



ASSUMPTION UNIVERSITY

COMPUTERIZED INVENTORY SYSTEM OF CRUDE DRUGS
SUPPLIES FOR THAI HUA CHAN DISPENSARY

by

Ms. Suwanna Pongprueksa

Final Report of the Three - Credit Course
CS 6908 System Development Project

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

December, 1991

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Project Title Computerized Inventory System of
 Crude Drugs Supplies
Name Ms. Suwanna Pongprueksa
Project Advisor Dr. Boonmark Sirinaovakul
Academic Year 1991

The Graduate School of Assumption University had approved this final report of the three-credit course, CS 6998 System Development Project, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer Information Systems.

Approval Committee :



(Dr.Boonmark Sirinaovakul)

Advisor



(Prof.Dr.Srisakdi Charmonmar)

Member



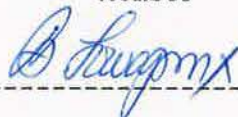
(Assoc.Prof.Dr.Kanchit Malaivongs)

Member



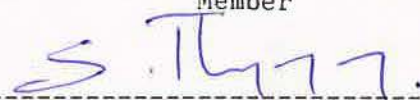
(Dr.Sudhiporn Patumtaewapibal)

Member



(Dr.Buranawong Sowapruks)

Member



(Assoc.Prof.Somchai Thayarnyong)

Member

(December, 1991)

ABSTRACT

The firm performs business as a wholesaler and distributor of products. The work functions of the overall system can be divided into four system which are : order processing system , purchasing system , accounting system and inventory system. There are two main products lines : medicine and its raw material (crude drugs and herbs). These two product lines are different in its brand name, type, size and grade of products. The prices are different due to the nature of product and the unit of measurement of product sold. The volume of transactions is large, therefore it is essential to develop the system to be computerized. Because the transactions of business involves mostly with the procurement and supplying product, the inventory system is very important, therefore the new system design is recommended for this system. There are the development of flows of data, documents and reports. The computer programs are implemented to control the inventory management system.

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1 . INTRODUCTION

1.1 Project Proposal

The objective of the project is to design and implement computerized inventory system of crude drugs supplies. The scope covers the overall design of the system and computer programs for serving the work functions of the inventory control system.

1.2 Nature of The Business

The firm performs business as a wholesaler and distributor of products. There are 2 main product lines : medicine and its raw material (crude drugs and herbs). These 2 lines of products are totally different in term of physical characteristics that reflect ways of managing methods. For example, herbs and finished medicine cannot be stored in the same place since most herbs will be contained in sacks which occupy more space and are very dusty. Whereas the finished medicines are contained in exact size of packages and are very fragile. Both finished medicines and herbs are despatched to various types of customers in Bangkok, and many provinces.

1.3 Key Business Functions

There are 2 key business functions which are

- 1) Procurement of products (Buying) and
- 2) Supplying products

1.3.1 Function of procurement of products

Procurement of products are different because of their nature and sources. Two main product lines are different in their nature as following.

1.3.1.1 Finished medicines

The finished medicines are usually branded, contained in paper boxes or paper-wrapped like many other finished products and are usually packed in dozen. Buying finished medicines is less complicated compared to buying crude drugs and herbs. Finished medicines are supplied by their manufacturers directly. Some brands are supplied by authorized dealers. When these products are out of stocks, the order can be made through telephone and sales representatives of that brand name. Then the products would be supplied within a few days. However, some suppliers locate in remoted provinces, in this case, shipping time requires more than one week. For credit terms this ranges from 15 days to 45 days, one-month credit term is given in most cases. Once the products have been despatched to the firm, big cartons are put off and small packages will be stacked on the racks of the stores.

1.3.1.2 Crude drugs and herbs

These types of products are from various parts of Thailand except only some herbs that are imported by middlemen or agencies and then supplied to the firm. The later case is much easier to order since the middlemen have certain offices in Bangkok that is convenient to contact anytime. They have sales representatives to collect orders. The credit term is usually given by these agencies. However, imported herbs usually spices, in the firm have small quantities compared with local herbs. Both imported and local ones are packaged and stored in the same way. However, buying local herbs is difficult because they have so many items. Folk people in the up country collect these herbs in the forest, slice or cut into small pieces, dry under the sun, contain in the sack. Then these people come

together with their goods by renting a truck. There is one surprizing fact that these villagers despatch goods to the firm without prior order or contact. They will stack sacks of herbs on footpath and see who needs. Price is uncertain and fluctuate up to demand in the market and season. Once bargaining is over, these goods will be stored in front of the firm. Then payment will be made in cash to these people. If these herbs are not in urgent need, they will be stored in the warehouse of the firm at Bangkhae. One question rises up, why does the firm have to buy or stock herbs that are not really needed? The answer is that anything cannot be forecasted, suppliers cannot be contacted at once, and sometimes the goods in the warehouse cannot be identified in exact quantity. Only some crude figures are recorded in one notebook. At the warehouse, the goods that had been bought in the morning, would be transfered after work in the evening of that day. They, then, would be piled up where space allowed in the next morning. A worker would take down a short report what had been kept in the warehouse that day.

1.3.2 Function of supplying products

Everyday the firm gets purchased orders from the customers through telephone and letter. These customers have stores in Bangkok and other provinces. Some retailers order only finished medicines, some order only crude drugs or both.

In case of finished medicines, processing an order is fast and easy. Each item is picked from its place and then checked again before putting in a paper-box. There is only some trouble as some items in the customer order. The firm has to get these products from other wholesaler, because the sales volume of these items is too little to stock since it cannot pay off. When the invoice is ready,

the products are sent to the customer.

Customers order crude drugs or herbs in the other way, they order by weight eg. kilogram and 'chang' which is a Thai unit. In case the firm receives an order which has both finished medicines and crude drugs, the first thing to do is separating all the crude drugs items and copy them to another piece of paper. Crude drugs are picked from the sack and contained in a paper-bag. The worker weights to order, then fastens it with plastic rope. This requires four to five workers to do these jobs - two workers at ground floor, the other two or three at 2nd and 3rd floor. The workers have to memorize every item on the rack, there will be no label to differentiate on sack from another except that you have to pick up the content in the sack and ask the worker what it is. This makes outsiders find it difficult to count and check. It seems impossible.

Some customers order crude drugs or herbs in bulk eg. one sack of..., 2 sacks of.... In this case, the worker have to check whether these goods are in stock. If the items are stored in the warehouse at Bangkhae, they will be despatched in the next day. Before despatching, their weight will be checked because each sack does not contain products in the same quantities.

Some customers want the herbs in powder form. The popular ones are crushed readily. Otherwise, they will be sent for crushing at another place. The crushing fee will be counted by products' weights. And the customers have to wait for one week.

1.4 Why Need the Computerized System for This Business

Because of the nature of business that performs as a wholesaler which has a lot of products. The product

lines can be classified into two product lines which are medicine and herbs. Medicine can be differentiated by type, brand name, and size. Herbs can be differentiated by type, and grade of products. Prices are different due to the nature of product and the unit of measurement of product sold. Therefore it is difficult to memorize all the details.

Not only the large amount of product types and quantities, but also the large numbers of trading transactions occur each day. Computerized system is considered to be applied in this business. The computer will be used in the daily business operations which are the daily records of trading transactions. The records will be updated daily in the evening and this will be used also in the inventory control system. Since the inventory management in the existing system is not strict, some problems occur when the customers need products and the exact quantities of that products cannot be identified. To use computer, the products in the stock can be checked easier, the exact quantities can be known. Some products are not necessary to be stocked in too many quantities, therefore to know the existing status is important and this can also protect the problem of loss from theft.

Another reason is that one future plan of the firm is to expand the business in the part of exporting some crude drugs. To enhance the business, all the existing system must be formed perfectly, only manual system cannot control these large numbers of transactions. Therefore the computerized system is considered to be important in this business.

2. DEFINITION OF THE AREA UNDER STUDY

2.1 The Context Diagrams and Dataflow Diagrams of The Area Under Study

The work functions of the overall system of the firm can be divided into 4 systems which are :

1. Order Processing System
2. Purchasing System
3. Accounting System
4. Inventory System

These 4 systems are demonstrated in context diagrams and data flow diagrams (DFDs) using the techniques as defined in the "Fundamental of Systems Analysis" book, as shown in figure 2.1 to 2.9 in the following pages.



