord
  STORE gi_qty_ord TO T_giord
  STORE we_qty_ord TO T_weord
  STORE pl_cost_un TO T_plunit
  STORE ar_cost_un TO T_arunit
  STORE gi_cost_un TO T_giunit
  STORE we_cost_un TO T_weunit

```

```

STORE pl_rc_date TO T_pldate
STORE ar_rc_date TO T_ardate
STORE gi_rc_date TO T_gidate
STORE we_rc_date TO T_wedate
SET COLOR TO &Normal+
  @9,21 SAY T_prod PICT "99999"
  @9,62 SAY T_cus PICT "9999"
  @11,21 SAY T_name PICT "@!"
SET COLOR TO &Normal
  @13,5 SAY "PLATE : DRAWING NO :- "
  @13,40 SAY "DRAWING COST :- "
  @15,13 SAY "VENDOR NAME :- "
  @17,13 SAY "QUANTITY ORDER:- "
  @19,13 SAY "COST/UNIT :- "
  @21,13 SAY "RECIEVE DATE :- "
SET COLOR TO &Normal+
  @13,30 SAY T_pldrw PICT "XXXXXXX!"
  @13,55 SAY T_plcost PICT "9999"
  @15,30 SAY T_plname PICT "@!"
  @17,30 SAY T_plord PICT "99"
  @19,30 SAY T_plunit PICT "999999"
  @21,30 SAY T_pldate
  @22,0 SAY " "
  WAIT " ANY KEY TO CONTINUE.."
  @13,0 CLEAR TO 23,79
SET COLOR TO &Normal
  @13,5 SAY "ARM : DRAWING NO :- "
  @13,40 SAY "DRAWING COST :- "
  @15,13 SAY "VENDOR NAME :- "
  @17,13 SAY "QUANTITY ORDER:- "
  @19,13 SAY "COST/UNIT :- "
  @21,13 SAY "RECIEVE DATE :- "
SET COLOR TO &Normal+
  @13,30 SAY T_ardrw PICT "XXXXXXX!"
  @13,55 SAY T_arcost PICT "9999"
  @15,30 SAY T_arname PICT "@!"
  @17,30 SAY T_arord PICT "99"
  @19,30 SAY T_arunit PICT "999999"
  @21,30 SAY T_ardate
  @22,0 SAY " "
  WAIT " ANY KEY TO CONTINUE.. "
  @13,0 CLEAR TO 23,79
SET COLOR TO &Normal
  @13,5 SAY "GIMBAL: DRAWING NO :- "
  @13,40 SAY "DRAWING COST :- "
  @15,13 SAY "VENDOR NAME :- "
  @17,13 SAY "QUANTITY ORDER:- "
  @19,13 SAY "COST/UNIT :- "
  @21,13 SAY "RECEIVE DATE :- "
SET COLOR TO &Normal+
  @13,30 SAY T_gidrw PICT "XXXXXXX!"
  @13,55 SAY T_gicost PICT "9999"

```



```

@15,30 SAY T_giname PICT "@!"
@17,30 SAY T_giord PICT "99"
@19,30 SAY T_giunit PICT "999999"
@21,30 SAY T_gidate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "WELDING : DRAWING NO :- "
@13,40 SAY "DRAWING COST :- "
@15,13 SAY "VENDOR NAME :- "
@17,13 SAY "QUANTITY ORDER:- "
@19,13 SAY "COST/UNIT :- "
@21,13 SAY "RECIEVE DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_wedrw PICT "XXXXXXX!"
@13,55 SAY T_wecost PICT "9999"
@15,30 SAY T_wename PICT "@!"
@17,30 SAY T_weord PICT "99"
@19,30 SAY T_weunit PICT "999999"
@21,30 SAY T_wedate
SET COLOR TO &Normal
IF .NOT. EOF()
DO Subcont
@13,0 CLEAR TO 23,79
SKIP
ELSE
SET COLOR TO &Normal+
C = "N"
@23,20 SAY "END OF FILE (ANY KEY TO Submenu)"
SET COLOR TO &Normal
WAIT " "
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```

```

**DIPACK1.PRG
*PURPOSE :TO DISPLAY ALL DATA OF PACK.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D   (PACKAGING)"
SELECT 1
USE Pack INDEX Ipack
GO TOP
CLEAR
Length = LEN(Title4)
Col = INT((80-Length)/2)
DO Title WITH Title1,Title2
@8,Col SAY Title4
STORE SPACE(25) TO T_name
STORE SPACE(30) TO T_vname
STORE SPACE(8) TO T_drno
STORE 0 TO T_prod,T_cus,T_drcost,T_costun
STORE CTOD('') TO T_apdate
  @10,5 SAY "PRODUCT TYPE :- "
  @10,46 SAY "CUSTOMER NO :- "
  @12,5 SAY "CUSTOMER NAME:- "
  @15,5 SAY "PACKAGING DRAWING NO :- "
  @15,45 SAY "DRAWING COST :- "
  @17,16 SAY "APPROVAL DATE:- "
  @19,16 SAY "VENDOR NAME :- "
  @21,16 SAY "COST/UNIT :- "
DO WHILE c = "Y"
  STORE product_ty TO T_prod
  STORE custom_no TO T_cus
  STORE cust_name TO T_name
  STORE pack_dr_no TO T_drno
  STORE pk_dr_cost TO T_drcost
  STORE pk_ap_date TO T_apdate
  STORE pk_vendor TO T_vname
  STORE pk_cost_un TO T_costun
  SET COLOR TO &Normal+
  @10,21 SAY T_prod PICT "99999"
  @10,62 SAY T_cus PICT "9999"
  @12,21 SAY T_name PICT "@!"
  @15,32 SAY T_drno PICT "XXXXXXX!"
  @15,60 SAY T_drcost PICT "99999"
  @17,32 SAY T_apdate
  @19,32 SAY T_vname PICT "@!"
  @21,32 SAY T_costun PICT "9999.99"
  SET COLOR TO &Normal
  IF .NOT. EOF()
    DO Subcont
    SKIP
  ELSE

```

```
SET COLOR TO &Normal+  
C = "N"  
    @23,20 SAY "END OF FILE (ANY KEY TO Submenu)"  
SET COLOR TO &Normal  
WAIT " "   
ENDIF  
ENDDO  
USE  
RETURN  
**END OF PROGRAM**
```



```

**DIPROG2.PRG
*PURPOSE :TO DISPLAY SPECIFIC DATA OF PRODUCT.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D   (PRODUCT)"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title4)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title4
    @12,25 SAY"DISPLAY PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Product INDEX Iprod
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
        STORE 0 TO T_arm,T_arwr,T_gim,T_gdrw
        STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE assy_dr_no TO T_ass
        STORE assy_dcost TO T_adrw
        STORE as_ap_date TO T_adate
        STORE plat_dr_no TO T_plate
        STORE plat_dcost TO T_pdrw
        STORE pl_ap_date TO T_pdate
        STORE arm_dr_no TO T_arm
        STORE arm_dcost TO T_arwr
        STORE ar_ap_date TO T_ardate
    
```

```

STORE gimb_dr_no TO T_gim
STORE gimb_dcost TO T_gdrw
STORE gi_ap_date TO T_gdate
@9,0 CLEAR TO 23,79
@10,5 SAY "PRODUCT TYPE :- "
@10,46 SAY "CUSTOMER NO :- "
@12,5 SAY "CUSTOMER NAME:- "
@15,5 SAY "ASSEMBLY DRAWING NO :- "
@15,35 SAY "DRAWING COST :- "
@15,58 SAY "APP. DATE :- "
@17,5 SAY "PLATE DRAWING NO :- "
@17,35 SAY "DRAWING COST :- "
@17,58 SAY "APP. DATE :- "
@19,5 SAY "ARM DRAWING NO :- "
@19,35 SAY "DRAWING COST :- "
@19,58 SAY "APP. DATE :- "
@21,5 SAY "GIMBAL DRAWING NO :- "
@21,35 SAY "DRAWING COST :- "
@21,58 SAY "APP. DATE :- "
SET COLOR TO &Normal+
@10,21 SAY T_prod
@10,62 SAY T_cus
@12,21 SAY T_name
@15,28 SAY T_ass PICT "99999"
@15,51 SAY T_adrw PICT "9999"
@15,71 SAY T_adate
@17,28 SAY T_plate PICT "99999"
@17,51 SAY T_pdrw PICT "9999"
@17,71 SAY T_pdate
@19,28 SAY T_arm PICT "99999"
@19,51 SAY T_ardrw PICT "9999"
@19,71 SAY T_ardate
@21,28 SAY T_gim PICT "99999"
@21,51 SAY T_gdrw PICT "9999"
@21,71 SAY T_gdate
SET COLOR TO &Normal
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```



```

**DIDIE2.PRG
*PURPOSE :TO DISPLAY SPECIFIC DATA OF DIE.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D   (DIE)"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title4)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title4
    @12,25 SAY"DISPLAY PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Die INDEX Idie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
        STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
        STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
        STORE 0 TO T_plord,T_arord,T_giord,T_weord
        STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
        STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
        @7,0 CLEAR TO 23,79
        @7,COL SAY Title4
        @9,5 SAY "PRODUCT TYPE :- "
        @9,46 SAY "CUSTOMER NO :- "
        @11,5 SAY "CUSTOMER NAME:- "
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
        STORE ar_didw_no TO T_ardrw
    
```

STORE gi_didw_no TO T_gidrw
 STORE we_didw_no TO T_wedrw
 STORE pl_di_cost TO T_plcost
 STORE ar_di_cost TO T_arcost
 STORE gi_di_cost TO T_gicost
 STORE we_di_cost TO T_wecost
 STORE pl_vd_name TO T_plname
 STORE ar_vd_name TO T_arname
 STORE gi_vd_name TO T_giname
 STORE we_vd_name TO T_wename
 STORE pl_qty_ord TO T_plord
 STORE ar_qty_ord TO T_arord
 STORE gi_qty_ord TO T_giord
 STORE we_qty_ord TO T_weord
 STORE pl_cost_un TO T_plunit
 STORE ar_cost_un TO T_arunit
 STORE gi_cost_un TO T_giunit
 STORE we_cost_un TO T_weunit
 STORE pl_rc_date TO T_pldate
 STORE ar_rc_date TO T_ardate
 STORE gi_rc_date TO T_gidate
 STORE we_rc_date TO T_wedate
 SET COLOR TO &Normal+

@9,21 SAY T_prod PICT "99999"
 @9,62 SAY T_cus PICT "9999"
 @11,21 SAY T_name PICT "@!"

SET COLOR TO &Normal

@13,5 SAY "PLATE : DRAWING NO :- "
 @13,40 SAY "DRAWING COST :- "
 @15,13 SAY "VENDOR NAME :- "
 @17,13 SAY "QUANTITY ORDER:- "
 @19,13 SAY "COST/UNIT :- "
 @21,13 SAY "RECIEVE DATE :- "

SET COLOR TO &Normal+

@13,30 SAY T_pldrw PICT "XXXXXXX!"
 @13,55 SAY T_plcost PICT "9999"
 @15,30 SAY T_plname PICT "@!"
 @17,30 SAY T_plord PICT "99"
 @19,30 SAY T_plunit PICT "999999"
 @21,30 SAY T_pldate
 @22,0 SAY " "

WAIT "

ANY KEY TO CONTINUE.. "

@13,0 CLEAR TO 23,79

SET COLOR TO &Normal

@13,5 SAY "ARM : DRAWING NO :- "
 @13,40 SAY "DRAWING COST :- "
 @15,13 SAY "VENDOR NAME :- "
 @17,13 SAY "QUANTITY ORDER:- "
 @19,13 SAY "COST/UNIT :- "
 @21,13 SAY "RECIEVE DATE :- "

```

SET COLOR TO &Normal+
@13,30 SAY T_ardrw PICT "XXXXXXX!"
@13,55 SAY T_arcost PICT "9999"
@15,30 SAY T_arname PICT "@!"
@17,30 SAY T_arord PICT "99"
@19,30 SAY T_arunit PICT "999999"
@21,30 SAY T_ardate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "GIMBAL: DRAWING NO :- "
@13,40 SAY "DRAWING COST :- "
@15,13 SAY "VENDOR NAME :- "
@17,13 SAY "QUANTITY ORDER:- "
@19,13 SAY "COST/UNIT :- "
@21,13 SAY "RECEIVE DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_gidrw PICT "XXXXXXX!"
@13,55 SAY T_gicost PICT "9999"
@15,30 SAY T_giname PICT "@!"
@17,30 SAY T_giord PICT "99"
@19,30 SAY T_giunit PICT "999999"
@21,30 SAY T_gidate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.."
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "WELDING : DRAWING NO :- "
@13,40 SAY "DRAWING COST :- "
@15,13 SAY "VENDOR NAME :- "
@17,13 SAY "QUANTITY ORDER:- "
@19,13 SAY "COST/UNIT :- "
@21,13 SAY "RECIEVE DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_wedrw PICT "XXXXXXX!"
@13,55 SAY T_wecost PICT "9999"
@15,30 SAY T_wename PICT "@!"
@17,30 SAY T_weord PICT "99"
@19,30 SAY T_weunit PICT "999999"
@21,30 SAY T_wedate
SET COLOR TO &Normal
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```

```

**DIPACK2.PRG
*PURPOSE :TO DISPLAY SPECIFIC DATA OF PACK.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D   (PACKAGING)"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title4)
    Col = INT((80-Length)/2)
    CLEAR
    DO Title WITH Title1,Title2
    @8,Col SAY Title4
    @12,25 SAY"DISPLAY PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Pack INDEX Ipack
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE SPACE(30) TO T_vname
        STORE SPACE(8) TO T_drno
        STORE 0 TO T_prod,T_cus,T_drcost,T_costun
        STORE CTOD('') TO T_apdate
        *
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pack_dr_no TO T_drno
        STORE pk_dr_cost TO T_drcost
        STORE pk_ap_date TO T_apdate
        STORE pk_vendor TO T_vname
        STORE pk_cost_un TO T_costun
        @9,0 CLEAR TO 23,79
        @10,5 SAY "PRODUCT TYPE :- "
        @10,46 SAY "CUSTOMER NO  :- "
        @12,5 SAY "CUSTOMER NAME:- "
        @15,5 SAY "PACKAGING  DRAWING NO  :- "
    ENDIF
    c = "Y"
ENDWHILE

```

```

@15,45 SAY "DRAWING COST :- "
@17,16 SAY "APPROVAL DATE:- "
@19,16 SAY "VENDOR NAME :- "
@21,16 SAY "COST/UNIT :- "
SET COLOR TO &Normal+
@10,21 SAY T_prod PICT "99999"
@10,62 SAY T_cus PICT "9999"
@12,21 SAY T_name PICT "@!"
@15,32 SAY T_drno PICT "XXXXXXX!"
@15,60 SAY T_drcost PICT "99999"
@17,32 SAY T_apdate
@19,32 SAY T_vname PICT "@!"
@21,32 SAY T_costun PICT "9999.99"
SET COLOR TO &Normal
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```




```

**PRINT.PRG**
*PURPOSE :TO DISPLAY PRINT SUBMENU
PARAMETER Suby
Suby1 = "1. PRINT ALL RECORD"
Suby2 = "2. PRINT SPECIFIC RECORD"
Suby3 = "3. Exit to Submenu"
g = 1
Normal = "W"
Inverse = "I"
SET COLOR TO &Normal
DO WHILE g#3
  g = 1
  r = 11
  Choice15 = "Suby1"
  CLEAR
  DO Title WITH Title1,Title2
  Length = LEN(Suby)
  Col = INT((80-Length)/2)
  @ 8 ,Col SAY Suby
  SET COLOR TO &Normal
  @ 11,30 SAY Suby1
  @ 13,30 SAY Suby2
  @ 15,30 SAY Suby3
  SET COLOR TO &Normal+
  @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
    + " to move highlight, and press ";
    + CHR(17) + CHR(217) + " to select"
  SET COLOR TO &Inverse
  @ r, 30 SAY &Choice15
  x = 0
DO WHILE x #13
  x = 0
  DO WHILE x = 0
    x = INKEY()
  ENDDO
  SET COLOR TO &Normal
  @ r,30 SAY &Choice15
DO CASE
  CASE x = 24
    r = r + 2
    r = IIF (r>15,11,r)
    g = VAL (RIGHT(Choice15,1))+1
    g = IIF (g>3,1,g)
    Choice15 = "Suby" + STR(g,1)
    SET COLOR TO &Inverse
    @r,30 SAY &Choice15
  CASE x = 5
    r = r - 2
    r = IIF (r<11,15,r)
    g = VAL (RIGHT(Choice15,1))-1
    g = IIF (g<1,3,g)
    Choice15 = "Suby" + STR(g,1)

```

```

SET COLOR TO &Inverse
  @r,30 SAY &Choice15
CASE x = 13
  SET COLOR TO &Inverse
  @r,30 SAY &Choice15
  IF g = 3
    EXIT
  ENDIF
  DO CASE
    CASE i = 1
      DO CASE
        CASE g = 1
          DO Pprod1
        CASE g = 2
          DO Pprod2
        CASE g = 3
          EXIT
      ENDCASE
    CASE i = 2
      DO CASE
        CASE g = 1
          DO Pdie1
        CASE g = 2
          DO Pdie2
        CASE g = 3
          EXIT
      ENDCASE
    CASE i = 3
      DO CASE
        CASE g = 1
          DO Ppack1
        CASE g = 2
          DO Ppack2
        CASE g = 3
          EXIT
      ENDCASE
  ENDCASE
ENDDO
SET COLOR TO &Normal
  @1,0 CLEAR TO 23,79
RETURN
**END OF PROGRAM**

```

```

**PPROG1.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF PRODUCT.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title5 = "PRODUCT REPORT"
SELECT 1
USE Product INDEX Iprod
GO TOP
CLEAR
Length = LEN(Title5)
Col = INT((80-Length)/2)
STORE SPACE(25) TO T_name
STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
STORE 0 TO T_arm,T_aradrw,T_gim,T_gdrw
STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
q = 0
page = 0
SET COLOR TO &Normal+
DO Title WITH Title1,Title2
@ 8,Col SAY Title5
@ 10,30 SAY "Please waiting..."
SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
  IF q = 4
    q = 0
  ENDIF
  IF q = 0
    page = page + 1
    Rows = 8
    EJECT
    DO Ptitle WITH Title1, Title2
    @Rows,Col SAY Title5
    @Rows,65 SAY "PAGE"
    @Rows,71 SAY page PICT "99"
    Rows = Rows + 1
    @Rows,5 SAY REPLICATE("-",75)
  ENDIF
  STORE product_ty TO T_prod
  STORE custom_no TO T_cus
  STORE cust_name TO T_name
  STORE assy_dr_no TO T_ass
  STORE assy_dcost TO T_adrw
  STORE as_ap_date TO T_adate
  STORE plat_dr_no TO T_plate
  STORE plat_dcost TO T_pdrw
  STORE pl_ap_date TO T_pdate
  STORE arm_dr_no TO T_arm
  STORE arm_dcost TO T_aradrw
  STORE ar_ap_date TO T_ardate

```