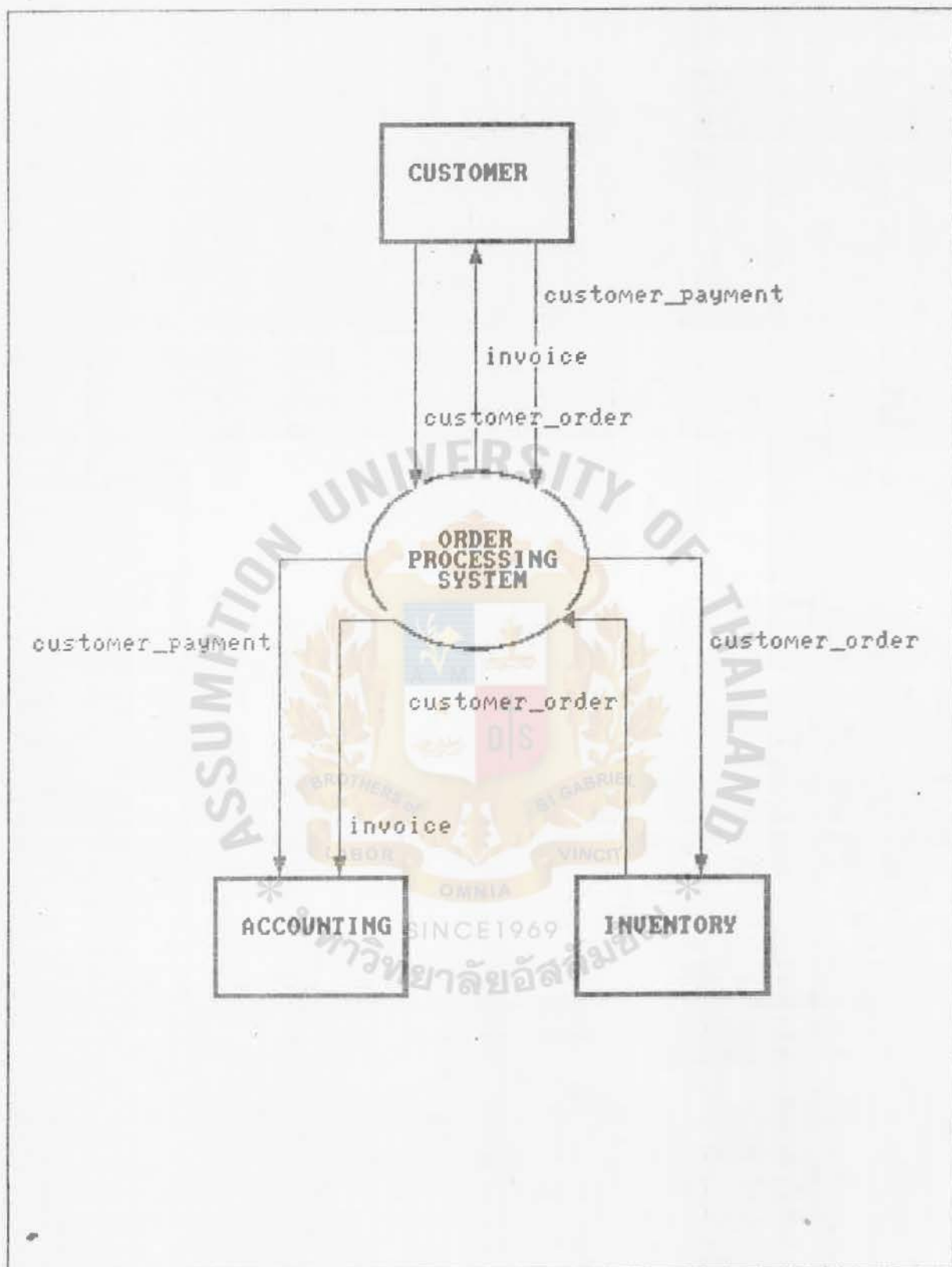


Figure 2.1 Context Diagram of Order Processing System

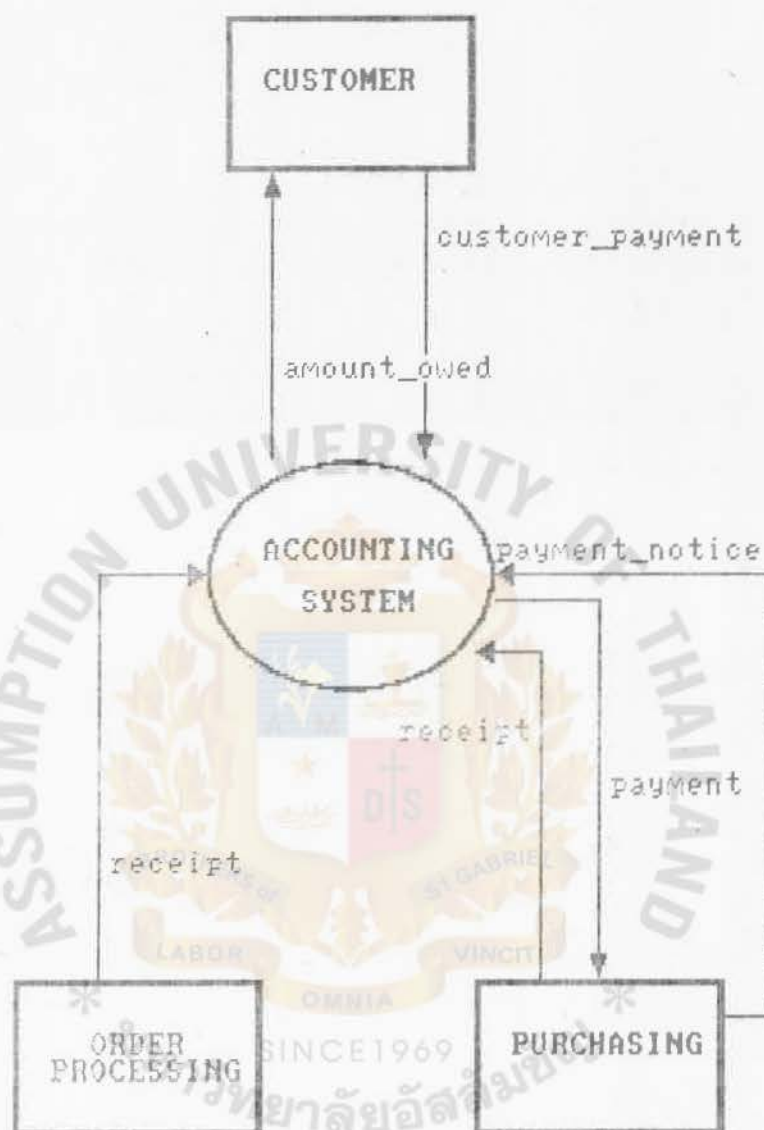


Figure 2.2 Context Diagram of Accounting System

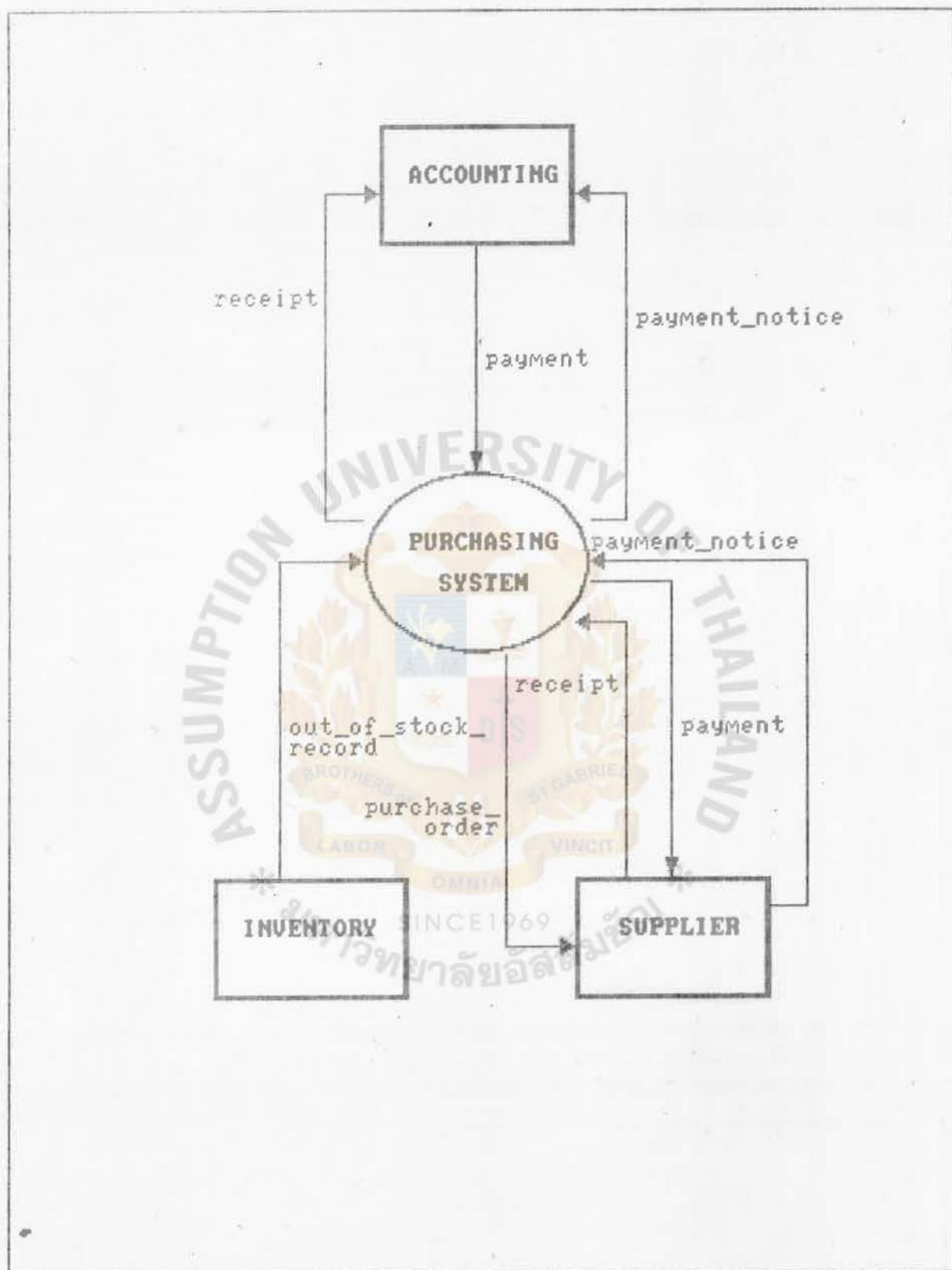


Figure 2.3 Context Diagram of Purchasing System

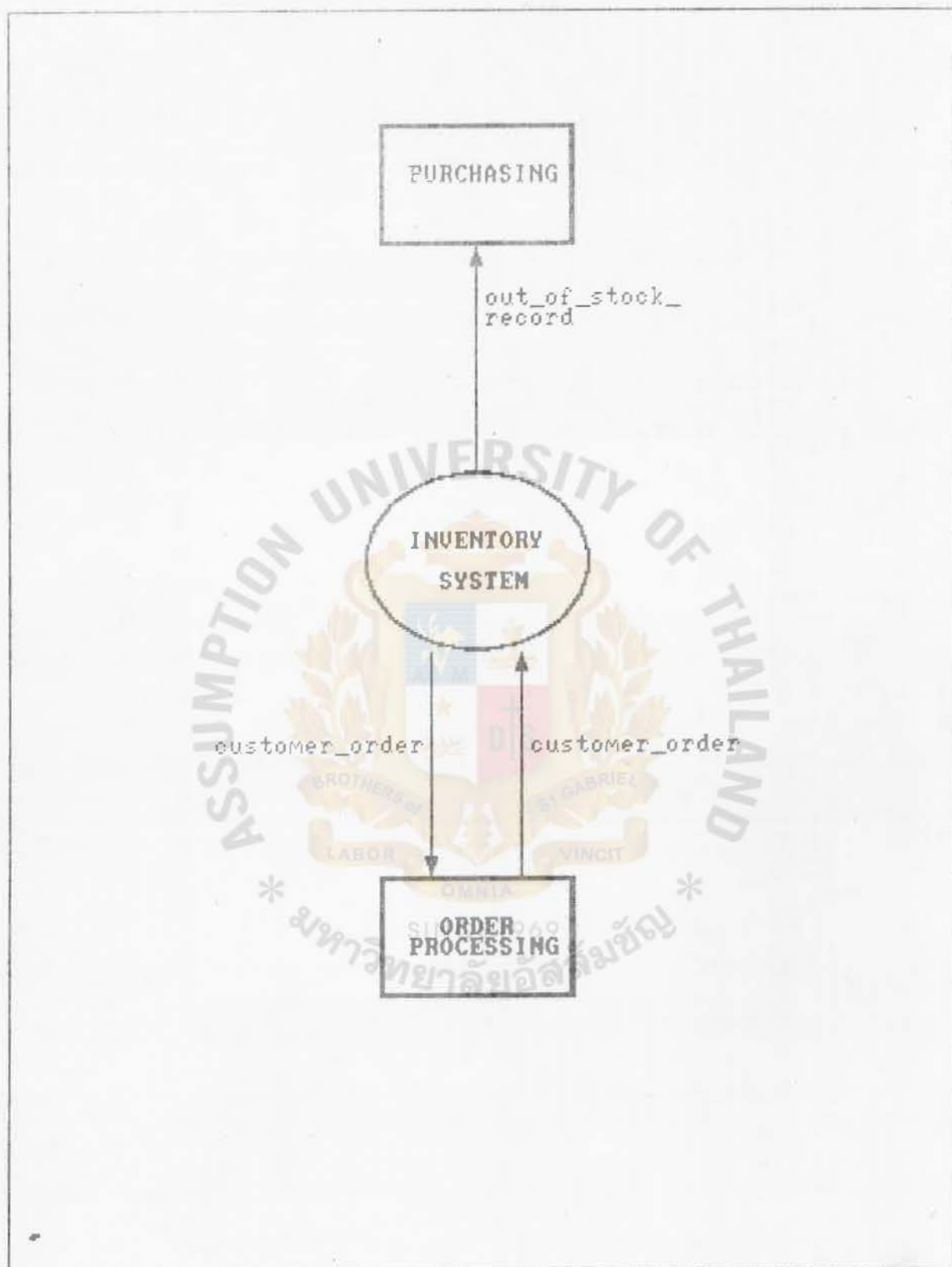


Figure 2.4 Context Diagram of Inventory System

LEVEL 0 DATA FLOW DIAGRAM OF OVERALL SYSTEM

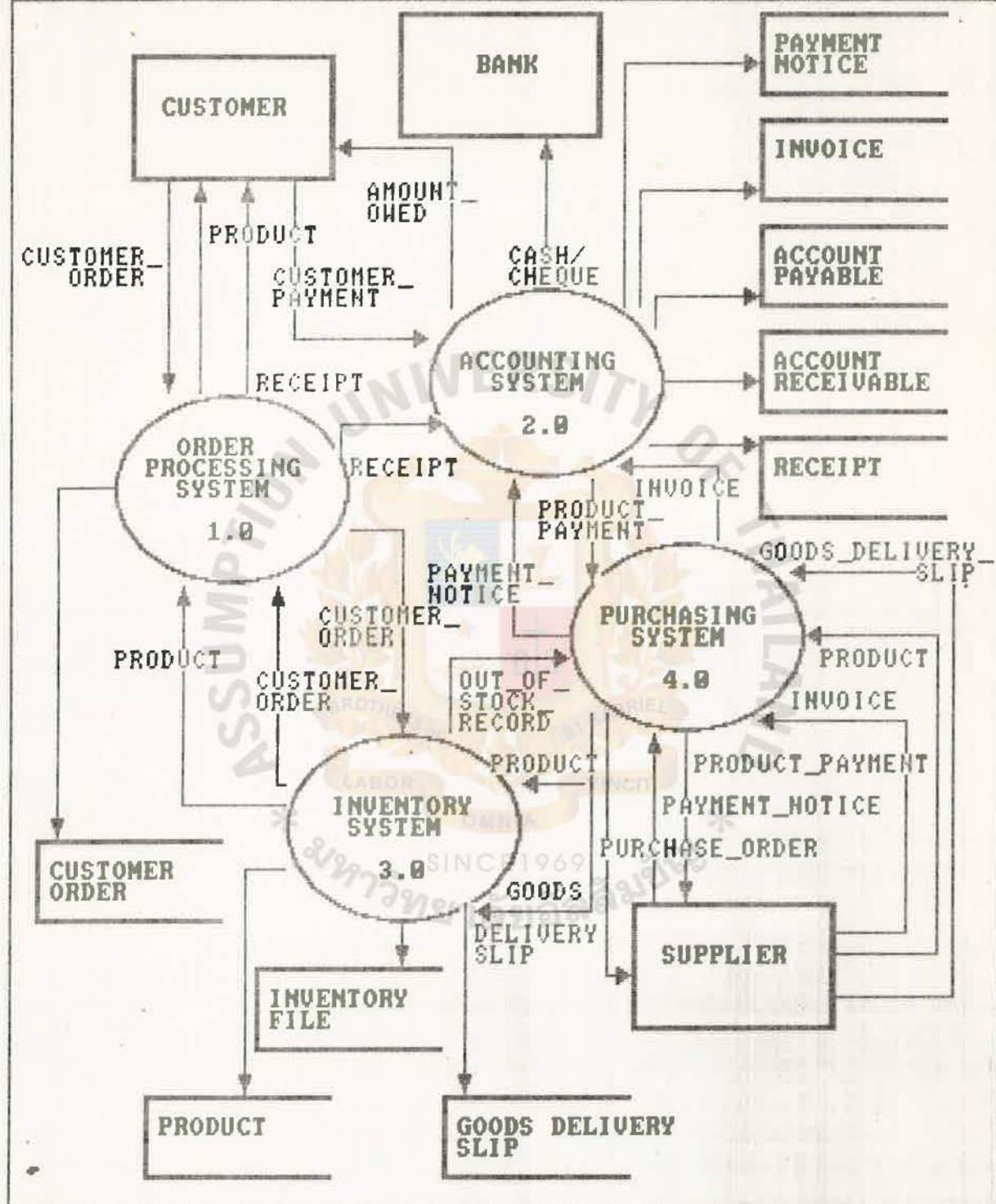


Figure 2.5 LEVEL 0 DATA FLOW DIAGRAM OF OVERALL SYSTEM (EXISTING SYSTEM)

**LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 1.0
(ORDER PROCESSING SYSTEM)**

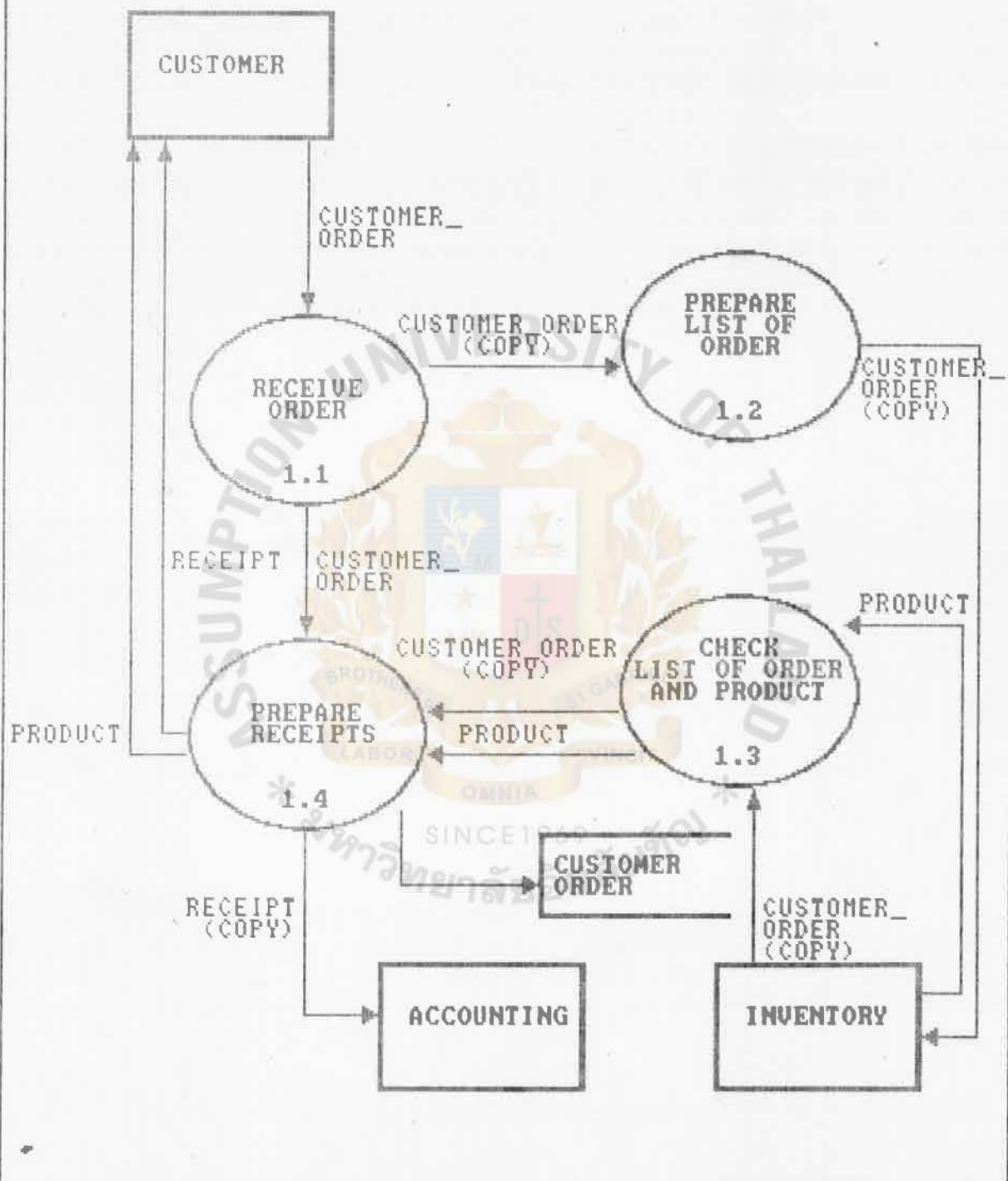


Figure 2.6 LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 1.0 (ORDER PROCESSING SYSTEM) (EXISTING SYSTEM)

LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 2.0
(ACCOUNTING SYSTEM)

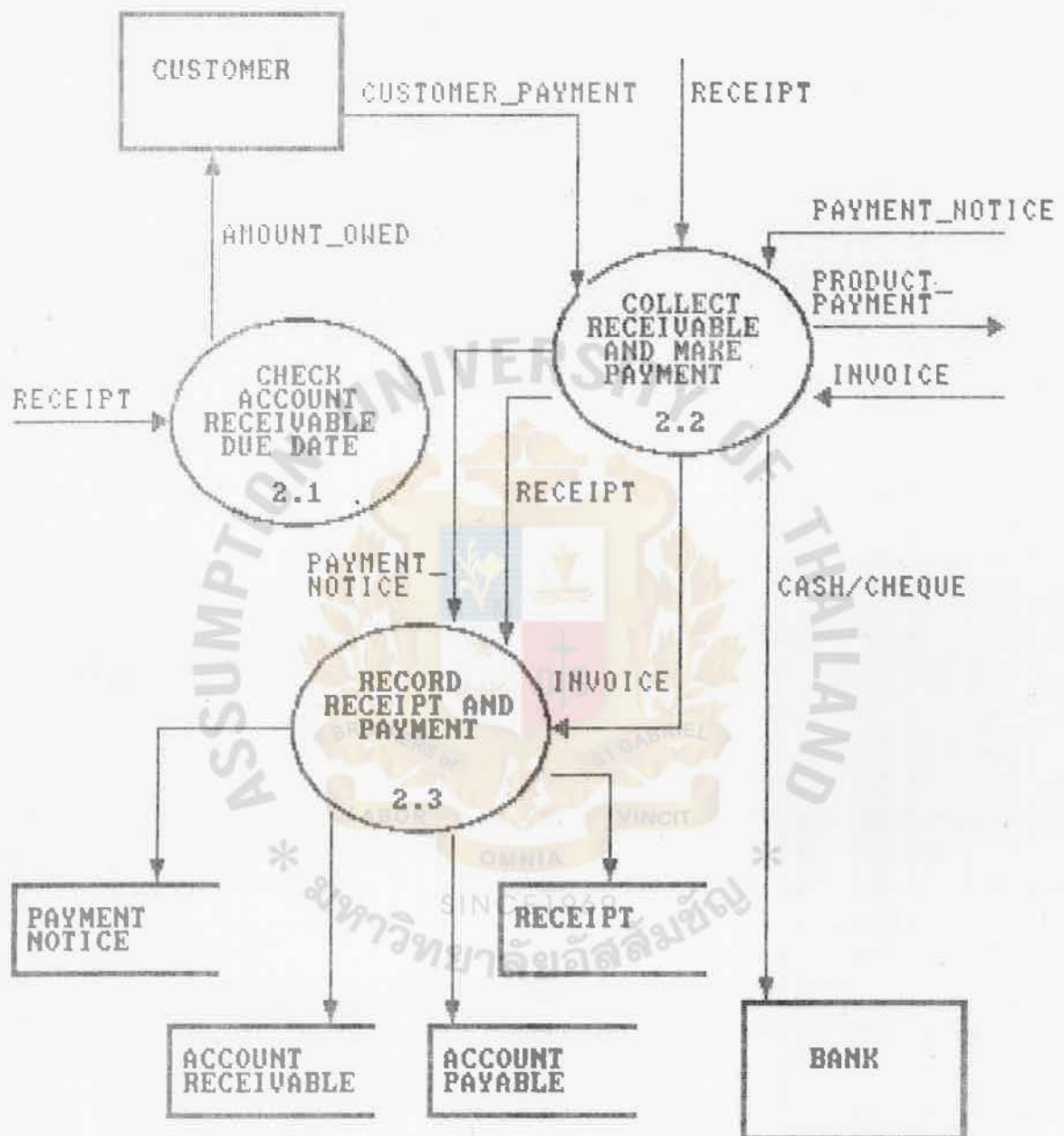


Figure 2.7 LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 2.0
(ACCOUNTING SYSTEM) (EXISTING SYSTEM)

LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 3.0
(INVENTORY SYSTEM)