```

STORE gimb_dr_no TO T_gim
STORE gimb_dcost TO T_gdrw
STORE gi_ap_date TO T_gdate
q = q+1
  Rows = Rows + 2
  @Rows,5 SAY "PRODUCT TYPE :- "
  @Rows,21 SAY T_prod
  @Rows,46 SAY "CUSTOMER NO :- "
  @Rows,62 SAY T_cus
  Rows = Rows + 2
  @Rows,21 SAY T_name
  @Rows,5 SAY "CUSTOMER NAME:- "
  Rows = Rows + 2
  @Rows,5 SAY "ASSEMBLY DRAWING NO :- "
  @Rows,28 SAY T_ass PICT "99999"
  @Rows,35 SAY "DRAWING COST :- "
  @Rows,51 SAY T_adrw PICT "9999"
  @Rows,58 SAY "APP. DATE :- "
  @Rows,71 SAY T_adata
  Rows = Rows + 2
  @Rows,5 SAY "PLATE DRAWING NO :- "
  @Rows,28 SAY T_plate PICT "99999"
  @Rows,35 SAY "DRAWING COST :- "
  @Rows,51 SAY T_pdrw PICT "9999"
  @Rows,58 SAY "APP. DATE :- "
  @Rows,71 SAY T_pdate
  Rows = Rows + 2
  @Rows,5 SAY "ARM DRAWING NO :- "
  @Rows,28 SAY T_arm PICT "99999"
  @Rows,35 SAY "DRAWING COST :- "
  @Rows,51 SAY T_arwr PICT "9999"
  @Rows,58 SAY "APP. DATE :- "
  @Rows,71 SAY T_ardate
  Rows = Rows + 2
  @Rows,5 SAY "GIMBAL DRAWING NO :- "
  @Rows,28 SAY T_gim PICT "99999"
  @Rows,35 SAY "DRAWING COST :- "
  @Rows,51 SAY T_gdrw PICT "9999"
  @Rows,58 SAY "APP. DATE :- "
  @Rows,71 SAY T_gdate
  Rows = Rows + 1
  @Rows,5 SAY REPLICATE ("-",75)
  SKIP

```

```

ENDDO
EJECT
USE
SET COLOR TO &Normal
SET DEVICE TO SCREEN
RETURN
**END OF PROGRAM**

```

```

**PDIE1.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF DIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title5 = "DIE SET/ JIG  REPORT"
SELECT 1
USE Die INDEX Idie
GO TOP
CLEAR
Length = LEN(Title5)
Col = INT((80-Length)/2)
STORE SPACE(25) TO T_name
STORE 0 TO T_prod,T_cus
STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
STORE 0 TO T_plord,T_arord,T_giord,T_weord
STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
page = 0
SET COLOR TO &Normal
DO Title WITH Title1,Title2
@ 8,Col SAY Title5
SET COLOR TO &Normal+
@ 10,30 SAY "Please waiting..."
SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
    page = page + 1
    Rows = 8
    EJECT
    DO Ptitle WITH Title1, Title2
    @Rows,Col SAY Title5
    @Rows,65 SAY "PAGE"
    @Rows,71 SAY page PICT "99"
    Rows = Rows +1
    @Rows,5 SAY REPLICATE("-",75)
    STORE product_ty TO T_prod
    STORE custom_no TO T_cus
    STORE cust_name TO T_name
    STORE pl_didw_no TO T_pldrw
    STORE ar_didw_no TO T_ardrw
    STORE gi_didw_no TO T_gidrw
    STORE we_didw_no TO T_wedrw
    STORE pl_di_cost TO T_plcost
    STORE ar_di_cost TO T_arcost
    STORE gi_di_cost TO T_gicost
    STORE we_di_cost TO T_wecost
    STORE pl_vd_name TO T_plname
    STORE ar_vd_name TO T_arname
    STORE gi_vd_name TO T_giname

```



```

STORE we_vd_name TO T_wename
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_rc_date TO T_pldate
STORE ar_rc_date TO T_ardate
STORE gi_rc_date TO T_gidate
STORE we_rc_date TO T_wedate
Rows = Rows + 2
@Rows ,5 SAY "PRODUCT TYPE :- "
@Rows ,21 SAY T_prod
@Rows ,46 SAY "CUSTOMER NO :- "
@Rows ,62 SAY T_cus
Rows = Rows + 2
@Rows,5 SAY "CUSTOMER NAME:- "
@Rows,21 SAY T_name
Rows = Rows +2
@Rows,5 SAY "PLATE :- DRAWING NO :- "
@ROWS,32 SAY T_pldrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_plcost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME :- "
@ROWS,32 SAY T_plname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_plord PICT "99"
@ROWS,46 SAY "COST/UNIT :- "
@ROWS,62 SAY T_plunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECIEVE DATE :- "
@ROWS,32 SAY T_pldate
ROWS = ROWS +2
@ROWS,5 SAY "ARM :- DRAWING NO :- "
@ROWS,32 SAY T_ardrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_arcost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME :- "
@ROWS,32 SAY T_arname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_arord PICT "99"
@ROWS,46 SAY "COST/UNIT :- "
@ROWS,62 SAY T_arunit PICT "999999"
ROWS = ROWS +1

```

```

@ROWS,15 SAY "RECIEVE DATE :- "
@ROWS,32 SAY T_ardate
ROWS = ROWS +2
@ROWS,5 SAY "GIMBAL:- DRAWING NO :- "
@ROWS,32 SAY T_gidrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_gicost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME :- "
@ROWS,32 SAY T_giname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_giord PICT "99"
@ROWS,46 SAY "COST/UNIT :- "
@ROWS,62 SAY T_giunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECEIVE DATE :- "
@ROWS,32 SAY T_gidate
ROWS = ROWS +2
@ROWS,5 SAY "WELDING:- DRAWING NO :- "
@ROWS,32 SAY T_wedrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_wecost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME :- "
@ROWS,32 SAY T_wename PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_weord PICT "99"
@ROWS,46 SAY "COST/UNIT :- "
@ROWS,62 SAY T_weunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECIEVE DATE :- "
@ROWS,32 SAY T_wedate
ROWS = ROWS +2
@Rows,5 SAY REPLICATE ("-",75)
SKIP

```

```

ENDDO
EJECT
USE
SET COLOR TO &Normal
SET DEVICE TO SCREEN
RETURN
**END OF PROGRAM**

```

```

**PPACK1.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF PACK.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title5 = "PACKAGING REPORT"
SELECT 1
USE Pack INDEX Ipack
GO TOP
CLEAR
Length = LEN(Title5)
Col = INT((80-Length)/2)
STORE SPACE(25) TO T_name
STORE SPACE(30) TO T_vname
STORE SPACE(8) TO T_drno
STORE 0 TO T_prod,T_cus,T_drcost,T_costun
STORE CTOD('') TO T_update
q = 0
page = 0
SET COLOR TO &Normal
DO Title WITH Title1,Title2
@ 8,Col SAY Title5
SET COLOR TO &Normal+
@ 10,30 SAY "Please waiting..."
SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
  IF q = 4
    q = 0
  ENDIF
  IF q = 0
    page = page + 1
    Rows = 8
    EJECT
    DO Ptitle WITH Title1, Title2
    @Rows,Col SAY Title5
    @Rows,65 SAY "PAGE"
    @Rows,71 SAY page PICT "99"
    Rows = Rows +1
    @Rows,5 SAY REPLICATE("-",75)
  ENDIF
  STORE product_ty TO T_prod
  STORE custom_no TO T_cus
  STORE cust_name TO T_name
  STORE pack_dr_no TO T_drno
  STORE pk_dr_cost TO T_drcost
  STORE pk_ap_date TO T_update
  STORE pk_vendor TO T_vname
  STORE pk_cost_un TO T_costun
  q = q+1
  Rows = Rows + 2
  @Rows ,5 SAY "PRODUCT TYPE :- "

```

```

@Rows ,21 SAY T_prod
@Rows ,46 SAY "CUSTOMER NO :- "
@Rows ,62 SAY T_cus
Rows = Rows + 2
@Rows,21 SAY T_name
@Rows,5 SAY "CUSTOMER NAME:- "
Rows = Rows +2
@Rows,5 SAY "PACKAGING:- DRAWING NO :- "
@Rows,31 SAY T_drno PICT "XXXXXXX!"
@Rows,40 SAY "DRAWING COST :- "
@Rows,56 SAY T_drcost PICT "99999"
Rows = Rows + 2
@Rows,17 SAY "APPROVAL DATE :- "
@Rows,35 SAY T_update
Rows = Rows +2
@Rows,17 SAY "VENDOR NAME :- "
@Rows,35 SAY T_vname PICT "@!"
Rows = Rows +2
@Rows,17 SAY "COST/ UNIT :- "
@Rows,35 SAY T_costun PICT "9999.99"
Rows = Rows +1
@Rows,5 SAY REPLICATE ("-",75)
SKIP

```

```

ENDDO
EJECT
USE
SET COLOR TO &Normal
SET DEVICE TO SCREEN
RETURN
**END OF PROGRAM
**

```

```

**PPROG2.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF PRODUCT.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "SPECIFIC PRODUCTS REPORT"
c = "Y"
DO WHILE c = "Y"
    T_edit = 0
    CLEAR
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    STORE SPACE(25) TO T_name
    STORE 0 TO T_prod,T_cus,T_ass,T_adrw,T_plate,T_pdrw
    STORE 0 TO T_arm,T_arwr,T_gim,T_gdrw
    STORE CTOD('') TO T_adate,T_pdate,T_ardate,T_gdate
    DO Title WITH Title1, Title2
    @8, Col SAY Title6
    @12,25 SAY "PRINT PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Product INDEX Iprod
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT " "
    ELSE
        SET DEVICE TO PRINT
        DO Ptitle WITH Title1, Title2
        Rows = 8
        @Rows,Col SAY Title6
        Rows = Rows +1
        @Rows,5 SAY REPLICATE("-",75)
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE assy_dr_no TO T_ass
        STORE assy_dcst TO T_adrw
        STORE as_ap_date TO T_adate
        STORE plat_dr_no TO T_plate
        STORE plat_dcst TO T_pdrw
        STORE pl_ap_date TO T_pdate
        STORE arm_dr_no TO T_arm
    
```



```

STORE arm_dcost TO T_arldr
STORE ar_ap_date TO T_ardate
STORE gimb_dr_no TO T_gim
STORE gimb_dcost TO T_gdrw
STORE gi_ap_date TO T_gdate
Rows = Rows + 2
@Rows,5 SAY "PRODUCT TYPE :- "
@Rows,21 SAY T_prod
@Rows,46 SAY "CUSTOMER NO :- "
@Rows,62 SAY T_cus
Rows = Rows + 2
@Rows,21 SAY T_name
@Rows,5 SAY "CUSTOMER NAME:- "
Rows = Rows + 2
@Rows,5 SAY "ASSEMBLY DRAWING NO :- "
@Rows,28 SAY T_ass PICT "99999"
@Rows,35 SAY "DRAWING COST :- "
@Rows,51 SAY T_arldr PICT "9999"
@Rows,58 SAY "APP. DATE :- "
@Rows,71 SAY T_ardate
Rows = Rows + 2
@Rows,5 SAY "PLATE DRAWING NO :- "
@Rows,28 SAY T_plate PICT "99999"
@Rows,35 SAY "DRAWING COST :- "
@Rows,51 SAY T_pdrw PICT "9999"
@Rows,58 SAY "APP. DATE :- "
@Rows,71 SAY T_pdate
Rows = Rows + 2
@Rows,5 SAY "ARM DRAWING NO :- "
@Rows,28 SAY T_arm PICT "99999"
@Rows,35 SAY "DRAWING COST :- "
@Rows,51 SAY T_arldr PICT "9999"
@Rows,58 SAY "APP. DATE :- "
@Rows,71 SAY T_ardate
Rows = Rows + 2
@Rows,5 SAY "GIMBAL DRAWING NO :- "
@Rows,28 SAY T_gim PICT "99999"
@Rows,35 SAY "DRAWING COST :- "
@Rows,51 SAY T_gdrw PICT "9999"
@Rows,58 SAY "APP. DATE :- "
@Rows,71 SAY T_gdate
Rows = Rows + 1
@Rows,5 SAY REPLICATE ("-",75)
EJECT
SET DEVICE TO SCREEN
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```

```

**PDIE2.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF DIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "SPECIFIC DIE SET/ JIG OF PRODUCT REPORT"
c = "Y"
DO WHILE c = "Y"
    T_edit = 0
    CLEAR
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    STORE SPACE(25) TO T_name
    STORE 0 TO T_prod,T_cus
    STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
    STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
    STORE SPACE(30) TO T_plname,T_arname,T_giname,T_wename
    STORE 0 TO T_plord,T_arord,T_giord,T_weord
    STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
    STORE CTOD('') TO T_pldate,T_ardate,T_gidate,T_wedate
    DO Title WITH Title1, Title2
    @8, Col SAY Title6
    @12,25 SAY "PRINT PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Die INDEX Idie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT " "
    ELSE
        SET DEVICE TO PRINT
        DO Ptitle WITH Title1, Title2
        Rows = 8
        @Rows,Col SAY Title6
        Rows = Rows +1
        @Rows,5 SAY REPLICATE("-",75)
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
    
```

```

STORE ar_didw_no TO T_ardrw
STORE gi_didw_no TO T_gidrw
STORE we_didw_no TO T_wedrw
STORE pl_di_cost TO T_plcost
STORE ar_di_cost TO T_arcost
STORE gi_di_cost TO T_gicost
STORE we_di_cost TO T_wecost
STORE pl_vd_name TO T_plname
STORE ar_vd_name TO T_arname
STORE gi_vd_name TO T_giname
STORE we_vd_name TO T_wename
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_rc_date TO T_pldate
STORE ar_rc_date TO T_ardate
STORE gi_rc_date TO T_gidate
STORE we_rc_date TO T_wedate
Rows = Rows + 2
@Rows ,5 SAY "PRODUCT TYPE :- "
@Rows ,21 SAY T_prod
@Rows ,46 SAY "CUSTOMER NO :- "
@Rows ,62 SAY T_cus
Rows = Rows + 2
@Rows,5 SAY "CUSTOMER NAME:- "
@Rows,21 SAY T_name
Rows = Rows +2
@Rows,5 SAY "PLATE :- DRAWING NO :-- "
@ROWS,32 SAY T_pldrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :-- "
@ROWS,62 SAY T_plcost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME :-- "
@ROWS,32 SAY T_plname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_plord PICT "99"
@ROWS,46 SAY "COST/UNIT :-- "
@ROWS,62 SAY T_plunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECIEVE DATE :-- "
@ROWS,32 SAY T_pldate
ROWS = ROWS +2
@ROWS,5 SAY "ARM :-- DRAWING NO :-- "
@ROWS,32 SAY T_ardrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :-- "
@ROWS,62 SAY T_arcost PICT "9999"

```

```

ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME      :- "
@ROWS,32 SAY T_arname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_arord PICT "99"
@ROWS,46 SAY "COST/UNIT        :- "
@ROWS,62 SAY T_arunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECIEVE DATE    :- "
@ROWS,32 SAY T_ardate
ROWS = ROWS +2
@ROWS,5 SAY "GIMBAL:- DRAWING NO      :- "
@ROWS,32 SAY T_gidrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_gicost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME      :- "
@ROWS,32 SAY T_giname PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_giord PICT "99"
@ROWS,46 SAY "COST/UNIT        :- "
@ROWS,62 SAY T_giunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECEIVE DATE    :- "
@ROWS,32 SAY T_gidate
ROWS = ROWS +2
@ROWS,5 SAY "WELDING:- DRAWING NO      :- "
@ROWS,32 SAY T_wedrw PICT "XXXXXXX!"
@ROWS,46 SAY "DRAWING COST :- "
@ROWS,62 SAY T_wecost PICT "9999"
ROWS = ROWS +1
@ROWS,15 SAY "VENDOR NAME      :- "
@ROWS,32 SAY T_wename PICT "@!"
ROWS = ROWS +1
@ROWS,15 SAY "QUANTITY ORDER:- "
@ROWS,32 SAY T_weord PICT "99"
@ROWS,46 SAY "COST/UNIT        :- "
@ROWS,62 SAY T_weunit PICT "999999"
ROWS = ROWS +1
@ROWS,15 SAY "RECIEVE DATE    :- "
@ROWS,32 SAY T_wedate
ROWS = ROWS +2
@Rows,5 SAY REPLICATE ("-",75)
EJECT
SET DEVICE TO SCREEN
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```



```

**PPACK2.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF PACK.DBF
*
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "SPECIFIC PACKAGING OF PRODUCT REPORT"
c = "Y"
DO WHILE c = "Y"
    T_edit = 0
    CLEAR
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    STORE SPACE(25) TO T_name
    STORE SPACE(30) TO T_vname
    STORE SPACE(8) TO T_drno
    STORE 0 TO T_prod,T_cus,T_drcost,T_costun
    STORE CTOD('') TO T_apdate
    *
    DO Title WITH Title1, Title2
    @8, Col SAY Title6
    @12,25 SAY "PRINT PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Pack INDEX Ipack
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT " "
    ELSE
        SET DEVICE TO PRINT
        DO Ptitle WITH Title1, Title2
        Rows = 8
        @Rows,Col SAY Title6
        Rows = Rows +1
        @Rows,5 SAY REPLICATE("-",75)
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pack_dr_no TO T_drno
        STORE pk_dr_cost TO T_drcost
    
```



```

STORE pk_ap_date TO T_apdate
STORE pk_vendor TO T_vname
STORE pk_cost_un TO T_costun
Rows = Rows + 2
@Rows,5 SAY "PRODUCT TYPE :- "
@Rows,21 SAY T_prod
@Rows,46 SAY "CUSTOMER NO :- "
@Rows,62 SAY T_cus
Rows = Rows + 2
@Rows,21 SAY T_name
@Rows,5 SAY "CUSTOMER NAME:- "
Rows = Rows + 2
@Rows,5 SAY "PACKAGING:- DRAWING NO :- "
@Rows,31 SAY T_drno PICT "XXXXXXX!"
@Rows,40 SAY "DRAWING COST :- "
@Rows,56 SAY T_drcost PICT "99999"
Rows = Rows + 2
@Rows,17 SAY "APPROVAL DATE :- "
@Rows,35 SAY T_apdate
Rows = Rows + 2
@Rows,17 SAY "VENDOR NAME :- "
@Rows,35 SAY T_vname PICT "@!"
Rows = Rows + 2
@Rows,17 SAY "COST/ UNIT :- "
@Rows,35 SAY T_costun PICT "9999.99"
Rows = Rows + 1
@Rows,5 SAY REPLICATE ("-",75)
EJECT
SET DEVICE TO SCREEN
DO Subcont
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```

```

**Subcont.prg
**To ask for more data **
*
Normal = "W"
Inverse = "/W"
c = SPACE(1)
DO WHILE .NOT. c$ "YN"
    SET COLOR TO &Normal+
    @23,28 SAY "CONTINUE (Y/N)?" GET c PICT "!"
    READ
    SET COLOR TO &Normal
ENDDO
IF c = "Y"
    LOOP
ENDIF
RETURN
**END OF PROGRAM*****

```

```

**Title.prg**
**To display heading
PARAMETER Title1,Title2
Length = LEN(Title1)
Col = INT((80-Length)/2)
@ 2, Col SAY Title1
@ 4,3    SAY Title2
@ 4,60   SAY DATE()
@ 5,0 TO 5, 79
RETURN
**END OF PROGRAM***

```

```

**Ptitle.prg**
**To print heading
PARAMETER Title1,Title2
Length = LEN(Title1)
Col = INT((80-Length)/2)
@ 2, Col SAY Title1
@ 4,5    SAY Title2
@ 4,60   SAY DATE()
RETURN
**END OF PROGRAM***