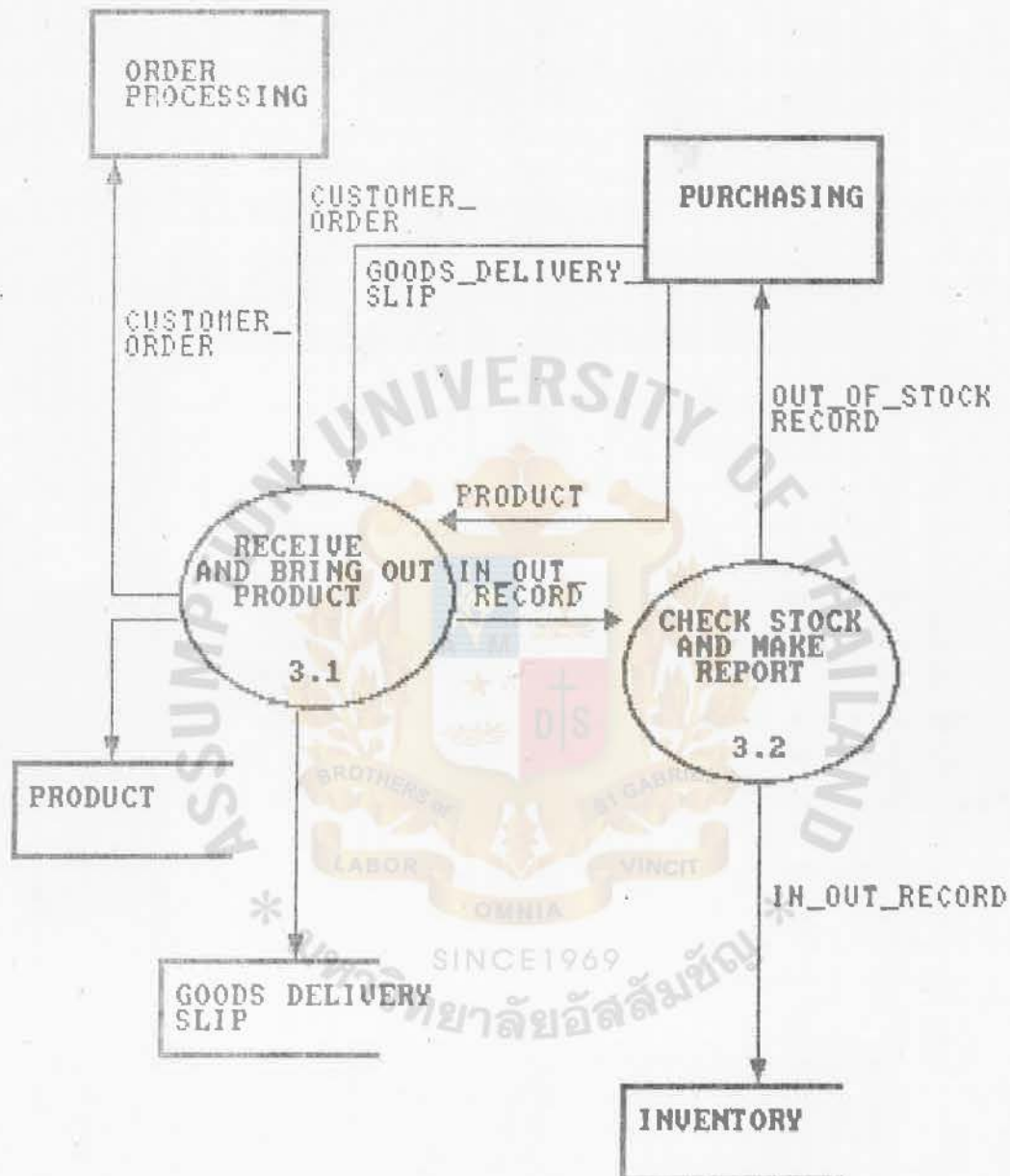
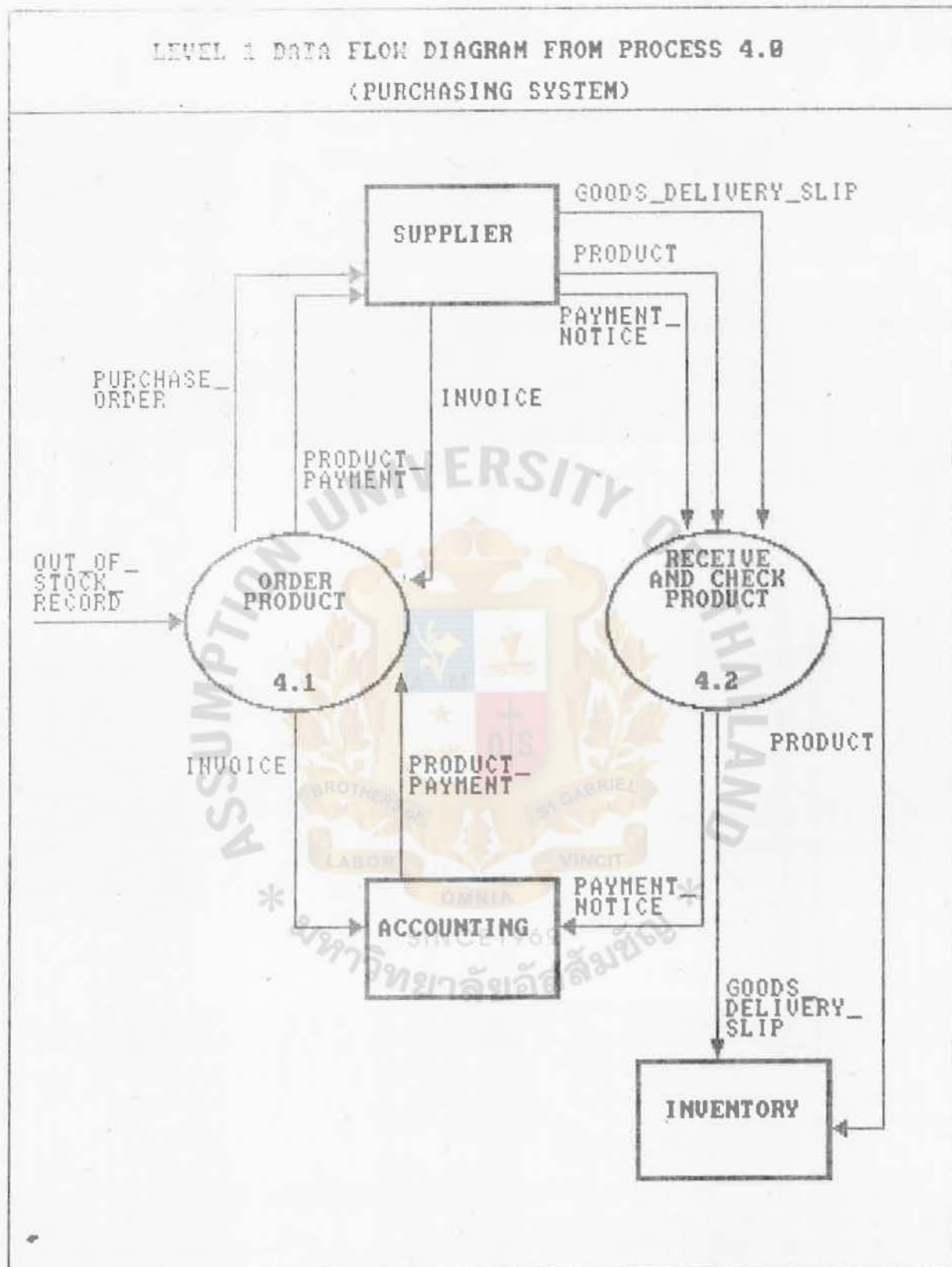


Figure 2.8 LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 3.0
(INVENTORY SYSTEM) (EXISTING SYSTEM)



**Figure 2.9 LEVEL 1 DATA FLOW DIAGRAM FROM PROCESS 4.0
(PURCHASING SYSTEM) (EXISTING SYSTEM)**

From the dataflow diagrams, the customers make orders of purchase to the firm. Then the firm prepare products according to these orders and prepare two copies of invoices. The invoice will be sent to the customers and the copy will be kept by the accounting division for collection of customer payment later.

In the purchasing system, the firm makes contact to the suppliers. Once the products are dispatched to the firm, these products will be stored in the warehouse. The invoice received from the suppliers will be sent to the accounting division for making payment.

2.2 Identification of the Area Under Study

The key business function of the firm concerns mostly with the procurement of products and supplying products. Inventory system is considered to be the most important system. The daily business transactions involve directly the receiving and delivery of products. From the study, the firm has a large amount of products. There are some problems in the inventory control system of the firm especially that of crude drugs and herbs. The stock of products require a lot of spaces to store. There are a large amount of product types and quantities and also a large numbers of trading transactions. Every day the users of the system involves mostly the work of transactions' records. In this case computer is consider to apply in this area.

2.3 Strengths and Weaknesses of the Firm

• Strengths

- The firm has a lot of creditable customers, this is beneficial in the collection of account receivables process.
- The product of the firm especially crudes drugs can be

stocked in a large amount due to the nature of the products themselves. The price of products will be increased due to the demand and season. The firm can store these products when the price decreases. This can reduce the cost of products.

Weaknesses

- There is no record of suppliers' list, therefore it is difficult to make purchasing order when the product is out of stock. The manager is the only one who knows where to order some products from. The work is too load to the manager.
- In the order processing system, sometimes after receiving orders from the customers, they are sent to the workers to prepare the products without making any copy. The orders are used in all processes -- from preparing products, checking them until making out receipts. The problem can be occurred if the order gets lose.
- There are problems in the inventory management system. There is no record of stocks in and out of store. The record of inventory is done only that in the warehouse. The problem is that the firm cannot know the exact quantities of stocks left in the store.

2.4 Study Plan

The study plan for the computerized inventory system of medicines and crude drugs supplies is controlled by using a Gantt chart shown in figure 2.10.