```

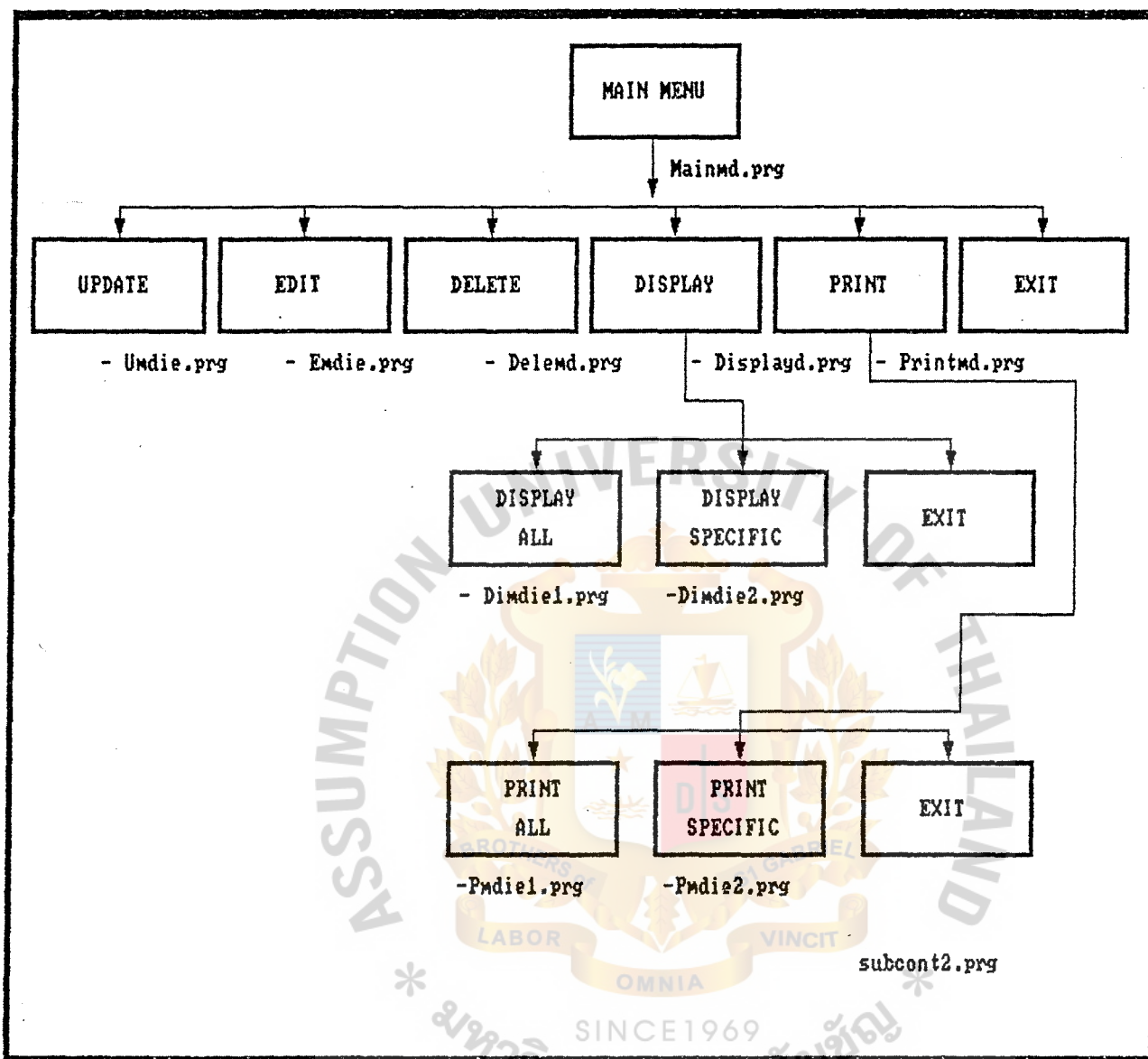


Figure F-9 Main System flowchart of Machine shop

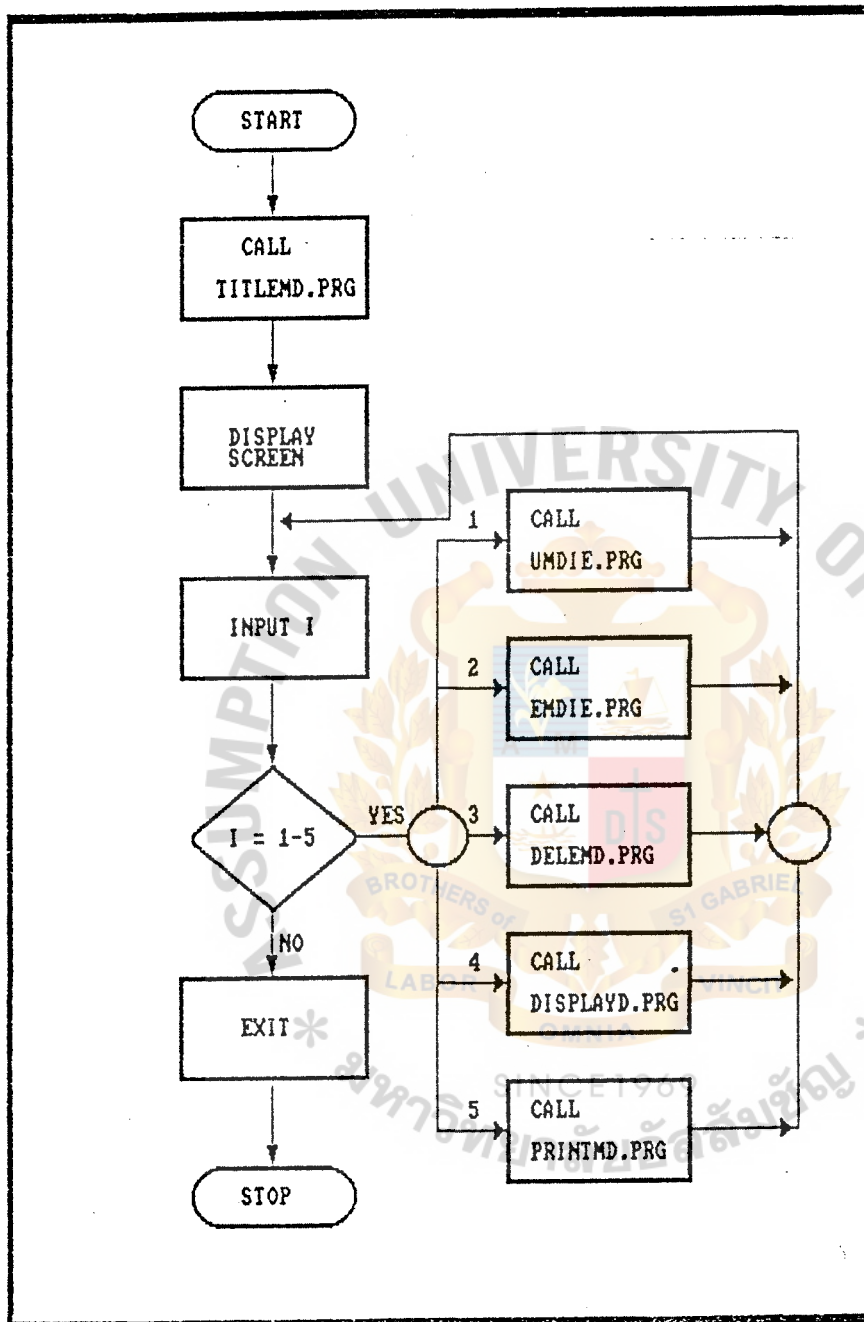


Figure F-18 Program flowchart of main menu Die set/Jig (Machine shop system)

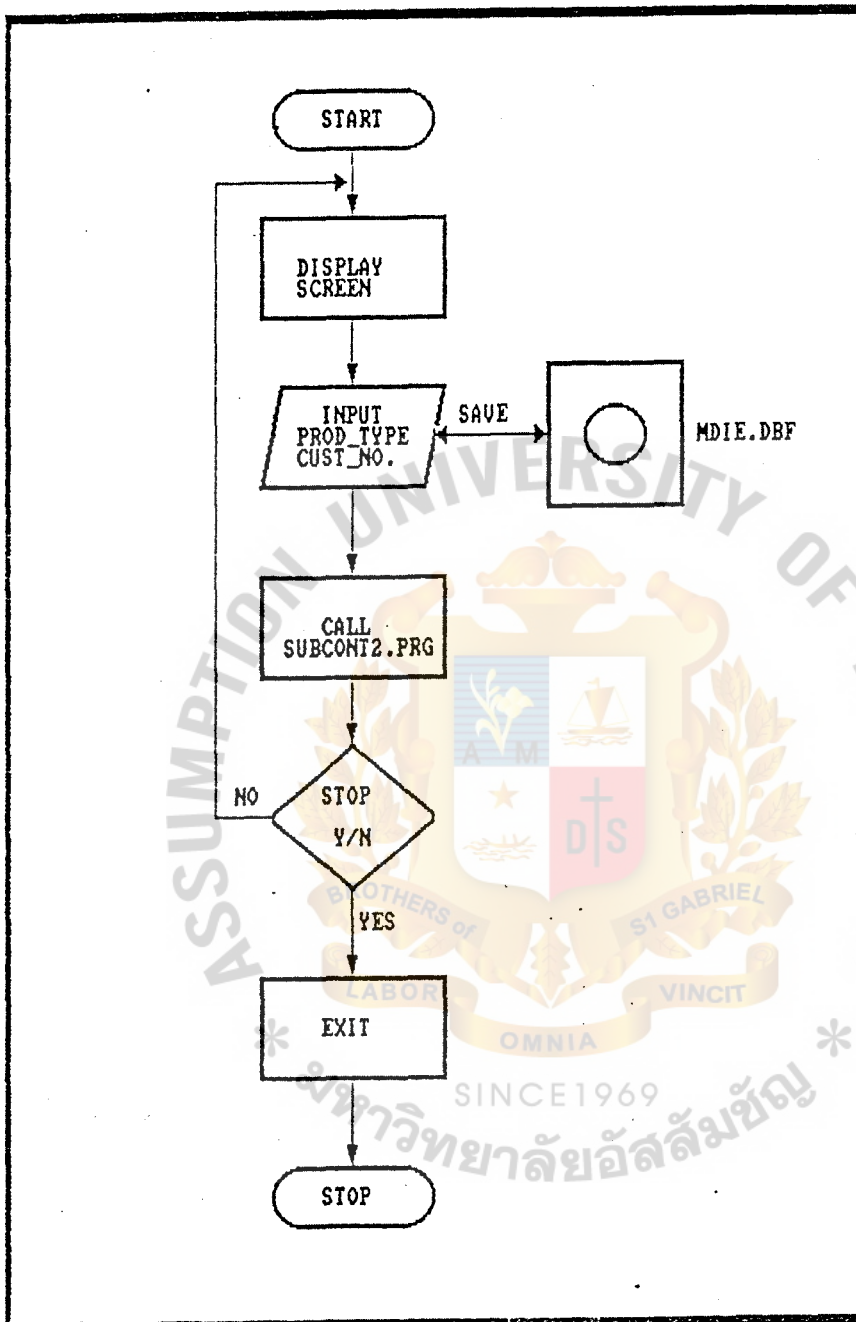


Figure F-11 Program flowchart of Update/add new record Mdie.dbf
(Machine shop system)

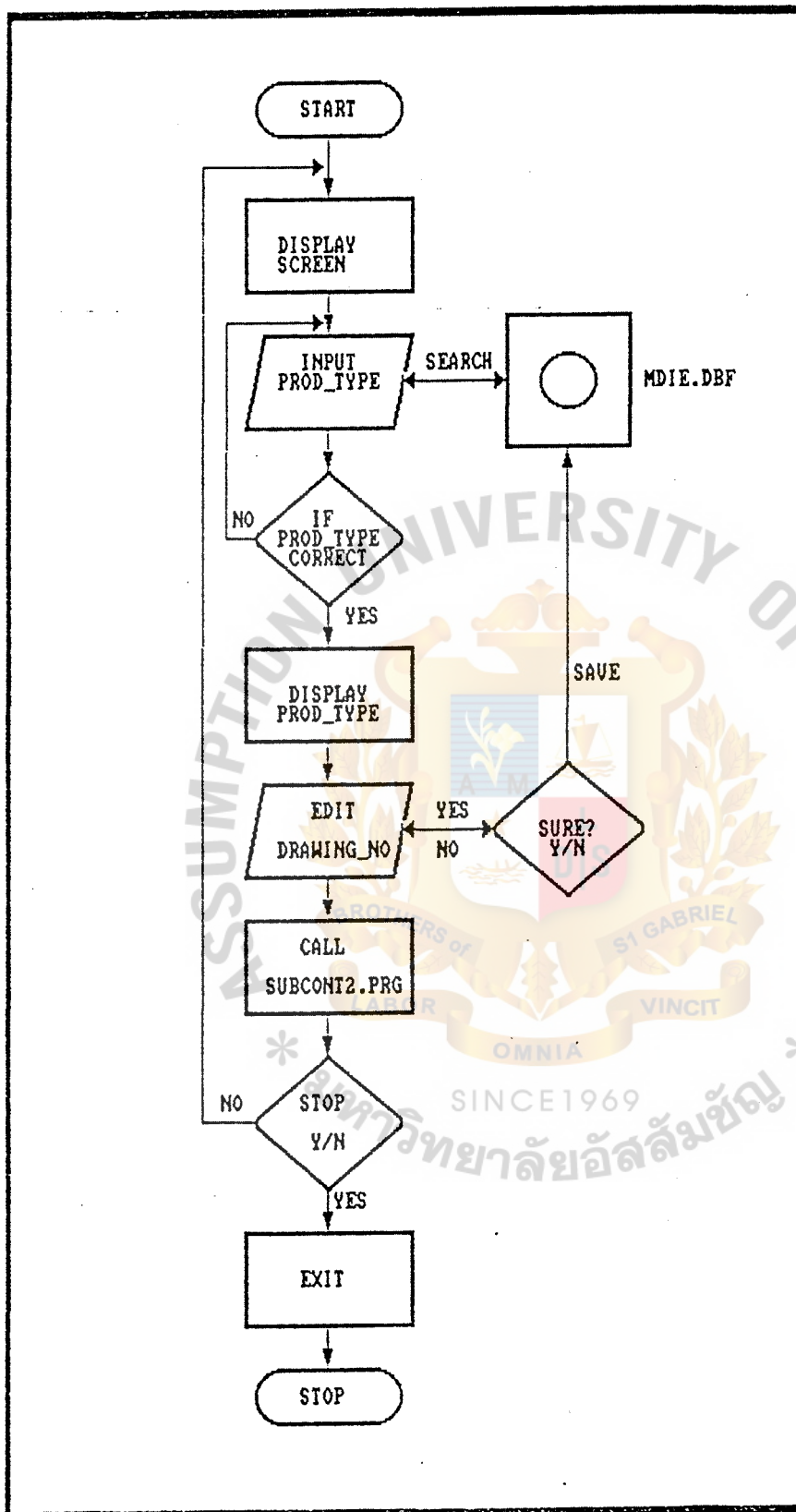


Figure F-12 Program flowchart of Edit/correct record Emdie.dbf
(Machine shop system)

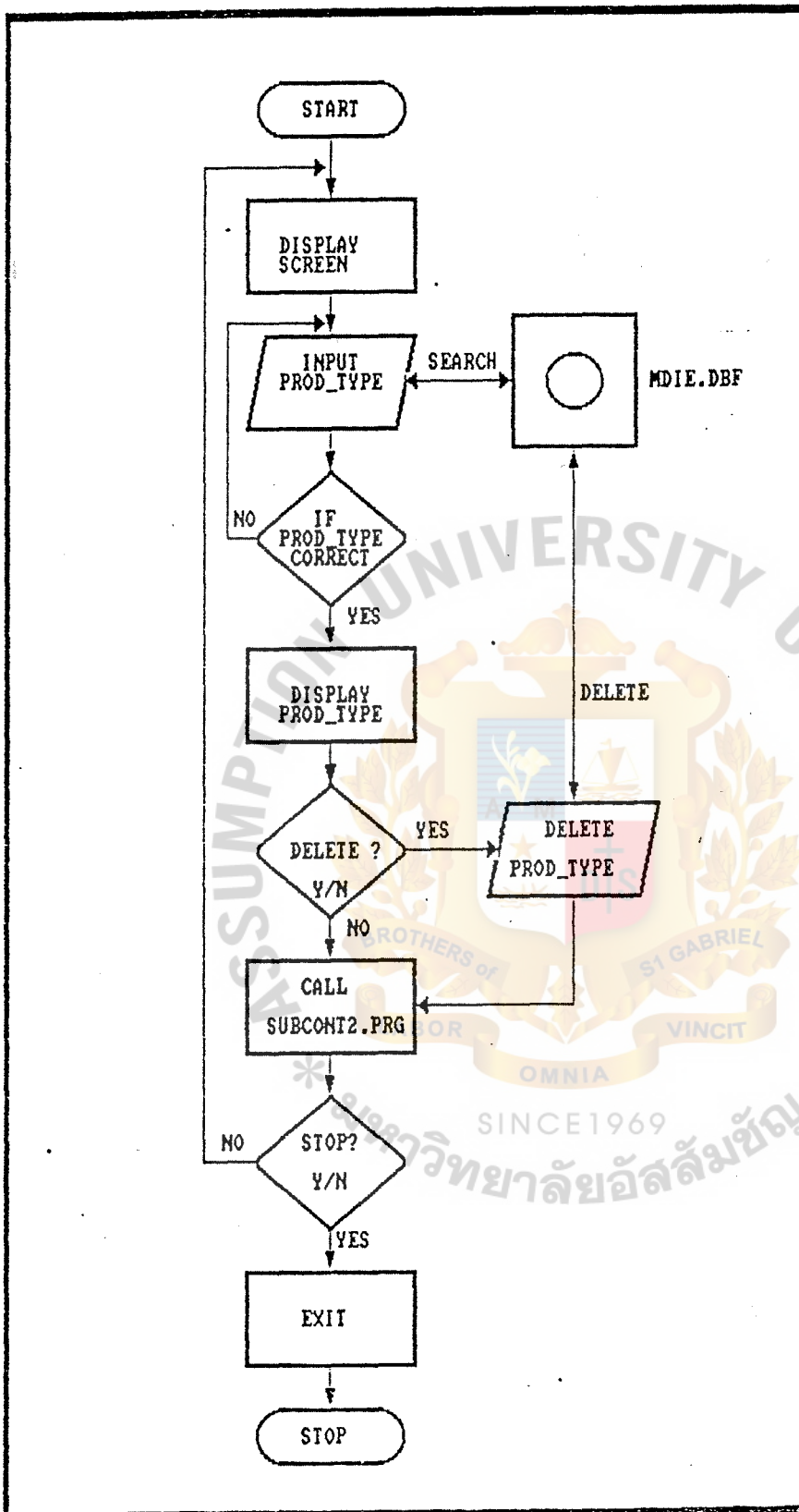


Figure F13 Program flowchart of Delete record (Machine shop system)

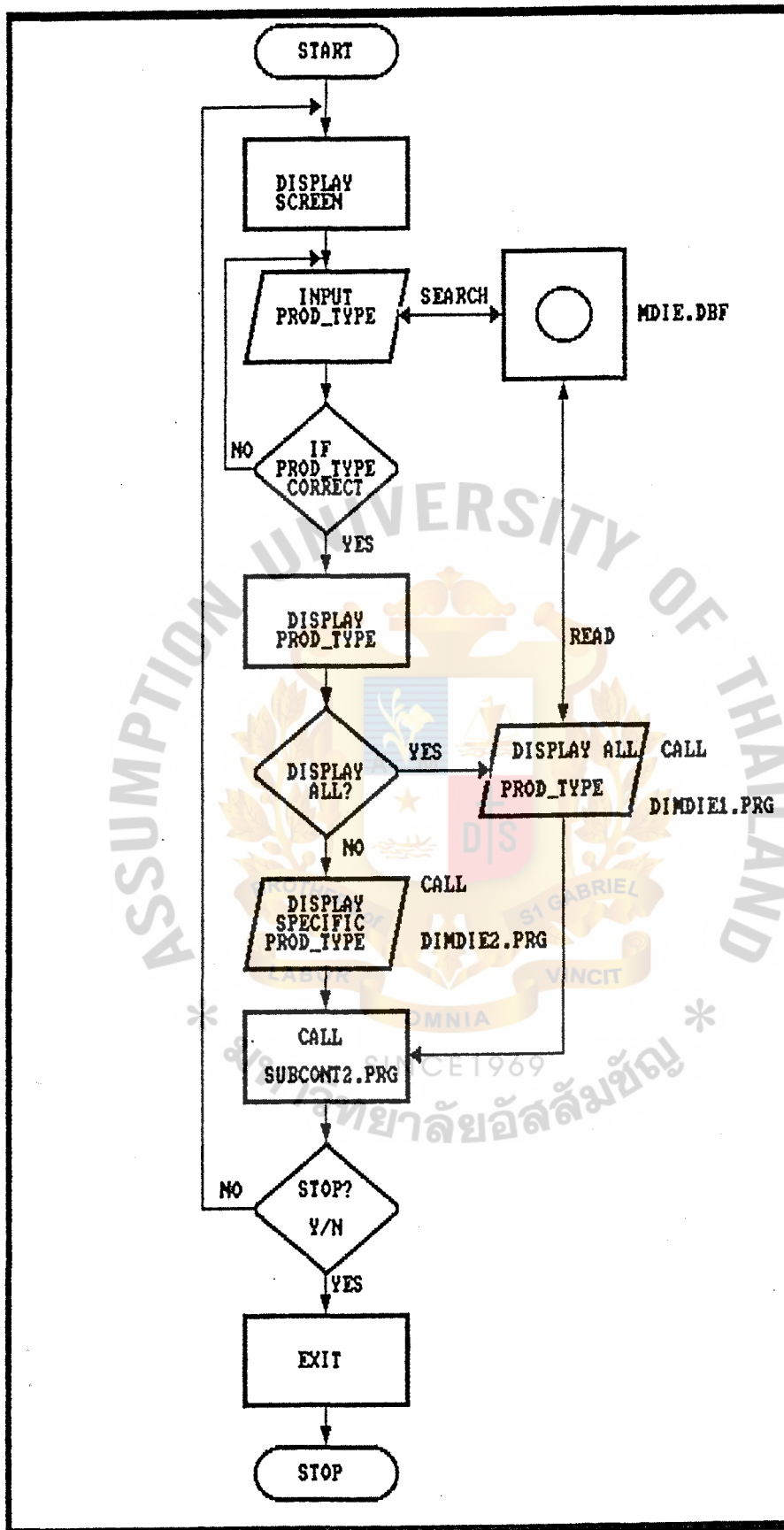


Figure F-14 Program flowchart of Display record (Machine shop system)

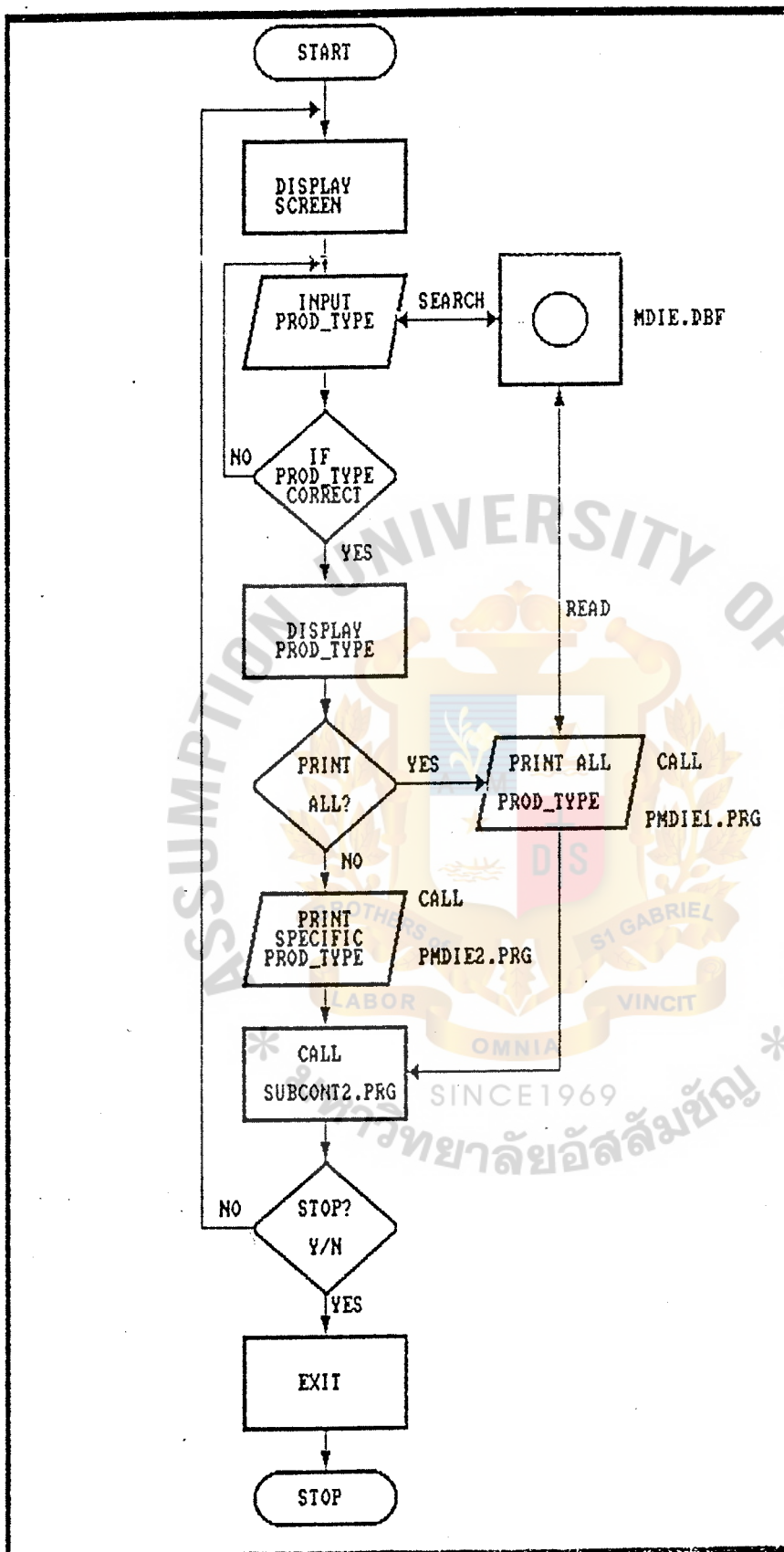


Figure F-15 Program flowchart of Print record (Machine Shop system)

```

**MAINMD.PRG**
*To display main menu of the die set of machine shop *
CLEAR
SET TALK OFF
SET ECHO OFF
SET STAT OFF
IF ISCOLOR()
    Normal = "W/B"
    Inverse = "GR/W"
ELSE
    Normal = "W"
    Inverse = "/W"
ENDIF
PUBLIC i,
i = 1
Title1 = "PRECISION CO., LTD"
Title2 = "MACHINE SHOP DEPARTMENT"
Title3 = "M A I N   M E N U (DIESET/JIG)"
Sub1 = "1. UPDATE/ADD NEW RECORD"
Sub2 = "2. EDIT/CORRECT RECORD"
Sub3 = "3. DELETE RECORD"
Sub4 = "4. DISPLAY RECORD"
Sub5 = "5. PRINT"
Sub6 = "6. Exit To Main Menu"
DO WHILE i#6
    r = 11
    Choice = "Sub1"
    SET COLOR TO &Normal
    CLEAR
    DO Titlend WITH Title1,Title2
    Length = LEN(Title3)
    Col = INT((80-Length)/2)
    @8,Col SAY Title3
    SET COLOR TO &Normal
    @ 11,33 SAY Sub1
    @ 13,33 SAY Sub2
    @ 15,33 SAY Sub3
    @ 17,33 SAY Sub4
    @ 19,33 SAY Sub5
    @ 21,33 SAY Sub6
    SET COLOR TO &Normal+
    @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
        + " to move highlight, and press ";
        + CHR(17) + CHR(217) + " to select"
    SET COLOR TO &Inverse
    @ r, 33 SAY &Choice
    x = 0
DO WHILE x #13
    x = 0
    DO WHILE x = 0
        x = INKEY()

```



```

SET COLOR TO &Normal
@ r,33 SAY &Choice
DO CASE
CASE x = 24
r = r + 2
r = IIF (r>21,11,r)
i = VAL (RIGHT(Choice,1))+1
i = IIF (i>6,1,i)
choice = "Sub" + STR(i,1)
SET COLOR TO &Inverse
@r,33 SAY &Choice
CASE x = 5
r = r - 2
r = IIF (r<11,21,r)
i = VAL (RIGHT(Choice,1))-1
i = IIF (i<1,6,i)
Choice = "Sub" + STR(i,1)
SET COLOR TO &Inverse
@r,33 SAY &Choice
CASE x = 13
SET COLOR TO &Inverse
@r,33 SAY &Choice
SET COLOR TO &Normal
DO CASE
CASE i = 1
DO Umdie
CASE i = 2
DO Emdie
CASE i = 3
DO Delemd
CASE i = 4
DO Displayd
CASE i = 5
DO Printmd
CASE i = 6
Exit
ENDCASE
ENDCASE
ENDDO
SET COLOR TO &Normal
CLEAR ALL
SET TALK ON
SET STAT ON
**END OF PROGRAM**

```

```

**UMDIE.PRG**
*PURPOSE : To update MDIE.DBF
SET CONFIRM OFF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
CLOSE ALL
CLEAR
SELECT 1
USE Mdie INDEX Imdie
c="Y"
DO WHILE c="Y"
  @23,0 CLEAR TO 24,79
  STORE SPACE(25) TO T_name
  STORE 0 TO T_prod,T_cus
  STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
  STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
  STORE 0 TO T_plord,T_arord,T_giord,T_weord
  STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
  STORE 0 TO T_plma,T_arma,T_gima,T_wema
  STORE 0 TO T_plla,T_arla,T_gila,T_wela
  STORE CTOD('') TO T_plstdate,T_arstdate,
    T_gistdate,T_westdate
  STORE CTOD('') TO T_plfsdate,T_arfsdate,
    T_gifsdate,T_wefsdate
  DO Titlemd WITH Title1,Title2
  Title5 = "UPDATE :- D I E S E T / J I G "
  Length = LEN(Title5)
  Col=INT((80-Length)/2)
  @7,Col SAY Title5
  @9,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
  @9,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
  @11,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@!"
  @13,5 SAY "PLATE:DRAWING NO:" GET T_pldrw PICT "XXXXXXX!"
  @13,46 SAY "QUANTITY ORDER :- " GET T_plord PICT "99"
  @15,13 SAY "DRAWING COST :- " GET T_plcost PICT "99999"
  @17,13 SAY "COST/UNIT :- " GET T_plunit PICT "999999"
  @17,46 SAY "MATERIAL COST :- " GET T_plma PICT "999999"
  @18,46 SAY "LABOR COST :- " GET T_plla PICT "99999"
  @19,13 SAY "START DATE :- " GET T_plstdate
  @19,46 SAY "FINISH DATE :- " GET T_plfsdate
  READ
  @13,0 CLEAR TO 23,79
  @13,5 SAY "ARM: DRAWING NO:" GET T_ardrw PICT "XXXXXXX!"
  @13,46 SAY "QUANTITY ORDER :- " GET T_arord PICT "99"
  @17,13 SAY "COST/UNIT :- " GET T_arunit PICT "999999"
  @17,46 SAY "MATERIAL COST :- " GET T_arma PICT "999999"

```

```

@18,46 SAY "LABOR COST      :- " GET T_arla PICT "99999"
@19,13 SAY "START DATE      :- " GET T_arstdate
@19,46 SAY "FINISH DATE     :- " GET T_arfsdate
READ
@13,0 CLEAR TO 23,79
@13,5SAY "GIMBAL:DRAWING NO:" GET T_gidrw PICT "XXXXXXX!"
@13,46 SAY "QUANTITY ORDER :- " GET T_giord PICT "99"
@15,13 SAY "DRAWING COST    :- " GET T_gicost PICT "99999"
@17,13 SAY "COST/UNIT      :- " GET T_giunit PICT "999999"
@17,46 SAY "MATERIAL COST:- " GET T_gima PICT "999999"
@18,46 SAY "LABOR COST      :- " GET T_gila PICT "99999"
@19,13 SAY "START DATE      :- " GET T_gistdate
@19,46 SAY "FINISH DATE     :- " GET T_gifsdate
READ
@13,0 CLEAR TO 23,79
@13,5SAY "WELDING:DRAWING NO:" GET T_wedrw PICT "XXXXXXX!"
@13,46 SAY "QUANTITY ORDER :- " GET T_weord PICT "99"
@15,13 SAY "DRAWING COST    :- " GET T_wecost PICT "99999"
@17,13 SAY "COST/UNIT      :- " GET T_weunit PICT "999999"
@17,46 SAY "MATERIAL COST  :- " GET T_wema PICT "999999"
@18,46 SAY "LABOR COST      :- " GET T_wela PICT "99999"
@19,13 SAY "START DATE      :- " GET T_westdate
@19,46 SAY "FINISH DATE     :- " GET T_wefsdate
READ
APPEND BLANK
REPLACE product_ty WITH T_prod,custom_no WITH T_cus
REPLACE cust_name WITH T_name
REPLACE pl_didw_no WITH T_pldrw,
        ar_didw_no WITH T_arldr
REPLACE gi_didw_no WITH T_gidrw,
        we_didw_no WITH T_wedrw
REPLACE pl_di_cost WITH T_plcost,
        ar_di_cost WITH T_arcost
REPLACE gi_di_cost WITH T_gicost,
        we_di_cost WITH T_wecost
REPLACE pl_qty_ord WITH T_plord,
        ar_qty_ord WITH T_arord
REPLACE gi_qty_ord WITH T_giord,
        we_qty_ord WITH T_weord
REPLACE pl_cost_un WITH T_plunit,
        ar_cost_un WITH T_arunit
REPLACE gi_cost_un WITH T_giunit,
        we_cost_un WITH T_weunit
REPLACE pl_ma_cost WITH T_plma,
        ar_ma_cost WITH T_arma
REPLACE gi_ma_cost WITH T_gima,
        we_ma_cost WITH T_wema
REPLACE pl_la_cost WITH T_plla,
        ar_la_cost WITH T_arla
REPLACE gi_la_cost WITH T_gila,
        we_la_cost WITH T_wela

```

```
REPLACE pl_st_date WITH T_plstdate,  
      ar_st_date WITH T_arstdate  
REPLACE gi_st_date WITH T_gistdate,  
      we_st_date WITH T_westdate  
REPLACE pl_fs_date WITH T_plfsdate,  
      ar_fs_date WITH T_arfsdate  
REPLACE gi_fs_date WITH T_gifsdate,  
      we_fs_date WITH T_wefsdate  
DO Subcont2  
ENDDO  
USE  
ERASE Imdie.ndx  
USE mdie  
INDEX ON product_ty TO Imdie  
USE  
RETURN  
**END OF PROGRAM**
```



```

*EMDIE.PRG
*PURPOSE :TO EDIT OR CORRECT DATA OF MDIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "E D I T   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    CLEAR
    DO Titlemd WITH Title1,Title2
    @8,Col SAY Title6
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Mdie INDEX Imdie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
        STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
        STORE 0 TO T_plord,T_arord,T_giord,T_weord
        STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
        STORE 0 TO T_plla,T_arla,T_gila,T_wela
        STORE 0 TO T_plma,T_arma,T_gima,T_wema
        STORE CTOD('') TO T_plstdate,T_arstdate,
            T_gistdate,T_westdate
        STORE CTOD('') TO T_plfsdate,T_arfsdate,
            T_gifsdate,T_wefsdate
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
        STORE ar_didw_no TO T_ardrw
        STORE gi_didw_no TO T_gidrw
        STORE we_didw_no TO T_wedrw
    
```


STORE pl_di_cost TO T_plcost
 STORE ar_di_cost TO T_arcost
 STORE gi_di_cost TO T_gicost
 STORE we_di_cost TO T_wecost
 STORE pl_qty_ord TO T_plord
 STORE ar_qty_ord TO T_arord
 STORE gi_qty_ord TO T_giord
 STORE we_qty_ord TO T_weord
 STORE pl_cost_un TO T_plunit
 STORE ar_cost_un TO T_arunit
 STORE gi_cost_un TO T_giunit
 STORE we_cost_un TO T_weunit
 STORE pl_ma_cost TO T_plma
 STORE ar_ma_cost TO T_arma
 STORE gi_ma_cost TO T_gima
 STORE we_ma_cost TO T_wema
 STORE pl_la_cost TO T_plla
 STORE ar_la_cost TO T_arla
 STORE gi_la_cost TO T_gila
 STORE we_la_cost TO T_wela
 STORE pl_st_date TO T_plstdate
 STORE ar_st_date TO T_arstdate
 STORE gi_st_date TO T_gistdate
 STORE we_st_date TO T_westdate
 STORE pl_fs_date TO T_plfsdate
 STORE ar_fs_date TO T_arfsdate
 STORE gi_fs_date TO T_gifsddate
 STORE we_fs_date TO T_wefsddate
 @7,0 CLEAR TO 23,79
 @7,Col SAY Title6
 @9,5 SAY "PRODUCT TYPE :- " GET T_prod PICT "99999"
 @9,46 SAY "CUSTOMER NO :- " GET T_cus PICT "9999"
 @11,5 SAY "CUSTOMER NAME:- " GET T_name PICT "@!"
 @13,5 SAY "PLATE:DRAWING NO:" GET T_pldrw PICT "XXXXX!"
 @13,46 SAY "QUANTITY ORDER :- " GET T_plord PICT "99"
 @15,13 SAY "DRAWING COST :- " GET T_plcost PICT "99999"
 @17,13 SAY "COST/UNIT :- " GET T_plunit PICT "999999"
 @17,46 SAY "MATERIAL COST:- " GET T_plma PICT "999999"
 @18,46 SAY "LABOR COST :- " GET T_plla PICT "99999"
 @19,13 SAY "START DATE :- " GET T_plstdate
 @19,46 SAY "FINISH DATE :- " GET T_plfsdate
 READ
 @13,0 CLEAR TO 23,79
 @13,5 SAY "ARM:DRAWING NO: " GET T_ardrw PICT "XXXXX!"
 @13,46 SAY "QUANTITY ORDER :- " GET T_arord PICT "99"
 @15,13 SAY "DRAWING COST :- " GET T_arcost PICT "99999"
 @17,13 SAY "COST/UNIT :- " GET T_arunit PICT "999999"
 @17,46 SAY "MATERIAL COST :- " GET T_arma PICT "999999"
 @18,46 SAY "LABOR COST :- " GET T_arla PICT "99999"

```

@19,13 SAY "START DATE      :- " GET T_arstdate
@19,46 SAY "FINISH DATE     :- " GET T_arfsdate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY"GIMBAL:DRAWING NO:" GET T_gidrw PICT "XXXXX!"
@13,46 SAY "QUANTITY ORDER :- " GET T_giord PICT "99"
@15,13 SAY "DRAWING COST:- " GET T_gicost PICT "99999"
@17,13 SAY "COST/UNIT  :- " GET T_giunit PICT "999999"
@17,46 SAY "MATERIAL COST:- " GET T_gima PICT "999999"
@18,46 SAY "LABOR COST   :- " GET T_gila PICT "99999"
@19,13 SAY "START DATE      :- " GET T_gistdate
@19,46 SAY "FINISH DATE     :- " GET T_gifsdate
READ
@13,0 CLEAR TO 23,79
@13,5 SAY"WELDING:DRAWING NO:" GET T_wedrw PICT "XXXX!"
@13,46 SAY "QUANTITY ORDER :- " GET T_weord PICT "99"
@15,13 SAY "DRAWING COST:- " GET T_wecost PICT "99999"
@17,13 SAY "COST/UNIT  :- " GET T_weunit PICT "999999"
@17,46 SAY "MATERIAL COST :- " GET T_wema PICT "999999"
@18,46 SAY "LABOR COST   :- " GET T_wela PICT "99999"
@19,13 SAY "START DATE      :- " GET T_westdate
@19,46 SAY "FINISH DATE     :- " GET T_wefsdate
READ
REPLACE product_ty WITH T_prod,custom_no WITH T_cus
REPLACE cust_name WITH T_name
REPLACE pl_didw_no WITH T_pldrw,
        ar_didw_no WITH T_arldr
REPLACE gi_didw_no WITH T_gidrw,
        we_didw_no WITH T_wedrw
REPLACE pl_di_cost WITH T_plcost,
        ar_di_cost WITH T_arcost
REPLACE gi_di_cost WITH T_gicost,
        we_di_cost WITH T_wecost
REPLACE pl_qty_ord WITH T_plord,
        ar_qty_ord WITH T_arord
REPLACE gi_qty_ord WITH T_giord,
        we_qty_ord WITH T_weord
REPLACE pl_cost_un WITH T_plunit,
        ar_cost_un WITH T_arunit
REPLACE gi_cost_un WITH T_giunit,
        we_cost_un WITH T_weunit
REPLACE pl_la_cost WITH T_plla,
        ar_la_cost WITH T_arla
REPLACE gi_la_cost WITH T_gila,
        we_la_cost WITH T_wela
REPLACE pl_ma_cost WITH T_plma,
        ar_ma_cost WITH T_arma