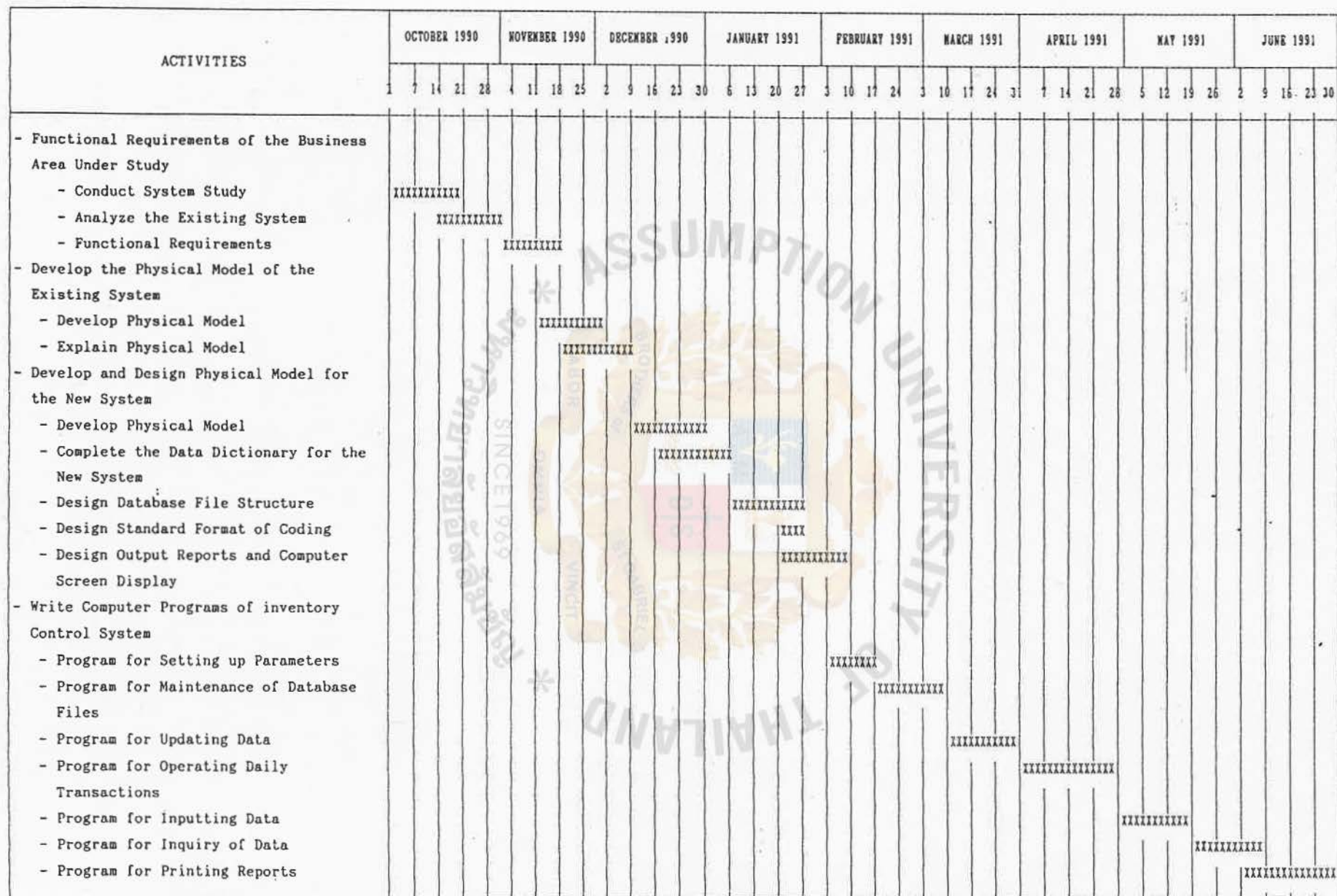


Figure 2.10 : Gantt Chart for Computerized Inventory System of Crude Drugs Supplies.

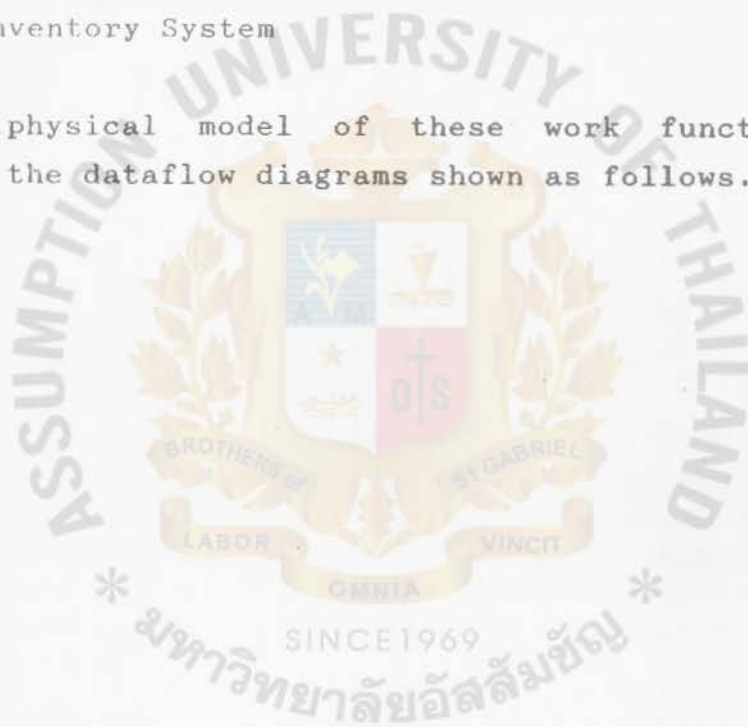
3. INFORMATION ON THE AREA UNDER STUDY

3.1 Physical Model of the Existing System

The work functions of the existing system of the firm can be divided into 4 important systems which are :

1. Order Processing System
2. Purchasing System
3. Accounting System
4. Inventory System

The physical model of these work functions are defined in the dataflow diagrams shown as follows.



DATA FLOW DIAGRAM OF OVERALL SYSTEM

ORDER PROCESSING

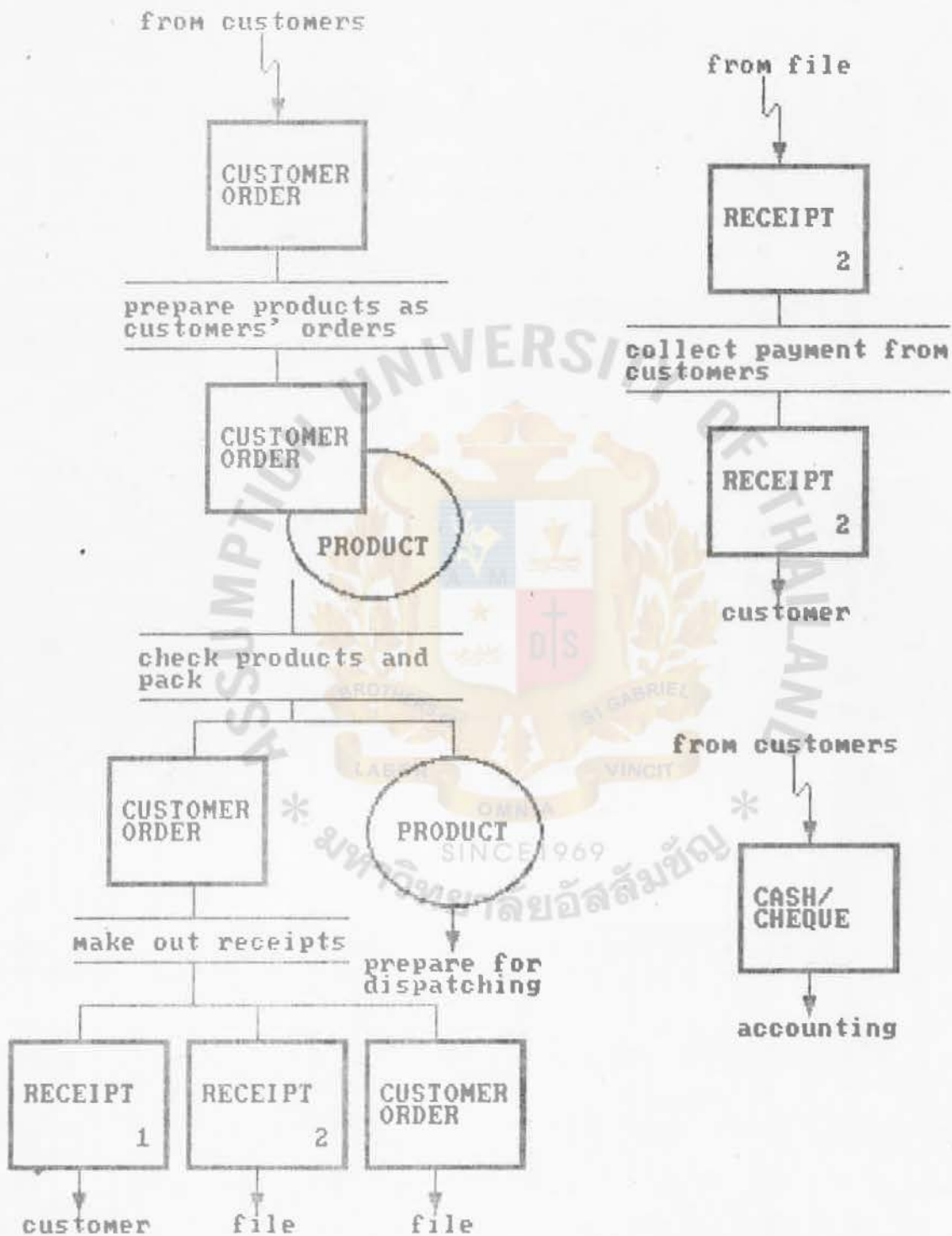


Figure 3.1.1 DATA FLOW DIAGRAM OF OVERALL SYSTEM

DATA FLOW DIAGRAM OF OVERALL SYSTEM (continue)

PURCHASING

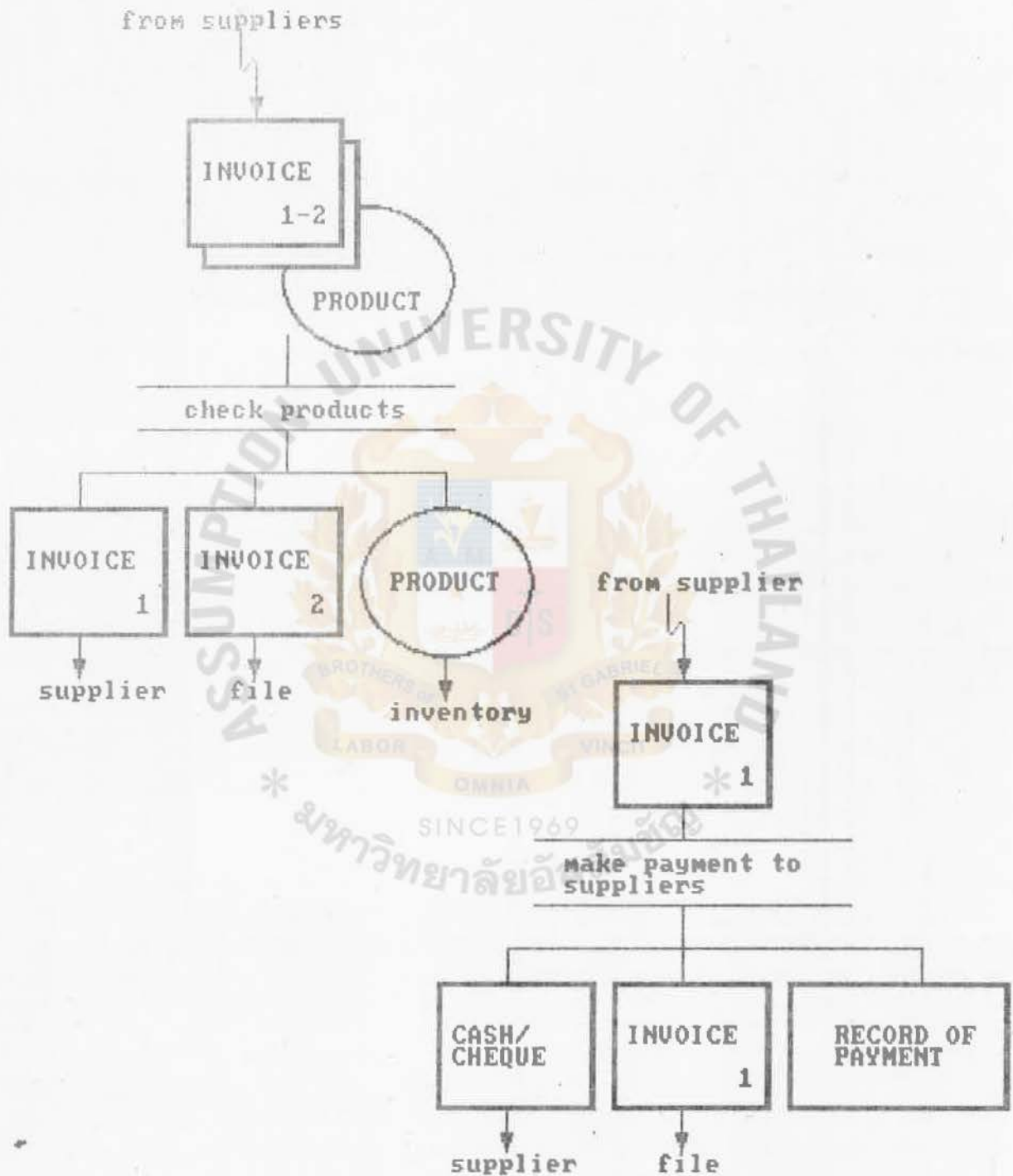


Figure 3.1.2 DATA FLOW DIAGRAM OF OVERALL SYSTEM (continue)

DATA FLOW DIAGRAM OF OVERALL SYSTEM (continue)

PURCHASING

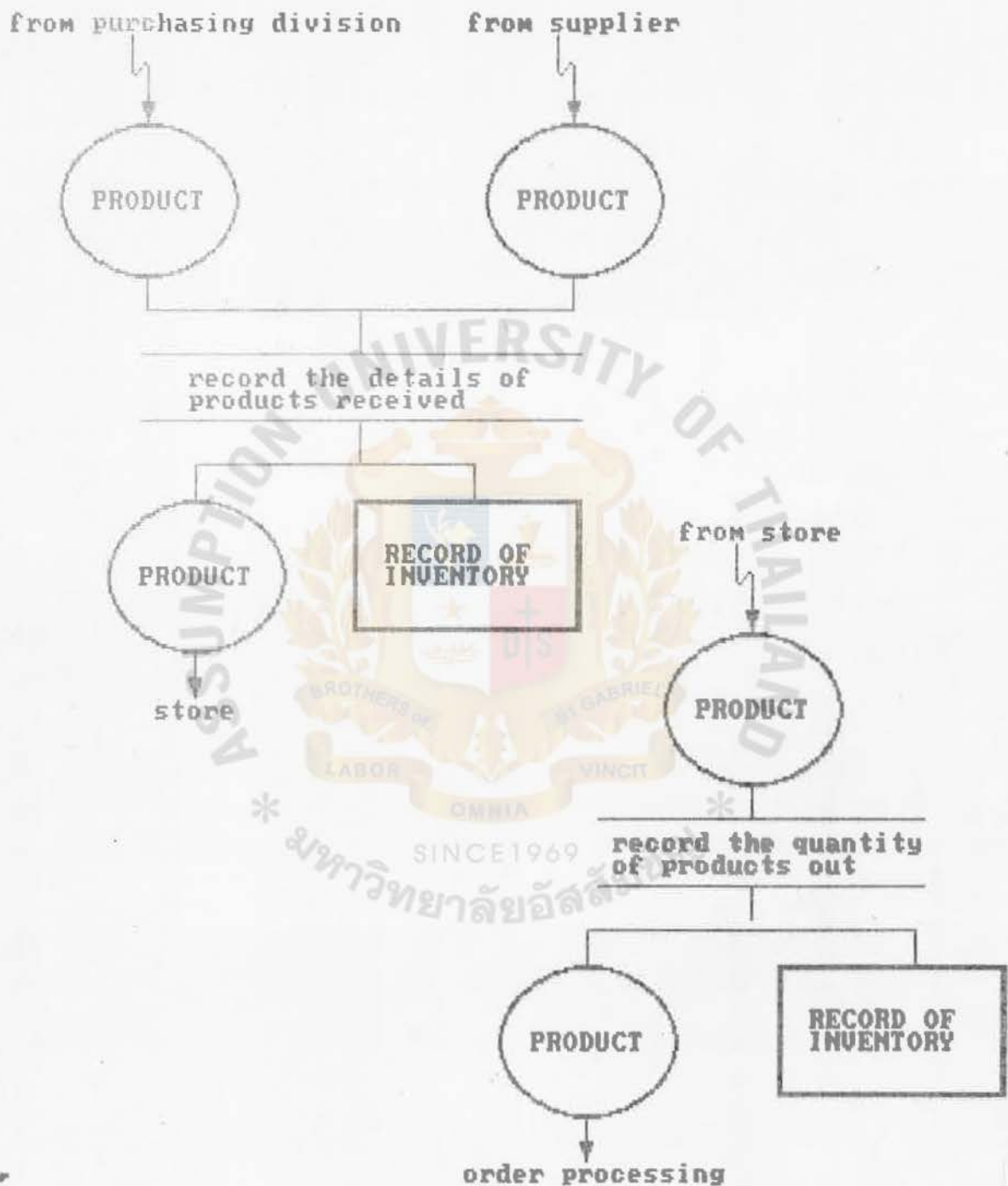


Figure 3.1.3 DATA FLOW DIAGRAM OF OVERALL SYSTEM (continue)

DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM

RECEIVE DATA

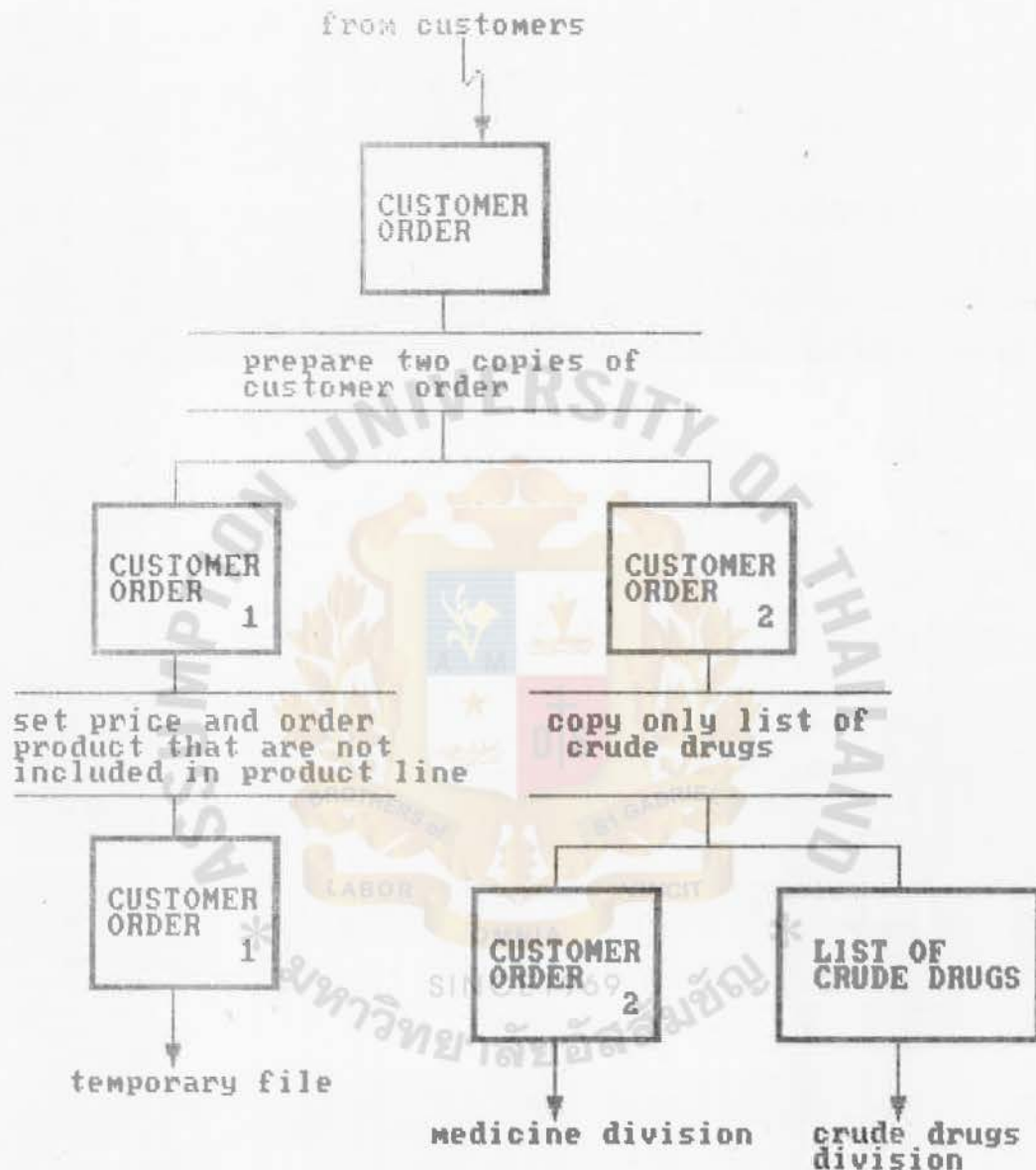


Figure 3.1.4 DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM

DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM (continue)