```

```
REPLACE gi_ma_cost WITH T_gima,  
        we_ma_cost WITH T_wema  
REPLACE pl_st_date WITH T_plstdate,  
        ar_st_date WITH T_arstdate  
REPLACE gi_st_date WITH T_gistdate,  
        we_st_date WITH T_westdate  
REPLACE pl_fs_date WITH T_plfsdate,  
        ar_fs_date WITH T_arfsdate  
REPLACE gi_fs_date WITH T_gifsddate,  
        we_fs_date WITH T_wefsddate  
DO Subcont2  
ENDIF  
ENDDO  
USE  
ERASE Imdie.ndx  
USE Mdie  
INDEX ON product_ty TO Imdie  
USE  
RETURN  
**END OF PROGRAM**
```



```

*DELEMD.PRG
*PURPOSE :TO DELETE RECORD OF MDIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title16 = "D E L E T E   R E C O R D"
c = "Y"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title16)
    Col = INT((80-Length)/2)
    CLEAR
    DO Titlemd WITH Title1,Title2
    @8,Col SAY Title16
    @12,30 SAY "PRODUCT TYPE : " GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Mdie INDEX Imdie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        @9,0 CLEAR TO 23,79
        @10,5 SAY "PRODUCT TYPE :- "
        @10,46 SAY "CUSTOMER NO :- "
        @12,5 SAY "CUSTOMER NAME:- "
        SET COLOR TO &Normal+
        @10,21 SAY T_prod
        @10,62 SAY T_cus
        @12,21 SAY T_name
        STORE " " TO ans
        @18,28 SAY "ARE YOU SURE ?" GET ans PICT "!"
        SET COLOR TO &Normal
        READ
    
```

```

IF ans = "Y"
  DELE
  PACK
ELSE
  @18,0 CLEAR TO 21,79
ENDIF
DO Subcont2
ENDIF
USE
ENDDO
@9,0 CLEAR TO 23,79
SET COLOR TO &Normal+
@18,35 SAY "PLEASE WAITING..."
SET COLOR TO &Normal
CLOSE ALL
ERASE Imdie.ndx
USE Mdie
INDEX ON product_ty TO Imdie
USE
CLOSE ALL
RETURN
**END OF PROGRAM**

```




```

**DISPLAYD.PRG**
*PURPOSE : To display submenu of Display record
Subx = "D I S P L A Y   R E C O R D"
Subx1 = "1. DISPLAY ALL RECORD"
Subx2 = "2. DISPLAY SPECIFIC RECORD"
Subx3 = "3. Exit to Submenu"
PUBLIC f
f = 1
Normal = "W"
Inverse = "I"
SET COLOR TO &Normal
DO WHILE f#3
    f = 1
    r = 11
    Choice14 = "Subx1"
    CLEAR
    DO Titlemd WITH Title1,Title2
    Length = LEN(Subx)
    Col = INT((80-Length)/2)
    @ 8 ,Col SAY Subx
    SET COLOR TO &Normal
    @ 11,30 SAY Subx1
    @ 13,30 SAY Subx2
    @ 15,30 SAY Subx3
    SET COLOR TO &Normal+
    @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
    + " to move highlight, and press ";
    + CHR(17) + CHR(217) + " to select"
    SET COLOR TO &Inverse
    @ r, 30 SAY &Choice14
    x = 0
    DO WHILE x #13
        x = 0
        DO WHILE x = 0
            x = INKEY()
        ENDDO
        SET COLOR TO &Normal
        @ r,30 SAY &Choice14
        DO CASE
            CASE x = 24
                r = r + 2
                r = IIF (r>15,11,r)
                f = VAL (RIGHT(Choice14,1))+1
                f = IIF (f>3,1,f)
                Choice14 = "Subx" + STR(f,1)
                SET COLOR TO &Inverse
                @r,30 SAY &Choice14
            CASE x = 5
                r = r - 2
                r = IIF (r<11,15,r)

```

```

f = VAL (RIGHT(Choice14,1))-1
f = IIF (f<1,3,f)
Choice14 = "Subx" + STR(f,1)
SET COLOR TO &Inverse
  @r,30 SAY &Choice14
CASE x = 13
  SET COLOR TO &Inverse
  @r,30 SAY &Choice14
  IF f = 3
    EXIT
  ENDIF
DO CASE
  CASE f = 1
    DO Dimdie1
  CASE f = 2
    DO Dimdie2
  CASE f = 3
    EXIT
  ENDCASE
.ENDCASE
ENDDO
SET COLOR TO &Normal
  @1,0 CLEAR TO 23,79
RETURN
**END OF PROGRAM**

```



```

**DIMDIE1.PRG
*PURPOSE :TO DISPLAY ALL DATA OF MDIE.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title7 = "D I S P L A Y   R E C O R D"
SELECT 1
USE Mdie INDEX Imdie
GO TOP
CLEAR
Length = LEN(Title7)
Col = INT((80-Length)/2)
DO Titlemd WITH Title1,Title2
    @7,Col SAY Title7
    STORE SPACE(25) TO T_name
    STORE 0 TO T_prod,T_cus
    STORE SPACE(8) TO T_pldrw,T_arldr,T_gldr,T_wedr
    STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
    STORE 0 TO T_plla,T_arla,T_gila,T_wela
    STORE 0 TO T_plma,T_arma,T_gima,T_wema
    STORE 0 TO T_plord,T_arord,T_giord,T_weord
    STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
    STORE CTOD('') TO T_plstdate,T_arstdate,
        T_gistdate,T_westdate
    STORE CTOD('') TO T_plfsdate,T_arfsdate,
        T_gifsdate,T_wefsdate
    @8,0 CLEAR TO 23,79
    @9,5 SAY "PRODUCT TYPE:- "
    @9,46 SAY "CUSTOMER NO :- "
    @11,5 SAY "CUSTOMER NAME:- "
DO WHILE c = "Y"
    STORE product_ty TO T_prod
    STORE custom_no TO T_cus
    STORE cust_name TO T_name
    STORE pl_didw_no TO T_pldrw
    STORE ar_didw_no TO T_arldr
    STORE gi_didw_no TO T_gldr
    STORE we_didw_no TO T_wedr
    STORE pl_di_cost TO T_plcost
    STORE ar_di_cost TO T_arcost
    STORE gi_di_cost TO T_gicost
    STORE we_di_cost TO T_wecost
    STORE pl_qty_ord TO T_plord
    STORE ar_qty_ord TO T_arord
    STORE gi_qty_ord TO T_giord
    STORE we_qty_ord TO T_weord
    STORE pl_cost_un TO T_plunit
    STORE ar_cost_un TO T_arunit
    STORE gi_cost_un TO T_giunit

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```

STORE we_cost_un TO T_weunit
STORE pl_la_cost TO T_plla
STORE ar_la_cost TO T_arla
STORE gi_la_cost TO T_gila
STORE we_la_cost TO T_wela
STORE pl_ma_cost TO T_plma
STORE ar_ma_cost TO T_arma
STORE gi_ma_cost TO T_gima
STORE we_ma_cost TO T_wema
STORE pl_st_date TO T_plstdate
STORE ar_st_date TO T_arstdate
STORE gi_st_date TO T_gistdate
STORE we_st_date TO T_wistdate
STORE pl_fs_date TO T_plfsdate
STORE ar_fs_date TO T_arfsdate
STORE gi_fs_date TO T_gifsddate
STORE we_fs_date TO T_wefsddate
SET COLOR TO &Normal+
  @9,21 SAY T_prod PICT "99999"
  @9,62 SAY T_cus PICT "9999"
  @11,21 SAY T_name PICT "@!"
SET COLOR TO &Normal
  @13,5 SAY "PLATE : DRAWING NO :- "
  @13,46 SAY "QUANTITY ORDER :- "
  @15,13 SAY "DRAWING COST :- "
  @17,13 SAY "COST/UNIT :- "
  @17,46 SAY "MATERIAL COST :- "
  @18,46 SAY "LABOR COST :- "
  @19,13 SAY "START DATE :- "
  @19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
  @13,30 SAY T_pldrw PICT "XXXXXXX!"
  @13,64 SAY T_plord PICT "99"
  @15,30 SAY T_plcost PICT "999999"
  @17,30 SAY T_plunit PICT "9999999"
  @17,64 SAY T_plma PICT "9999999"
  @18,64 SAY T_plla PICT "999999"
  @19,30 SAY T_plstdate
  @19,64 SAY T_plfsdate
  @22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.."
  @13,0 CLEAR TO 23,79
SET COLOR TO &Normal
  @13,5 SAY "ARM : DRAWING NO :- "
  @13,46 SAY "QUANTITY ORDER :- "
  @15,13 SAY "DRAWING COST :- "
  @17,13 SAY "COST/UNIT :- "
  @17,46 SAY "MATERIAL COST :- "
  @18,46 SAY "LABOR COST :- "
  @19,13 SAY "START DATE :- "
  @19,46 SAY "FINISH DATE :- "

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```

SET COLOR TO &Normal+
@13,30 SAY T_ardrw PICT "XXXXXXX!"
@13,64 SAY T_arord PICT "99"
@15,30 SAY T_arcost PICT "99999"
@17,30 SAY T_arunit PICT "999999"
@17,64 SAY T_arma PICT "999999"
@18,64 SAY T_arla PICT "99999"
@19,30 SAY T_arstdate
@19,64 SAY T_arfsdate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "GIMBAL: DRAWING NO :- "
@13,46 SAY "QUANTITY ORDER :- "
@15,13 SAY "DRAWING COST :- "
@17,13 SAY "COST/UNIT :- "
@17,46 SAY "MATERIAL COST :- "
@18,46 SAY "LABOR COST :- "
@19,13 SAY "START DATE :- "
@19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_gidrw PICT "XXXXXXX!"
@13,64 SAY T_giord PICT "99"
@15,30 SAY T_gicost PICT "99999"
@17,30 SAY T_giunit PICT "999999"
@17,64 SAY T_gima PICT "999999"
@18,64 SAY T_gila PICT "99999"
@19,30 SAY T_gistdate
@19,64 SAY T_gifsdate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "WELDING: DRAWING NO :- "
@13,46 SAY "QUANTITY ORDER :- "
@15,13 SAY "DRAWING COST :- "
@17,13 SAY "COST/UNIT :- "
@17,46 SAY "MATERIAL COST :- "
@18,46 SAY "LABOR COST :- "
@19,13 SAY "START DATE :- "
@19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_wedrw PICT "XXXXXXX!"
@13,64 SAY T_weord PICT "99"
@15,30 SAY T_wecost PICT "99999"
@17,30 SAY T_weunit PICT "999999"
@17,64 SAY T_wema PICT "999999"
@18,64 SAY T_wela PICT "99999"
@19,30 SAY T_westdate

```



```

@19,64 SAY T_wefsdate
@22,0 SAY " "
WAIT "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
IF .NOT. EOF()
DO Subcont2
@13,0 CLEAR TO 23,79
SKIP
ELSE
SET COLOR TO &Normal+
C = "N"
@23,20 SAY "END OF FILE (ANY KEY TO Submenu)"
SET COLOR TO &Normal
WAIT " "
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```



```

**DIMDIE2.PRG
*PURPOSE :TO DISPLAY SPECIFIC DATA OF MDIE.DBF ON SCREEN
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
c = "Y"
Title4 = "D I S P L A Y   R E C O R D"
DO WHILE c = "Y"
    STORE 0 TO T_edit
    Length = LEN(Title4)
    Col = INT((80-Length)/2)
    CLEAR
    DO Titlend WITH Title1,Title2
    @8,Col SAY Title4
    @12,25 SAY"DISPLAY PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Mdie INDEX Indie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T   F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT ""
    ELSE
        STORE SPACE(25) TO T_name
        STORE 0 TO T_prod,T_cus
        STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
        STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
        STORE 0 TO T_plla,T_arla,T_gila,T_wela
        STORE 0 TO T_plma,T_arma,T_gima,T_wema
        STORE 0 TO T_plord,T_arord,T_giord,T_weord
        STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
        STORE CTOD('') TO T_plstdate,T_arstdate,
            T_gistdate,T_westdate
        STORE CTOD('') TO T_plfsdate,T_arfsdate,
            T_gifsdate,T_wefsdate
        @8,0 CLEAR TO 23,79
        @9,5 SAY "PRODUCT TYPE :- "
        @9,46 SAY "CUSTOMER NO :- "
        @11,5 SAY "CUSTOMER NAME:- "
        STORE product_ty TO T_prod
        STORE custom_no TO T_cus
        STORE cust_name TO T_name
        STORE pl_didw_no TO T_pldrw
        STORE ar_didw_no TO T_ardrw
        STORE gi_didw_no TO T_gidrw
        STORE we_didw_no TO T_wedrw

```

```

STORE pl_di_cost TO T_plcost
STORE ar_di_cost TO T_arcost
STORE gi_di_cost TO T_gicost
STORE we_di_cost TO T_wecost
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_la_cost TO T_plla
STORE ar_la_cost TO T_arla
STORE gi_la_cost TO T_gila
STORE we_la_cost TO T_wela
STORE pl_ma_cost TO T_plma
STORE ar_ma_cost TO T_arma
STORE gi_ma_cost TO T_gima
STORE we_ma_cost TO T_wema
STORE pl_st_date TO T_plstdate
STORE ar_st_date TO T_arstdate
STORE gi_st_date TO T_gistdate
STORE we_st_date TO T_westdate
STORE pl_fs_date TO T_plfsdate
STORE ar_fs_date TO T_arfsdate
STORE gi_fs_date TO T_gifsddate
STORE we_fs_date TO T_wefsddate
SET COLOR TO &Normal+
@9,21 SAY T_prod PICT "99999"
@9,62 SAY T_cus PICT "9999"
@11,21 SAY T_name PICT "@!"
SET COLOR TO &Normal
@13,5 SAY "PLATE : DRAWING NO :-- "
@13,46 SAY "QUANTITY ORDER :-- "
@15,13 SAY "DRAWING COST :-- "
@17,13 SAY "COST/UNIT :-- "
@17,46 SAY "MATERIAL COST :-- "
@18,46 SAY "LABOR COST :-- "
@19,13 SAY "START DATE :-- "
@19,46 SAY "FINISH DATE :-- "
SET COLOR TO &Normal+
@13,30 SAY T_pldrw PICT "XXXXXXX!"
@13,64 SAY T_plord PICT "99"
@15,30 SAY T_plcost PICT "99999"
@17,30 SAY T_plunit PICT "999999"
@17,64 SAY T_plma PICT "999999"
@18,64 SAY T_plla PICT "99999"

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```

@19,30 SAY T_plstdate
@19,64 SAY T_plfsdate
@22,0 SAY " "
WAIT " " ANY KEY TO CONTINUE.."
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "ARM : DRAWING NO :- "
@13,46 SAY "QUANTITY ORDER :- "
@15,13 SAY "DRAWING COST :- "
@17,13 SAY "COST/UNIT :- "
@17,46 SAY "MATERIAL COST :- "
@18,46 SAY "LABOR COST :- "
@19,13 SAY "START DATE :- "
@19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_ardrw PICT "XXXXXXX!"
@13,64 SAY T_arord PICT "99"
@15,30 SAY T_arcost PICT "999999"
@17,30 SAY T_arunit PICT "9999999"
@17,64 SAY T_arma PICT "9999999"
@18,64 SAY T_arla PICT "999999"
@19,30 SAY T_arstdate
@19,64 SAY T_arfsdate
@22,0 SAY " "
WAIT " " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "GIMBAL: DRAWING NO :- "
@13,46 SAY "QUANTITY ORDER :- "
@15,13 SAY "DRAWING COST :- "
@17,13 SAY "COST/UNIT :- "
@17,46 SAY "MATERIAL COST :- "
@18,46 SAY "LABOR COST :- "
@19,13 SAY "START DATE :- "
@19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_gidrw PICT "XXXXXXX!"
@13,64 SAY T_giord PICT "99"
@15,30 SAY T_gicost PICT "999999"
@17,30 SAY T_giunit PICT "9999999"
@17,64 SAY T_gima PICT "9999999"
@18,64 SAY T_gila PICT "999999"
@19,30 SAY T_gistdate
@19,64 SAY T_gifsdate
@22,0 SAY " "
WAIT " " ANY KEY TO CONTINUE.. "
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
@13,5 SAY "WELDING: DRAWING NO :- "

```

```

@13,46 SAY "QUANTITY ORDER :- "
@15,13 SAY "DRAWING COST :- "
@17,13 SAY "COST/UNIT :- "
@17,46 SAY "MATERIAL COST :- "
@18,46 SAY "LABOR COST :- "
@19,13 SAY "START DATE :- "
@19,46 SAY "FINISH DATE :- "
SET COLOR TO &Normal+
@13,30 SAY T_wedrw PICT "XXXXXXX!"
@13,64 SAY T_weord PICT "99"
@15,30 SAY T_wecost PICT "999999"
@17,30 SAY T_weunit PICT "9999999"
@17,64 SAY T_wema PICT "9999999"
@18,64 SAY T_wela PICT "999999"
@19,30 SAY T_westdate
@19,64 SAY T_wefsddate
@22,0 SAY " "
WAIT " ANY KEY TO CONTINUE.."
@13,0 CLEAR TO 23,79
SET COLOR TO &Normal
DO Subcont2
ENDIF
ENDDO
USE
RETURN
**END OF PROGRAM**

```




```

**PRINTMD.PRG**
*PURPOSE :To display submenu of Print Mdie.dbf
Suby = "P R I N T   R E C O R D"
Suby1 = "1. PRINT ALL RECORD"
Suby2 = "2. PRINT SPECIFIC RECORD"
Suby3 = "3. Exit to Submenu"
g = 1
Normal = "W"
Inverse = "I"
SET COLOR TO &Normal
DO WHILE g#3
    g = 1
    r = 11
    Choice15 = "Suby1"
    CLEAR
    DO Titlmd WITH Title1,Title2
    Length = LEN(Suby)
    Col = INT((80-Length)/2)
    @ 8 ,Col SAY Suby
    SET COLOR TO &Normal
        @ 11,30 SAY Suby1
        @ 13,30 SAY Suby2
        @ 15,30 SAY Suby3
    SET COLOR TO &Normal+
        @ 23,15 SAY "Press " + CHR(24) + " or " + CHR(25);
            + " to move highlight, and press ";
            + CHR(17) + CHR(217) + " to select"
    SET COLOR TO &Inverse
        @ r, 30 SAY &Choice15
    x = 0
    DO WHILE x #13
        x = 0
        DO WHILE x = 0
            x = INKEY()
        ENDDO
        SET COLOR TO &Normal
        @ r,30 SAY &Choice15
    DO CASE
        CASE x = 24
            r = r + 2
            r = IIF (r>15,11,r)
            g = VAL (RIGHT(Choice15,1))+1
            g = IIF (g>3,1,g)
            Choice15 = "Suby" + STR(g,1)
            SET COLOR TO &Inverse
            @r,30 SAY &Choice15
        CASE x = 5
            r = r - 2
            r = IIF (r<11,15,r)
            g = VAL (RIGHT(Choice15,1))-1
            g = IIF (g<1,3,g)
            Choice15 = "Suby" + STR(g,1)
            SET COLOR TO &Inverse
            @r,30 SAY &Choice15
    
```

```

SET COLOR TO &Inverse
  @r,30 SAY &Choice15
IF g = 3
  EXIT
ENDIF
DO CASE
  CASE g = 1
    DO Pmdie1
  CASE g = 2
    DO Pmdie2
  CASE g = 3
    EXIT
ENDCASE
ENDCASE
ENDDO
SET COLOR TO &Normal
  @1,0 CLEAR TO 23,79
RETURN
**END OF PROGRAM**

```



```

**PMDIE1.PRG
*PURPOSE :TO PRINT HARD COPY ALL DATA OF MDIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title5 = "DIE SET/ JIG  REPORT"
SELECT 1
USE Mdie INDEX Imdie
GO TOP
CLEAR
Length = LEN(Title5)
Col = INT((80-Length)/2)
STORE SPACE(25) TO T_name
STORE 0 TO T_prod,T_cus
STORE SPACE(8) TO T_pldrw,T_ardrw,T_gidrw,T_wedrw
STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
STORE 0 TO T_plord,T_arord,T_giord,T_weord
STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
STORE 0 TO T_plma,T_arma,T_gima,T_wema
STORE 0 TO T_plla,T_arla,T_gila,T_wela
STORE CTOD('') TO T_plstdate,T_arstdate,
T_gistdate,T_westdate
STORE CTOD('') TO T_plfsdate,T_arfsdate,
T_gifsdate,T_wefsdate

page = 0
SET COLOR TO &Normal
DO Titlend WITH Title1,Title2
@ 8,Col SAY Title5
SET COLOR TO &Normal+
@ 10,30 SAY "Please waiting..."
SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
    page = page + 1
    Rows = 8
    EJECT
    DO Pitled WITH Title1, Title2
    @ROWS,Col SAY Title5
    @ROWS,65 SAY "PAGE"
    @ROWS,71 SAY page PICT "99"
    Rows = Rows +1
    @ROWS,5 SAY REPLICATE("-",75)
    STORE product_ty TO T_prod
    STORE custom_no TO T_cus
    STORE cust_name TO T_name
    STORE pl_didw_no TO T_pldrw
    STORE ar_didw_no TO T_ardrw
    STORE gi_didw_no TO T_gidrw
    STORE we_didw_no TO T_wedrw
    STORE pl_di_cost TO T_plcost
    STORE ar_di_cost TO T_arcost

```

```

STORE gi_di_cost TO T_gicost
STORE we_di_cost TO T_wecost
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_ma_cost TO T_plma
STORE ar_ma_cost TO T_arma
STORE gi_ma_cost TO T_gima
STORE we_ma_cost TO T_wema
STORE pl_la_cost TO T_plla
STORE ar_la_cost TO T_arla
STORE gi_la_cost TO T_gila
STORE we_la_cost TO T_wela
STORE pl_st_date TO T_plstdate
STORE ar_st_date TO T_arstdate
STORE gi_st_date TO T_gistdate
STORE we_st_date TO T_westdate
STORE pl_fs_date TO T_plfsdate
STORE ar_fs_date TO T_arfsdate
STORE gi_fs_date TO T_gifsddate
STORE we_fs_date TO T_wefsddate
Rows = Rows + 2
@ROWS,5 SAY "PRODUCT TYPE :- "
@ROWS,21 SAY T_prod
@ROWS,46 SAY "CUSTOMER NO :- "
@ROWS,62 SAY T_cus
Rows = Rows + 2
@ROWS,5 SAY "CUSTOMER NAME:- "
@ROWS,21 SAY T_name
Rows = Rows + 2
@ROWS,5 SAY "PLATE :- DRAWING NO :- "
@ROWS,33 SAY T_pldrw PICT "XXXXXXX!"
@ROWS,46 SAY "QUANTITY ORDER:- "
@ROWS,62 SAY T_plord
Rows = Rows + 1
@ROWS,5 SAY "          DRAWING COST :- "
@ROWS,33 SAY T_plcost PICT "99999"
Rows = Rows + 1
@ROWS,5 SAY "          MATERIAL COST :- "
@ROWS,33 SAY T_plma PICT "999999"
Rows = Rows + 1
@ROWS,5 SAY "          LABOR COST :- "
@ROWS,33 SAY T_plla PICT "99999"
Rows = Rows + 1

```

@ROWS,5 SAY " COST/UNIT :- "
 @ROWS,33 SAY T_plunit PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " START DATE :- "
 @ROWS,33 SAY T_plstdat
 @ROWS,46 SAY "FINISH DATE :- "
 @ROWS,62 SAY T_plfsdate
 Rows = Rows +2
 @ROWS,5 SAY "ARM :- DRAWING NO :- "
 @ROWS,33 SAY T_ardrw PICT "XXXXXXX!"
 @ROWS,46 SAY "QUANTITY ORDER:- "
 @ROWS,62 SAY T_arord
 Rows = Rows +1
 @ROWS,5 SAY " DRAWING COST :- "
 @ROWS,33 SAY T_arcost PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " MATERIAL COST :- "
 @ROWS,33 SAY T_arma PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " LABOR COST :- "
 @ROWS,33 SAY T_arla PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " COST/UNIT :- "
 @ROWS,33 SAY T_arunit PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " START DATE :- "
 @ROWS,33 SAY T_arstdat
 @ROWS,46 SAY "FINISH DATE :- "
 @ROWS,62 SAY T_arfsdate
 Rows = Rows +2
 @ROWS,5 SAY "GIMBAL :- DRAWING NO :- "
 @ROWS,33 SAY T_gidrw PICT "XXXXXXX!"
 @ROWS,46 SAY "QUANTITY ORDER:- "
 @ROWS,62 SAY T_giord
 Rows = Rows +1
 @ROWS,5 SAY " DRAWING COST :- "
 @ROWS,33 SAY T_gicost PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " MATERIAL COST :- "
 @ROWS,33 SAY T_gima PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " LABOR COST :- "
 @ROWS,33 SAY T_gila PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " COST/UNIT :- "
 @ROWS,33 SAY T_giunit PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " START DATE :- "
 @ROWS,33 SAY T_gistdate
 @ROWS,46 SAY "FINISH DATE :- "


```

@ROWS,62 SAY T_gifsdate
Rows = Rows +2
@Rows,5 SAY "WELDING:- DRAWING NO      :- "
@ROWS,33 SAY T_wedrw PICT "XXXXXXX!"
@ROWS,46 SAY "QUANTITY ORDER:- "
@ROWS,62 SAY T_weord
Rows = Rows +1
@ROWS,5 SAY "          DRAWING COST  :- "
@ROWS,33 SAY T_wecost PICT "99999"
Rows = Rows +1
@ROWS,5 SAY "          MATERIAL COST :- "
@ROWS,33 SAY T_wema PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          LABOR COST      :- "
@ROWS,33 SAY T_wela PICT "99999"
Rows = Rows +1
@ROWS,5 SAY "          COST/UNIT        :- "
@ROWS,33 SAY T_weunit PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          START DATE       :- "
@ROWS,33 SAY T_westdate
@ROWS,46 SAY "FINISH DATE :- "
@ROWS,62 SAY T_wefsdate
Rows = Rows +2
@ROWS,5 SAY REPLICATE ("-",75)
SKIP

```

```

ENDDO
EJECT
USE
SET COLOR TO &Normal
SET DEVICE TO SCREEN
RETURN
**END OF PROGRAM ***

```

```

**PMDIE2.PRG
*PURPOSE :TO PRINT HARD COPY SPECIFIC DATA OF MDIE.DBF
Normal = "W"
Inverse = "/W"
SET COLOR TO &Normal
Title6 = "SPECIFIC DIE SET/ JIG OF PRODUCT REPORT"
c = "Y"
DO WHILE c = "Y"
    T_edit = 0
    CLEAR
    Length = LEN(Title6)
    Col = INT((80-Length)/2)
    STORE SPACE(25) TO T_name
    STORE 0 TO T_prod,T_cus
    STORE SPACE(8) TO T_pldrw,T_arldr,T_gldr,T_wedr
    STORE 0 TO T_plcost,T_arcost,T_gicost,T_wecost
    STORE 0 TO T_plord,T_arord,T_giord,T_weord
    STORE 0 TO T_plunit,T_arunit,T_giunit,T_weunit
    STORE 0 TO T_plma,T_arma,T_gima,T_wema
    STORE 0 TO T_plla,T_arla,T_gila,T_wela
    STORE CTOD('') TO T_plstdate,
        T_arstdate,T_gistdate,T_westdate
    STORE CTOD('') TO T_plfsdate,
        T_arfsdate,T_gifsddate,T_wefsddate
    DO Titlmd WITH Title1, Title2
    @8, Col SAY Title6
    @12,25 SAY "PRINT PRODUCT TYPE:" GET T_edit PICT "99999"
    READ
    IF T_edit = 0
        EXIT
    ENDIF
    SELECT 1
    USE Mdie INDEX Imdie
    GO TOP
    SEEK T_edit
    IF EOF()
        SET COLOR TO &Normal+
        @18,30 SAY "N O T F O U N D"
        @20,25 SAY "THIS RECORD IS NOT EXIST"
        @22,25 SAY "PRESS ANY KEY TO CONTINUE"
        SET COLOR TO &Normal
        WAIT " "
    ELSE
        SET DEVICE TO PRINT
        DO Ptitled WITH Title1, Title2
        Rows = 8
        @Rows,Col SAY Title6
        Rows = Rows +1
        @Rows,5 SAY REPLICATE("-",75)
        STORE product_ty TO T_prod
    ENDIF
    c = "N"
ENDWHILE

```

```

STORE custom_no TO T_cus
STORE cust_name TO T_name
STORE pl_didw_no TO T_pldrw
STORE ar_didw_no TO T_arldr
STORE gi_didw_no TO T_gldr
STORE we_didw_no TO T_wedr
STORE pl_di_cost TO T_plcost
STORE ar_di_cost TO T_arcost
STORE gi_di_cost TO T_gicost
STORE we_di_cost TO T_wecost
STORE pl_qty_ord TO T_plord
STORE ar_qty_ord TO T_arord
STORE gi_qty_ord TO T_giord
STORE we_qty_ord TO T_weord
STORE pl_cost_un TO T_plunit
STORE ar_cost_un TO T_arunit
STORE gi_cost_un TO T_giunit
STORE we_cost_un TO T_weunit
STORE pl_ma_cost TO T_plma
STORE ar_ma_cost TO T_arma
STORE gi_ma_cost TO T_gima
STORE we_ma_cost TO T_wema
STORE pl_la_cost TO T_plla
STORE ar_la_cost TO T_arla
STORE gi_la_cost TO T_gila
STORE we_la_cost TO T_wela
STORE pl_st_date TO T_plstdate
STORE ar_st_date TO T_arstdate
STORE gi_st_date TO T_gistdate
STORE we_st_date TO T_westdate
STORE pl_fs_date TO T_plfsdate
STORE ar_fs_date TO T_arfsdate
STORE gi_fs_date TO T_gifsdte
STORE we_fs_date TO T_wefsdte
Rows = Rows + 2
@Rows,5 SAY "PRODUCT TYPE :- "
@Rows,21 SAY T_prod
@Rows,46 SAY "CUSTOMER NO :- "
@Rows,62 SAY T_cus
Rows = Rows + 2
@Rows,5 SAY "CUSTOMER NAME:- "
@Rows,21 SAY T_name
Rows = Rows +2
@Rows,5 SAY "PLATE :- DRAWING NO :- "
@ROWS,33 SAY T_pldrw PICT "XXXXXXX!"
@ROWS,46 SAY "QUNATITY ORDER :- "
@ROWS,62 SAY T_plord

```

Rows = Rows +1
 @ROWS,5 SAY " DRAWING COST :- "
 @ROWS,33 SAY T_plcost PICT "99999"
 Rows = Rows +1
 @ROWS,5 SAY " MATERIAL COST :- "
 @ROWS,33 SAY T_plma PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " LABOR COST :- "
 @ROWS,33 SAY T_plla PICT "99999"
 Rows = Rows +1
 @ROWS,5 SAY " COST/UNIT :- "
 @ROWS,33 SAY T_plunit PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " START DATE :- "
 @ROWS,33 SAY T_plstdate
 @ROWS,46 SAY "FINISH DATE :- "
 @ROWS,62 SAY T_plfsdate
 Rows = Rows +2
 @Rows,5 SAY "ARM :- DRAWING NO :- "
 @ROWS,33 SAY T_ardrw PICT "XXXXXXX!"
 @ROWS,46 SAY "QUNATITY ORDER :- "
 @ROWS,62 SAY T_arord
 Rows = Rows +1
 @ROWS,5 SAY " DRAWING COST :- "
 @ROWS,33 SAY T_arcost PICT "99999"
 Rows = Rows +1
 @ROWS,5 SAY " MATERIAL COST :- "
 @ROWS,33 SAY T_arma PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " LABOR COST :- "
 @ROWS,33 SAY T_arla PICT "99999"
 Rows = Rows +1
 @ROWS,5 SAY " COST/UNIT :- "
 @ROWS,33 SAY T_arunit PICT "999999"
 Rows = Rows +1
 @ROWS,5 SAY " START DATE :- "
 @ROWS,33 SAY T_arstdate
 @ROWS,46 SAY "FINISH DATE :- "
 @ROWS,62 SAY T_arfsdate
 Rows = Rows +2
 @Rows,5 SAY "GIMBAL :- DRAWING NO :- "
 @ROWS,33 SAY T_gidrw PICT "XXXXXXX!"
 @ROWS,46 SAY "QUNATITY ORDER :- "
 @ROWS,62 SAY T_giord
 Rows = Rows +1
 @ROWS,5 SAY " DRAWING COST :- "
 @ROWS,33 SAY T_gicost PICT "99999"
 Rows = Rows +1
 @ROWS,5 SAY " MATERIAL COST :- "

```

@ROWS,33 SAY T_gima PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          LABOR COST      :- "
@ROWS,33 SAY T_gila PICT "99999"
Rows = Rows +1
@ROWS,5 SAY "          COST/UNIT       :- "
@ROWS,33 SAY T_giunit PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          START DATE        :- "
@ROWS,33 SAY T_gistdate
@ROWS,46 SAY "FINISH DATE :- "
@ROWS,62 SAY T_gifsdate
Rows = Rows +2
@Rows,5 SAY "WELDING:- DRAWING NO      :- "
@ROWS,33 SAY T_wedrw PICT "XXXXXXX!"
@ROWS,46 SAY "QUNATITY ORDER :- "
@ROWS,62 SAY T_weord
Rows = Rows +1
@ROWS,5 SAY "          DRAWING COST      :- "
@ROWS,33 SAY T_wecost PICT "99999"
Rows = Rows +1
@ROWS,5 SAY "          MATERIAL COST :- "
@ROWS,33 SAY T_wema PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          LABOR COST       :- "
@ROWS,33 SAY T_wela PICT "99999"
Rows = Rows +1
@ROWS,5 SAY "          COST/UNIT        :- "
@ROWS,33 SAY T_weunit PICT "999999"
Rows = Rows +1
@ROWS,5 SAY "          START DATE       :- "
@ROWS,33 SAY T_westdate
@ROWS,46 SAY "FINISH DATE :- "
@ROWS,62 SAY T_wefsdate
Rows = Rows +2
@Rows,5 SAY REPLICATE ("-",75)
EJECT
SET DEVICE TO SCREEN
DO Subcont2
ENDIF

```

```

ENDDO
USE
RETURN
**END OF PROGRAM**

```



```

**Subcont2.prg
**To ask for more data **
*
Normal = "W"
Inverse = "/W"
c = SPACE(1)
DO WHILE .NOT. c$ "YN"
    SET COLOR TO &Normal+
    @23,28 SAY "CONTINUE (Y/N)?" GET c PICT "!"
    READ
    SET COLOR TO &Normal
ENDDO
IF c = "Y"
    LOOP
ENDIF
RETURN
**END OF PROGRAM**

```

```

**Ptitled.prg**
**To print heading
PARAMETER Title1,Title2
Length = LEN(Title1)
Col = INT((80-Length)/2)
@ 2, Col SAY Title1
@ 4,5    SAY Title2
@ 4,60   SAY DATE()
RETURN
**END OF PROGRAM**

```

```

**Titlend.prg**
**To display heading
PARAMETER Title1,Title2
Length = LEN(Title1)
Col = INT((80-Length)/2)
@ 2, Col SAY Title1
@ 4,3    SAY Title2
@ 4,60   SAY DATE()
@ 5,0 TO 5, 79
RETURN
**END OF PROGRAM**

```

Appendix G : Sample of Report

(new system)



PRODUCTS REPORT

R&D ENGINEERING DEPARTMENT

DATE :99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
 CUSTOMER NAME :- X-----25-----X
 ASSEMBLY D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 PLATE D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 ARM D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 GIMBAL D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
 CUSTOMER NAME :- X-----25-----X
 ASSEMBLY D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 PLATE D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 ARM D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 GIMBAL D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
 CUSTOMER NAME :- X-----25-----X
 ASSEMBLY D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 PLATE D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 ARM D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 GIMBAL D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
 CUSTOMER NAME :- X-----25-----X
 ASSEMBLY D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 PLATE D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 ARM D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99
 GIMBAL D. NO :- 99999 D. COST :- 9999 APPROVAL DATE :- 99/99/99

Figure : G-1 Sample of Periodic Report of Product (new system)

DIE SET & JIG REPORT

R&D ENGINEERING DEPARTMENT

DATE :99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999

CUSTOMER NAME :- X-----25-----X

PLATE :- DRAWING NO :- 9999999P DRAWING COST :- 9999

VENDOR NAME :- X-----30-----X

QANTITY ORDER :- 99 COST/UNIT :- 999999

RECEIVE DATE :- 99/99/99

ARM :- DRAWING NO :- 9999999A DRAWING COST :- 9999

VENDOR NAME :- X-----30-----X

QANTITY ORDER :- 99 COST/UNIT :- 999999

RECEIVE DATE :- 99/99/99

GIMBAL :- DRAWING NO :- 9999999G DRAWING COST :- 9999

VENDOR NAME :- X-----30-----X

QANTITY ORDER :- 99 COST/UNIT :- 999999

RECEIVE DATE :- 99/99/99

WELDING :-DRAWING NO :- 9999999W DRAWING COST :- 9999

VENDOR NAME :- X-----30-----X

QANTITY ORDER :- 99 COST/UNIT :- 999999

RECEIVE DATE :- 99/99/99

Figure : G-2 Sample of Periodic Report of Die-set (new system)

PACKAGING REPORT

R&D ENGINEERING DEPARTMENT

DATE :99/99/99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
CUSTOMER NAME :- X-----25-----X
PACKING :-DRAWING NO :- 9999999P DRAWING COST :- 9999
APPROVAL DATE :- 99/99/99
VENDOR NAME :- X-----30-----X
COST/UNIT :- 9999.99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
CUSTOMER NAME :- X-----25-----X
PACKING :-DRAWING NO :- 9999999P DRAWING COST :- 9999
APPROVAL DATE :- 99/99/99
VENDOR NAME :- X-----30-----X
COST/UNIT :- 9999.99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
CUSTOMER NAME :- X-----25-----X
PACKING :-DRAWING NO :- 9999999P DRAWING COST :- 9999
APPROVAL DATE :- 99/99/99
VENDOR NAME :- X-----30-----X
COST/UNIT :- 9999.99

PRODUCT TYPE :- 99999 CUSTOMER NO :- 9999
CUSTOMER NAME :- X-----25-----X
PACKING :-DRAWING NO :- 9999999P DRAWING COST :- 9999
APPROVAL DATE :- 99/99/99
VENDOR NAME :- X-----30-----X
COST/UNIT :- 9999.99

Figure : G-3 Sample of Periodic Report of Packaging (new system)

DIE SET /JIG REPORT

MACHINE SHOP DEPARTMENT

DATE :99/99/99

PRODUCT TYPE :- 99999

CUSTOMER NO :- 9999

CUSTOMER NAME :- X-----25-----X

PLATE :- DRAWING NO :- 9999999PM

QUANTITY ORDER :- 99

DRAWING COST :- 99999

MATERIAL COST :- 999999

LABOR COST :- 99999

COST/UNIT :- 999999

START DATE :- 99/99/99

RECEIVE DATE :- 99/99/99

ARM :- DRAWING NO :- 9999999AM

QUANTITY ORDER :- 99

DRAWING COST :- 99999

MATERIAL COST :- 999999

LABOR COST :- 99999

COST/UNIT :- 999999

START DATE :- 99/99/99

RECEIVE DATE :- 99/99/99

GIMBAL :- DRAWING NO :- 9999999GM

QUANTITY ORDER :- 99

DRAWING COST :- 99999

MATERIAL COST :- 999999

LABOR COST :- 99999

COST/UNIT :- 999999

START DATE :- 99/99/99

RECEIVE DATE :- 99/99/99

WELDING :- DRAWING NO :- 9999999WM

QUANTITY ORDER :- 99

DRAWING COST :- 99999

MATERIAL COST :- 999999

LABOR COST :- 99999

COST/UNIT :- 999999

START DATE :- 99/99/99

RECEIVE DATE :- 99/99/99

Figure : G-4 Sample of Periodic Report of Die-set (Machine Shop) (new system)

**Appendix H : Data Structure
& Data Dictionary**



| NAME OF DATA STORE : REQUISITION-ORDER | |
|--|--|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| REQUISITION-ORDER | REQUISITION-NO REQ-DATE JOB-NO DRAWING-NO ESTIMATE-COST ESTIMATE-TIME REQUIRE-MATERIAL REQUIRE-ACCSSORY |
| NOTATION : | |

Figure : H-1 data structure . Logical data dictionary for data store :D2
Requisition order (existing system)

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|---|----------------|-----------------|------------------------|---------------|---------------|
| REQUISITION-NO | 6N | 000010 | REQUISITION NUMBER | NUMERIC | D2,4 |
| REQ-DATE | 8AN | 10/12/92 | REQUISITION DATE | - | D2,4 |
| JOB-NO | 6N | 001101 | JOB ORDER NUMBER | NUMERIC | D2 |
| DRAWING-NO | 8AN | 1112233W | DRAWING NUMBER | NUMERIC | D2,4 |
| ESTIMATE-COST | 6N | 50000 | ESTIMATE COST OF PROD. | NUMERIC | D2,4 |
| ESTIMATE-TIME | 3N | 120 | ESTIMATE TIME OF PROD. | NUMERIC | D2,4 |
| REQUIRE-MATERIAL | 60AN | SS-303 | REQUIRE MATERIAL | - | D2 |
| REQUIRE-ACCSSORY | 60AN | DRILING | REQUIRE ACCESSORY | - | D2 |
| <p>A = Alphabetic</p> <p>N = Numeric</p> <p>AN = Alphabetic & Numeric</p> | | | | | |

Figure :H-2 Data elements. Physical data dictionary for data store :D2
Requisition order (existing system)

| NAME OF DATA STORE : RECEIVING FORM | |
|-------------------------------------|--|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| RECEIVING-FORM | REC-NO REC-DATE REQUISITION-NO REQ-DATE DRAWING-NO MATERIAL-COST OVER-HEAD-COST OTHER-EXPENSE TOTAL-COST |
| NOTATION : | |

Figure :H-3 Data structure . Logical data dictionary for data store : D4
Receiving form (existing system)

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|----------------------|----------------|-----------------|-----------------------|---------------|---------------|
| REC-NO | 6N | 001234 | RECEIVING NUMBER | NUMERIC | D4 |
| REC-DATE | 8AN | 10/12/92 | RECEIVING DATE | - | D4 |
| REQUISITION-NO | 6N | 124567 | REQUISITION NUMBER | NUMERIC | D2,4 |
| REQ-DATE | 8AN | 12/02/92 | REQUISITION DATE | - | D2,4 |
| DRAWING-NO | 8AN | 1112233W | DRAWING NUMBER | NUMERIC | D2,4 |
| MATERIAL-COST | 6N | 200000 | MATERIAL COST | NUMERIC | D4 |
| OVER-HEAD-COST | 5N | 40000 | OVER HEAD COST | NUMERIC | D4 |
| OTHER-EXPENSE | 6N | 3000 | OTHER EXPENSES | NUMERIC | D4 |
| TOTAL-COST | 6N | 243000 | TOTAL COST | NUMERIC | D4 |

A = Alphabetic
 N = Numeric
 AN = Alphabetic & Numeric

Figure :H-4 Data elements. Physical data dictionary for data store : D4
Receiving form (existing system)

| NAME OF DATA STORE : PRODUCT | |
|------------------------------|--|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| PRODUCT | PRODUCT-TYPE CUSTOMER-NO CUSTOMER-NAME ASSY-DRW-NO PLATE-DRW-NO GIMBAL-DRW-NO ARM-DRW-NO ASSY-DCOST PLATE-DCOST GIMBAL-DCOST ARM-DCOST ASSY-APP-DATE PLATE-APP-DATE GIMBAL-APP-DATE ARM-APP-DATE |
| NOTATION : | |

Figure : H-5 Data structure . Logical data dictionary for data store :

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|---|----------------|-----------------|-------------------------|---------------|---------------|
| PRODUCT-TYPE | 5N | 10012 | PRODUCT TYPE | NUMERIC | |
| CUSTOMER-NO | 4N | 1001 | CUSTOMER NUMBER | NUMERIC | |
| CUSTOMER-NAME | 25A | SEAGATE | CUSTOMER NAME | - | |
| ASSY-DRW-NO | 5N | 11012 | ASSEMBLY DRAWING NUMBER | NUMERIC | |
| PLATE-DRW-NO | 4N | 12012 | PLATE DRAWING NUMBER | NUMERIC | |
| GIMBAL-DRW-NO | 4N | 13012 | GIMBAL DRAWING NUMBER | NUMERIC | |
| ARM-DRW-NO | 4N | 14012 | ARM DRAWING NUMBER | NUMERIC | |
| ASSY-DCOST | 4N | 15000 | ASSEMBLY DRAWING COST | NUMERIC | |
| PLATE-DCOST | 4N | 10000 | PLATE DRAWING COST | NUMERIC | |
| GIMBAL-DCOST | 4N | 15000 | GIMBAL DRAWING COST | NUMERIC | |
| ARM-DCOST | 4N | 12000 | ARM DRAWING COST | NUMERIC | |
| ASSY-APP-DATE | 8AN | 12/12/91 | ASSEMBLY APPROVAL DATE | - | |
| PLATE-APP-DATE | 8AN | 12/12/91 | PLATE APPROVAL DATE | - | |
| GIMBAL-APP-DATE | 8AN | 12/12/91 | GIMBAL APPROVAL DATE | - | |
| ARM-APP-DATE | 8AN | 12/12/91 | ARM APPROVAL DATE | - | |
| <p>A = Alphabetic</p> <p>N = Numeric</p> <p>AN = Alphabetic & Numeric</p> | | | | | |

Figure : H-6 Data elements. Physical data dictionary for data store :D1
Product (new system)

| NAME OF DATA STORE : DIE SET | |
|------------------------------|---|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| DIE-SET | PRODUCT-TYPE CUSTOMER-NO CUSTOMER-NAME PLATE-DIEDRW-NO PLATE-DIEDRW-COST PLATE-VENDOR-NAME PLATE-QTY-ORDER PLATE-COST-UNIT PLATE-REC-DATE ARM-DIEDRW-NO ARM-DIEDRW-COST ARM-VENDOR-NAME ARM-QTY-ORDER ARM-COST-UNIT ARM-REC-DATE GIMBAL-DIEDRW-NO GIMBAL-DIEDRW-COST GIMBAL-VENDOR-NAME GIMBAL-QTY-ORDER GIMBAL-COST-UNIT GIMBAL-REC-DATE |
| NOTATION : | |

Figure : H-7 Data structure . Logical data dictionary for data store :D2
Die set (new system)

| NAME OF DATA STORE : DIE SET | |
|------------------------------|---|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| DIE-SET | WELD-DIEDRW-NO WELD-DIEDRW-COST WELD-VENDOR-NAME WELD-QTY-ORDER WELD-COST-UNIT WELD-REC-DATE |
| NOTATION : | |

Figure : H-8 Data structure . Logical data dictionary for data store : D2
Die set (cont')

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|--|----------------|-----------------|-----------------------|---------------|---------------|
| PRODUCT-TYPE | 5N | 10012 | PRODUCT TYPE | NUMERIC | |
| CUSTOMER-NO | 4N | 1001 | CUSTOMER NUMBER | NUMERIC | |
| CUSTOMER-NAME | 25AN | SEAGATE | CUSTOMER NAME | - | |
| PLATE-DIEDRW-NO | 8AN | 1100012P | PLATE DIE SET DRAWING | - | |
| PLATE-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| PLATE-VENDOR-NAME | 30AN | P.CISION | VENDOR NAME | - | |
| PLATE-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| PLATE-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| PLATE-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| ARM-DIEDRW-NO | 8AN | 1100012A | ARM SET DRAWING | - | |
| ARM-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| ARM-VENDOR-NAME | 30AN | P.CISION | VENDOR NAME | - | |
| ARM-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| ARM-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| ARM-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| GIMBAL-DIEDRW-NO | 8AN | 1100012G | GIMBAL DIESET DRAWING | - | |
| GIMBAL-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| GIMBAL-VDOR-NAME | 30AN | P.CISION | VENDOR NAME | - | |
| GIMBAL-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| GIMBAL-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| GIMBAL-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| A = Alphabetic N = Numeric AN = Alphabetic & Numeric | | | | | |

Figure :H-9 Data elements. Physical data dictionary for data store :D2

Die set (cont')

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|---|----------------|-----------------|-------------------------|---------------|---------------|
| WELD-DIEDRW-NO | 8AN | 1100012W | WELDING DIE SET DRAWING | - | |
| WELD-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| WELD-VENDOR-NAME | 30AN | P.CISION | VENDOR NAME | - | |
| WELD-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| WELD-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| WELD-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| <p>A = Alphabetic</p> <p>N = Numeric</p> <p>AN = Alphabetic & Numeric</p> | | | | | |

Figure :H-10 Data elements. Physical data dictionary for data store :D2
Die set (cont')

| NAME OF DATA STORE : PACKAGING | |
|--------------------------------|---|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| PACKAGING | PRODUCT-TYPE CUSTOMER-NO CUSTOMER-NAME PACKAGE-DRW-NO PACKAGE-DRW-COST PACKAGE-APP-DATE PACKAGE-VENDOR PACKAGE-COST-UNIT |
| NOTATION : | |

Figure :H-11 Data structure . Logical data dictionary for data store : D-3
Packaging (new system)

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|---|----------------|-----------------|-------------------------|---------------|---------------|
| PRODUCT-TYPE | 5N | 10012 | PRODUCT TYPE | NUMERIC | |
| CUSTOMER-NO | 4N | 1001 | CUSTOMER NUMBER | NUMERIC | |
| CUSTOMER-NAME | 25AN | SEAGATE | CUSTOMER NAME | - | |
| PACKAGE-DRW-NO | 8AN | 110012K | PACKAGING DRAWING NO. | NUMERIC | |
| PACKAGE-DRW-COST | 5N | 8000 | DRAWING COST | NUMERIC | |
| PACKAGE-APP-DATE | 8AN | 12/12/91 | APPROVAL DATE | - | |
| PACKAGE-VENDOR | 30AN | BESTPACK | VENDOR NAME | - | |
| PACKAGE-COST-UNIT | 6N | 32.50 | PACKAGING COST PER UNIT | NUMERIC | |
| <p>A = Alphabetic</p> <p>N = Numeric</p> <p>AN = Alphabetic & Numeric</p> | | | | | |

Figure : H-12 Data elements. Physical data dictionary for data store :D3
Packaging (new system)

| NAME OF DATA STORE : DIE SET (MACHINE SHOP) | |
|---|--|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| DIE-SET | PRODUCT-TYPE CUSTOMER-NO CUSTOMER-NAME PLATE-DIEDRW-NO PLATE-DIEDRW-COST PLATE-QTY-ORDER PLATE-COST-UNIT P-MATERIAL-COST P-LABOR-COST PLATE-START-DATE PLATE-REC-DATE ARM-DIEDRW-NO ARM-DIEDRW-COST ARM-QTY-ORDER ARM-COST-UNIT A-MATERIAL-COST A-LABOR-COST ARM-START-DATE ARM-REC-DATE |
| NOTATION : | |

Figure : H-13 Data structure . Logical data dictionary for data store :D4
Die set Machine shop (new system

| NAME OF DATA STORE : DIE SET (MACHINE SHOP) | |
|---|--|
| NAME OF DATA STRUCTURE | NAME OF DATA ELEMENT |
| DIE-SET | GIMBAL-DIEDRW-NO GIMBAL-DIEDRW-COST GIMBAL-QTY-ORDER GIMBAL-COST-UNIT G-MATERIAL-COST G-LABOR-COST GIMBAL-START-DATE GIMBAL-REC-DATE WELD-DIEDRW-NO WELD-DIEDRW-COST WELD-QTY-ORDER WELD-COST-UNIT W-MATERIAL-COST W-LABOR-COST WELD-START-DATE WELD-REC-DATE |
| NOTATION : | |

Figure :-14 Data structure . Logical data dictionary for data store :D4
Die set Machine shop (cont')

| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|--|----------------|-----------------|-------------------------|---------------|---------------|
| PRODUCT-TYPE | 5N | 10012 | PRODUCT TYPE | NUMERIC | |
| CUSTOMER-NO | 4N | 1001 | CUSTOMER NUMBER | NUMERIC | |
| CUSTOMER-NAME | 25AN | SEAGATE | CUSTOMER NAME | - | |
| PLATE-DIEDRW-NO | 9AN | 1100012PM | PLATE DIE SET DRAWING | - | |
| PLATE-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| PLATE-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| PLATE-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| P-MATERIAL-COST | 6N | 10000 | MATERIAL FOR FABICATE | NUMERIC | |
| P-LABOR-COST | 5N | 10000 | LABOR COST FOR FABICATE | NUMERIC | |
| PLATE-START-DATE | 8AN | 12/08/91 | START FABICATE DATE | - | |
| PLATE-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| ARM-DIEDRW-NO | 9AN | 1100012AM | ARM SET DRAWING | - | |
| ARM-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| ARM-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| ARM-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| A-MATERIAL-COST | 6N | 10000 | MATERIAL FOR FABICATE | NUMERIC | |
| A-LABOR-COST | 5N | 10000 | LABOR COST FOR FABICATE | NUMERIC | |
| ARM-START-DATE | 8AN | 12/08/91 | START FABICATE DATE | - | |
| ARM-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| A = Alphabetic N = Numeric AN = Alphabetic & Numeric | | | | | |

Figure : H-15 Data elements. Physical data dictionary for data store :D4
Die set Machine shop (cont')

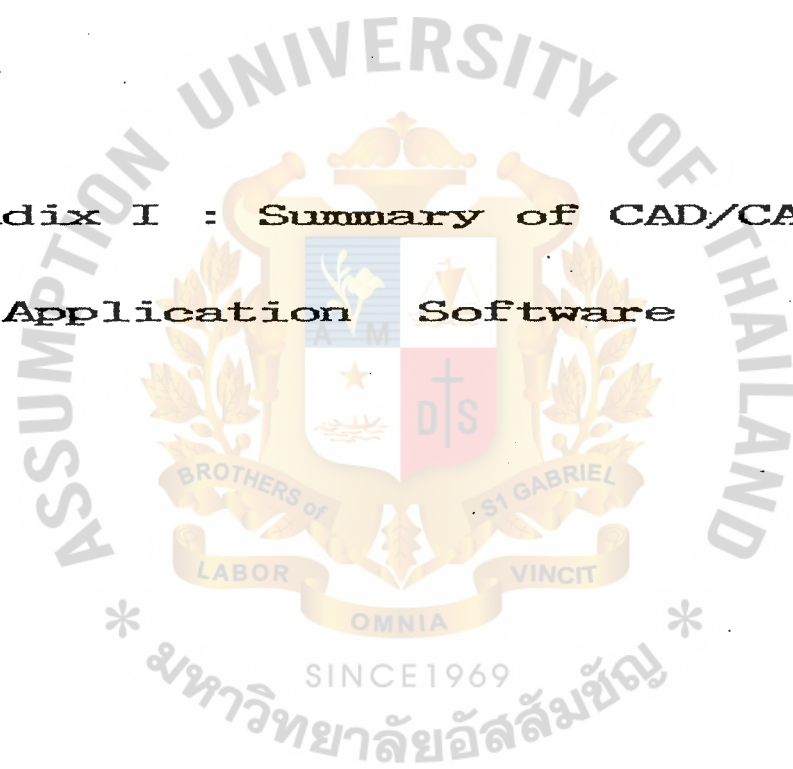
| DATA ELEMENT NAME | APPROX SIZE | SAMPLE VALUE | NARRATIVE DESCRIPTION | EDIT CHECK | DATA STORE |
|---|----------------|-----------------|-------------------------|---------------|---------------|
| GIMBAL-DIEDRW-NO | 9AN | 1100012GM | GIMBAL DIESET DRAWING | - | |
| GIMBAL-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| GIMBAL-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| GIMBAL-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| G-MATERIAL-COST | 6N | 10000 | MATERIAL FOR FABICATE | NUMERIC | |
| G-LABOR-COST | 5N | 10000 | LABOR COST FOR FABICATE | NUMERIC | |
| GIMBAL-START-DATE | 8AN | 12/08/91 | START FABICATE DATE | - | |
| GIMBAL-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| WELD-DIEDRW-NO | 9AN | 1100012WM | WELDING DIESET DRAWING | - | |
| WELD-DIEDRW-COST | 5N | 20000 | DIESET DRAWING COST | NUMERIC | |
| WELD-QTY-ORDER | 2N | 2 | DIESET QUANTITY ORDER | NUMERIC | |
| WELD-COST-UNIT | 6N | 80000 | DIESET COST PER UNIT | NUMERIC | |
| W-MATERIAL-COST | 6N | 10000 | MATERIAL FOR FABICATE | NUMERIC | |
| W-LABOR-COST | 5N | 10000 | LABOR COST FOR FABICATE | NUMERIC | |
| WELD-START-DATE | 8AN | 12/08/91 | START FABICATE DATE | - | |
| WELD-REC-DATE | 8AN | 12/12/91 | RECIEVING DATE | - | |
| <p>A = Alphabetic</p> <p>N = Numeric</p> <p>AN = Alphabetic & Numeric</p> | | | | | |

Figure :H-16 Data elements. Physical data dictionary for data store :D4

Die set Machine shop (cont')

Appendix I : Summary of CAD/CAM

Application Software



APPENDIX I

SUMMARY OF CAD/CAM APPLICATION SOFTWARE

Before implementating an CAD/CAM system there are a number of important features to consider as following:

1. Characteristic of the application :

- type of products and parts involved
- quantities of parts to be manufactured
- natural of the design process
- frequency and types of change involve
- characteristic of the designs (eg. size, and feature)
- types and styles of drawing require
- documentation require
- engineering analyses require
- use of standard parts of designs
- NC programme output requirements

2. Selection of the system

- software characteristic
- hardware characteristic
- system function and features
- performance capabilities
- user friendliness
- flexibility
- availability and type of support

3. Personnel consideration

- Experience and skill
- training requirements
- working condition and human factors

4. Economic justification

- productivity improvement
- return on investment
- absolute cost and cash flow requirements



Characteristic of the application :-

Fact file of FastCAD, Version 2.28

Evolution computing, 437 S. 48th ST. Tempe, AZ 85281.

List price : \$2,295

Requires : 640 K RAM math coprocess, DOS 3.0 or later.
Mouse or digitizing tablet recommended

In short : The fastest and easiest to use 2D PC CAD package available. With an effective interface, the external interface toolkit makes third-party customization possible.

Fact file of CADvance, Version 3.0

ISICAD Inc. 1920 W. Corporate Way, Anaheim, CA. 92803

List price : \$2,995

Requires : 640 K RAM math coprocess, DOS 3.0 or later.
Mouse or digitizing tablet recommended

In short : A package that provides full architectural modeling support and modest mechanical parts modeling support. It provides strong database connection, making it a good product for facilities managers. Copy protected.

Fact file of Cadkey Version 3.53

Cadkey Inc, 440 Oakland ST. Manchester., CT 06040

List price : With Cadkey Solids and Tutor \$3,195

Requires : 640 K RAM math coprocess, DOS 3.0 or later.
Mouse or digitizing tablet recommended

In short : Cadkey leads the way in 3-D CAD on the PC with
a superb user interface, excellent 2-D drafting
and detailing capabilities, and copy protected.

Fact file of DataCAD Version 3.6

Cadkey Inc. 440 Oakland ST., Manchester., CT 06040

List price : \$2,795

Requires : 640 K RAM math coprocess, DOS 3.0 or later.
Mouse or digitizing tablet recommended

In short : DataCAD is a 3-D design and drafting system
designed for and by architects. It has all nice
touches specific to architectural design and is
otherwise a full featured system.

Fact file of AutoCAD release 10.

Autodesk Inc., 2320 Maniship Way, Saualito, CA 94965;

List price : \$3000, Atuo Shade \$500

Requires : 640 K RAM math coprocess, DOS 3.0 or later.
Mouse or digitizing tablet recommended

In short : ACAD will do virtually anything from 2-D layouts and drawings to 3-D wireframe models. Strong on 2-D. ACAD is a winner as a drafting system.

Tables I-1 to I-3. as high-end packages, all of these programs can handle CAD basics easily. All allow both screen-oriented and key board-oriented data entry. They have absolute and relative rectangular and polar coordinates, they can left-and center-justify text, and can snap to a grid, the nearest point, an endpoint, a midpoint, the center of a circle, an another specified point. They can join endpoints, break trim lines, circles, and arcs.

| Description | FastCad | CADvance | Cadkey | DataCAD | AutoCAD |
|--------------------------------|-----------|-----------|---------|---------|---------|
| List price | \$2,295 | \$2,995 | \$3,195 | \$3,290 | \$3,500 |
| DRAWING COMMANDS | | | | | |
| LINE | | | | | |
| Automatic polygon closing | X | — | X | X | X |
| Automatic continuation of line | X | X | X | X | X |
| Variable line width | X | X | X | X | X |
| POINT | X | X | X | X | X |
| CIRCLE | | | | | |
| Center/radius | X | X | X | X | X |
| Center/diameter | — | X | — | X | X |
| 3-point circle | X | X | X | X | X |
| Curve | | | | | |
| 3-point arc | X | X | X | X | X |
| Ellipse | X | X | X | X | X |
| Multipoint curve | X | X | X | X | X |
| Spine curve | X | X | X | X | X |
| Bezier curve | — | X | — | X | X |
| Polygon | X | X | X | X | X |
| Polyline | X | X | X | X | X |
| TEXT | | | | | |
| Right justification | X | X | X | X | X |
| Auto-aligned | X | X | — | X | X |
| Different fonts | X | X | X | X | X |
| Different size | X | X | X | X | X |
| Variable aspect ratio | — | X | X | X | X |
| Can run along arc | — | — | — | — | — |
| DRAWING ASSISTANCE | | | | | |
| Snap | | | | | |
| Circle quadrant | X | X | — | X | X |
| Intersection | X | X | X | X | X |
| Perpendicular | X | — | X | X | X |
| One-time | X | — | — | — | X |
| Grid | | | | | |
| Variable size | X | X | X | X | X |
| Variable aspect ratio | X | X | X | X | X |
| Variable angle | — | — | — | X | X |
| Isometric grid | X | X | — | — | X |
| EDITING COMMANDS | | | | | |
| Number of multiple windows | UNLIMITED | UNLIMITED | 16 | NONE | 4 |
| Select last object | X | X | — | X | X |
| Select by entity type | X | X | X | X | X |
| Erase | X | X | X | X | X |
| Unerase | X | X | — | X | X |
| Animated movement | — | X | X | X | X |
| Copy | X | X | X | X | X |
| X = yes — = no | | | | | |

Table I-1 : High-end CADD application program summary of feature

| Description | FastCad | CADvance | Cadkey | DataCAD | AutoCAD |
|----------------------------|---------|----------|--------|---------|---------|
| EDITING COMMANDS | | | | | |
| Move | X | X | — | X | X |
| Rectangular arrays | X | X | X | X | X |
| Circular arrays | X | X | X | X | X |
| Fill | X | X | X | X | X |
| Extend | X | X | X | X | X |
| Fillet | X | X | X | X | X |
| Chamfer | X | — | X | X | X |
| Segment line/arc | — | X | X | — | X |
| Undo | X | X | X | X | X |
| DISPLAY CONTROLS | | | | | |
| ZOOM | | | | | |
| By magnification factor | X | X | X | X | X |
| By region | X | X | X | X | X |
| Restore original view | X | — | X | X | X |
| Dynamic zoom | X | — | — | — | X |
| Pan | — | X | X | X | X |
| Drag | X | — | — | X | X |
| Display cursor coordinates | X | X | X | X | X |
| Adjustable units | X | X | X | X | X |
| Cursor icons | X | — | X | X | — |
| Page display | X | X | X | X | X |
| DIMENSIONING | | | | | |
| Associative | X | — | X | X | X |
| Linear | | | | | |
| Horizontal | X | X | X | X | X |
| Vertical | X | X | X | X | X |
| At an angle | X | X | X | X | X |
| Rotated text | X | X | X | X | X |
| Baseline (stacked) | — | X | X | X | X |
| Chained | X | X | X | X | X |
| Diameter | — | X | X | X | X |
| Radius | — | X | X | X | X |
| Extension lines | X | X | X | X | X |
| Line terminators | X | X | X | X | X |
| User definable | X | X | X | — | X |
| Tolerances | — | X | X | X | X |
| Leaders | X | X | X | X | X |
| MEASURE | | | | | |
| Distance | X | X | X | X | X |
| Area | X | X | X | X | X |
| Perimeter | — | — | X | X | X |
| LINE TYPES | | | | | |
| Solid | X | X | X | X | X |
| Dashed | X | X | X | X | X |
| Center | X | X | X | X | X |
| Phantom | X | X | X | X | X |
| SYMBOLS | | | | | |
| Menu-selectable | — | X | — | X | X |
| Named | X | X | X | X | X |
| Can be scaled | X | X | X | X | X |
| X = yes — = no | | | | | |

Table I-2 : High-end CADD application program summary of feature

| Description | FastCad | CADvance | Cadkey | DataCAD | AutoCAD |
|---------------------------------|---------|----------|----------|---------|---------|
| SYMBOLS | | | | | |
| Can be rotated | X | X | X | X | X |
| Can be mirrored | — | — | — | X | X |
| Attributes | — | X | — | X | X |
| NONGRAPHICAL ATTRIBUTES | | | | | |
| Editable | — | X | — | X | X |
| Can be output as a text file | — | X | — | X | X |
| PLOTTING CONTROLS | | | | | |
| Variable sizing | X | X | X | X | X |
| Variable orientation | X | X | X | X | X |
| PLOT part of drawing | X | X | X | X | X |
| By window | X | X | X | X | — |
| By layer | — | X | X | X | X |
| By attribute | — | — | X | X | — |
| Automatic scaling | X | X | X | — | X |
| MISCELLANEOUS FEATURES | | | | | |
| Command—line interpreter | X | — | — | — | X |
| Command scripts | X | X | — | X | X |
| Programming language | X | X | X | X | X |
| Programmable screen menus | X | X | X | X | X |
| Programmable tablet menus | X | X | X | X | X |
| Freehand sketching | — | — | X | X | X |
| Function—key support | X | X | X | X | X |
| Imports and exports IGES files | — | optional | optional | — | X |
| 3-D FEATURES | | | | | |
| Polygons (max. number of sides) | — | X (87) | X (8) | X (36) | X (4) |
| Extrusions | — | X | X | X | X |
| Surfaces of revolution | — | X | X | X | X |
| Ruled surfaces | — | — | X | X | X |
| Tab surfaces | — | — | X | X | X |
| Coons patch surfaces | — | — | X | — | X |
| Vertex—defined surfaces | — | — | — | — | X |
| Hidden—line removal | — | X | X | X | X |
| Shaded images | — | — | X | X | X |
| Definable viewpoints | — | X | X | X | X |
| Derives 2—D images from | — | X | X | X | X |
| 3—D models perspective view in | — | X | X | X | X |
| HELP | | | | | |
| On—screen | X | X | — | X | X |
| Context—sensitive | — | X | — | — | X |
| disk tutorial | — | — | X | X | — |
| X = yes — = no | | | | | |

Table I-3 : High—end CADD application program summary of feature

Point Control Co. Software Price List

For: MS-DOS® operating system on personal computers including IBM®
PC/XT/AT, PS/2, 80286 and 80386 computers and compatibles
UNIX® operating system on Sun® 386i and Sun 3 workstations

SmartCAM systems

ราคา (บาท)

SmartCAM™ Integrated CAM System

English 100,000.00

Programs all basic machine types in a single system
2 1/2 axis mill, 2 axis wire EDM, lathe, punch, profiler

SmartCAM 3-D Machining™

English 120,000.00

Advanced 3-D surfacing, 4 and 5 axis positioning
Includes SmartCAM for all basic machine types
MS-DOS version requires a 80286 or 80386 computer

Options

3-D Machining added to your existing SmartCAM system

English 80,000.00

4 Axis Wire EDM

50,000.00

Tape-to-Shape™ - CNC Code Interpreter

CAM Connection™ CAD/CAM Translators 1 รายการ (เลือกได้) 20,000.00

For MS-DOS: AutoCAD®, VersaCAD™, CADKEY® 3 รายการ (เลือกได้) 30,000.00

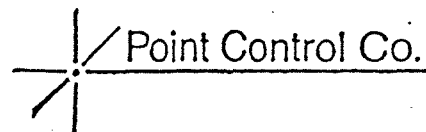
Anvil 1000MD™, CV Personal Designer™ 5 รายการ (เลือกได้) 40,000.00

IGES, Micro CADAM™ or
Intergraph MicroStation™

For UNIX: AutoCAD, IGES



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PACIFIC TOOLS
COMPANY LIMITED



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**Appendix J : Sample of Designed
Products**



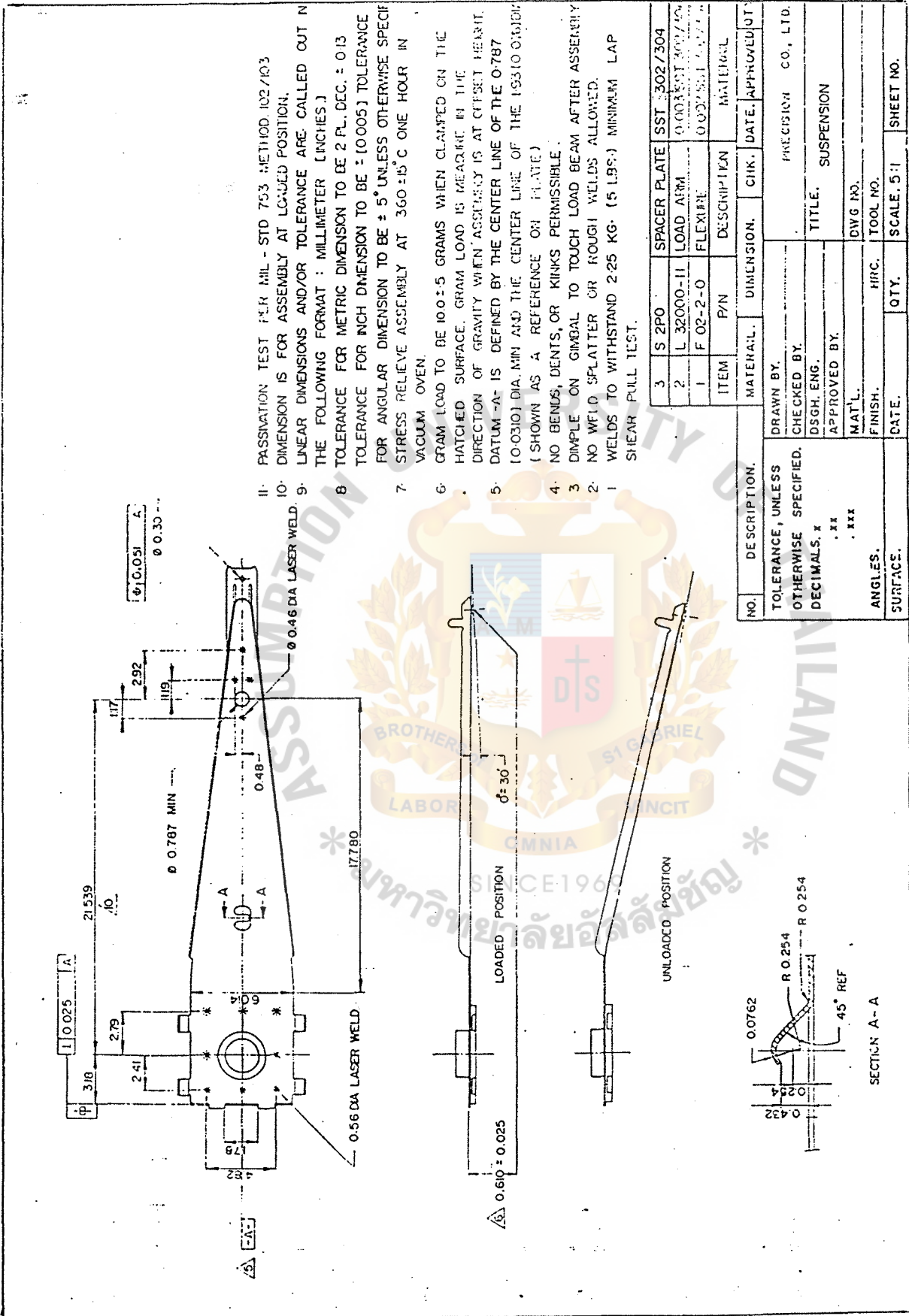


Figure J-1 : Sample of Designed Product Assembly parts (CAD process)

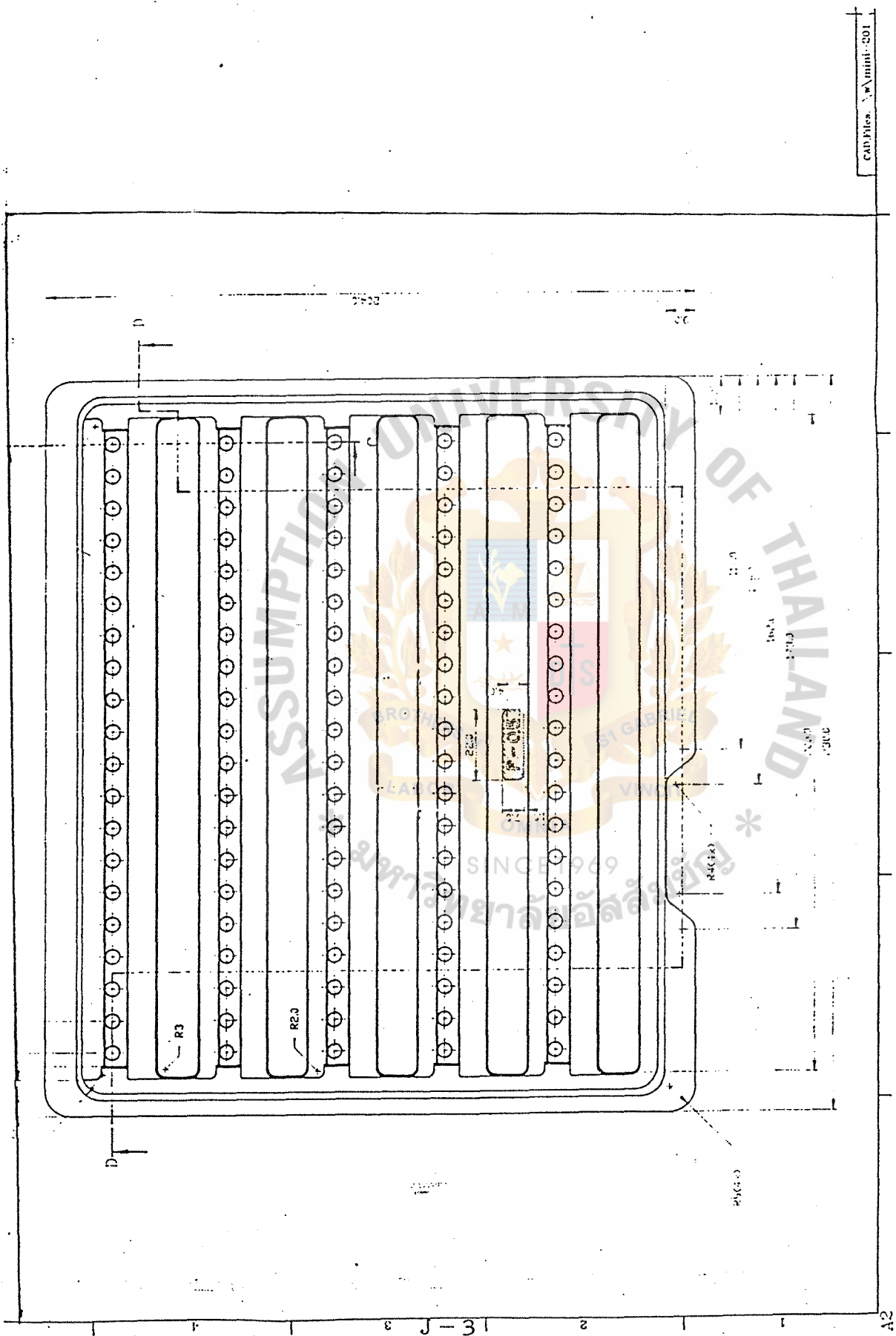


Figure J-3 : Sample of Designed Packaging (Cover) (CAD process)