PROCESSING

After preparing products as customer order (2) and list of crude drugs

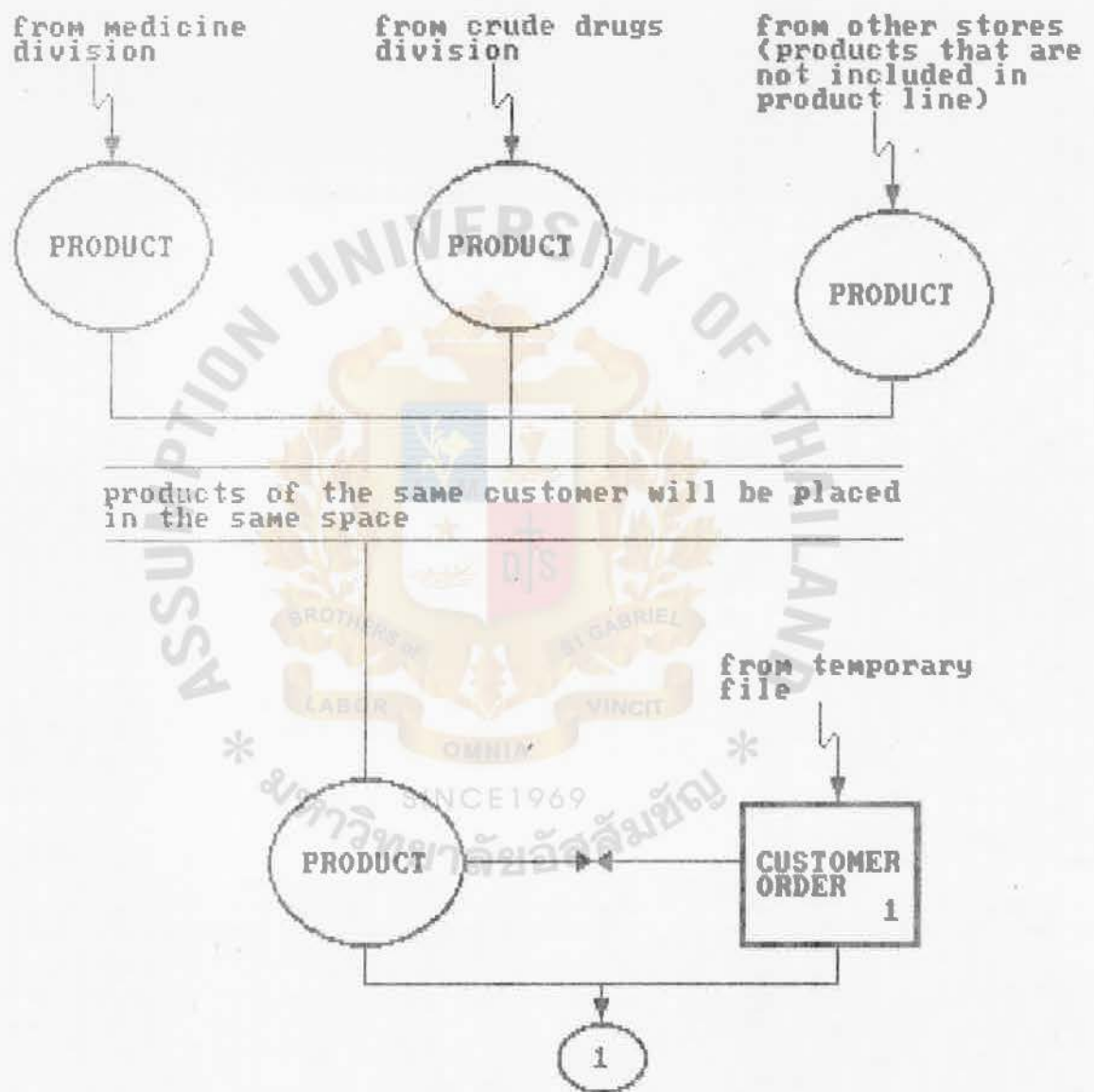


Figure 3.1.5 DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM (continue)

DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM (continue)

PROCESSING

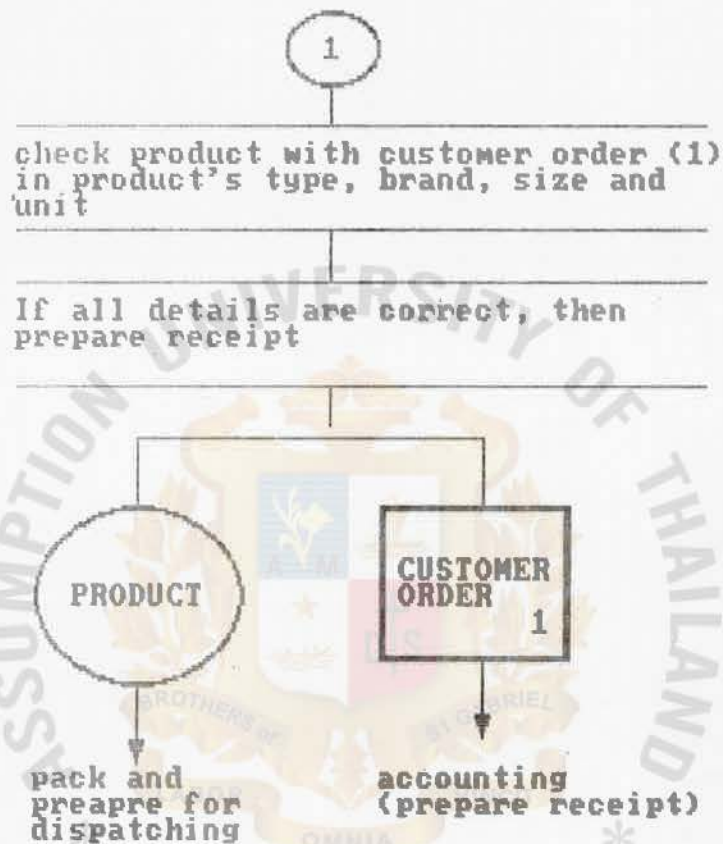


Figure 3.1.6 DATA FLOW DIAGRAM OF ORDER PROCESSING SYSTEM (continue)

DATA FLOW DIAGRAM OF PURCHASING SYSTEM

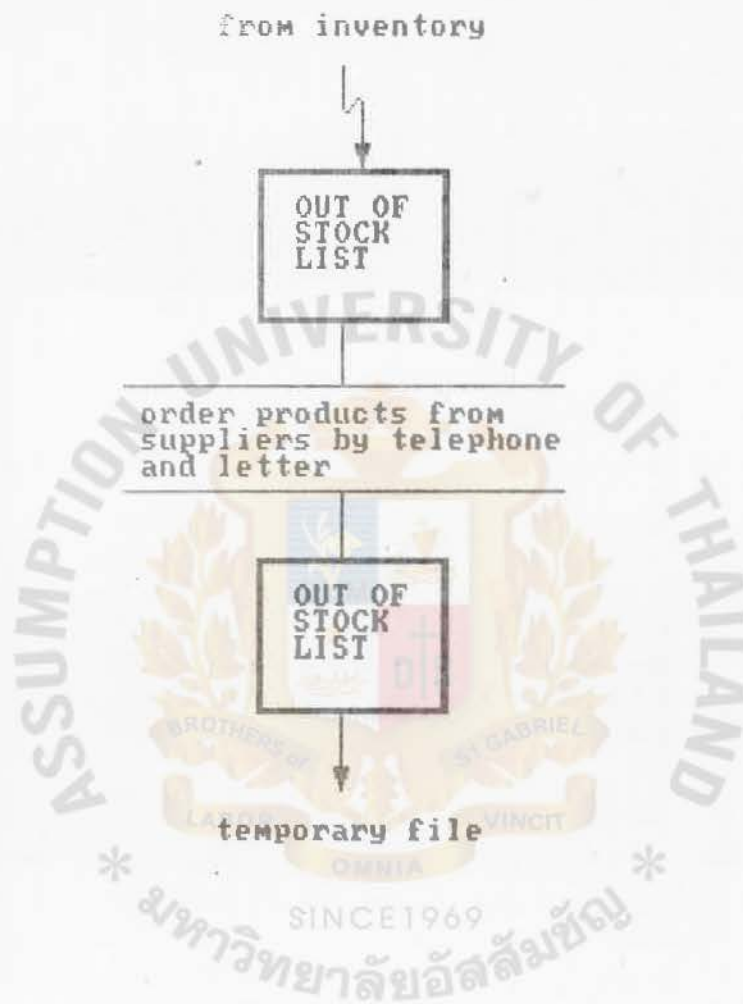


Figure 3.1.7 DATA FLOW DIAGRAM OF PURCHASING SYSTEM

DATA FLOW DIAGRAM OF PURCHASING SYSTEM (ocntinue)

When receive products from suppliers
(three types of suppliers)

1. CREDIT PAYMENT METHOD

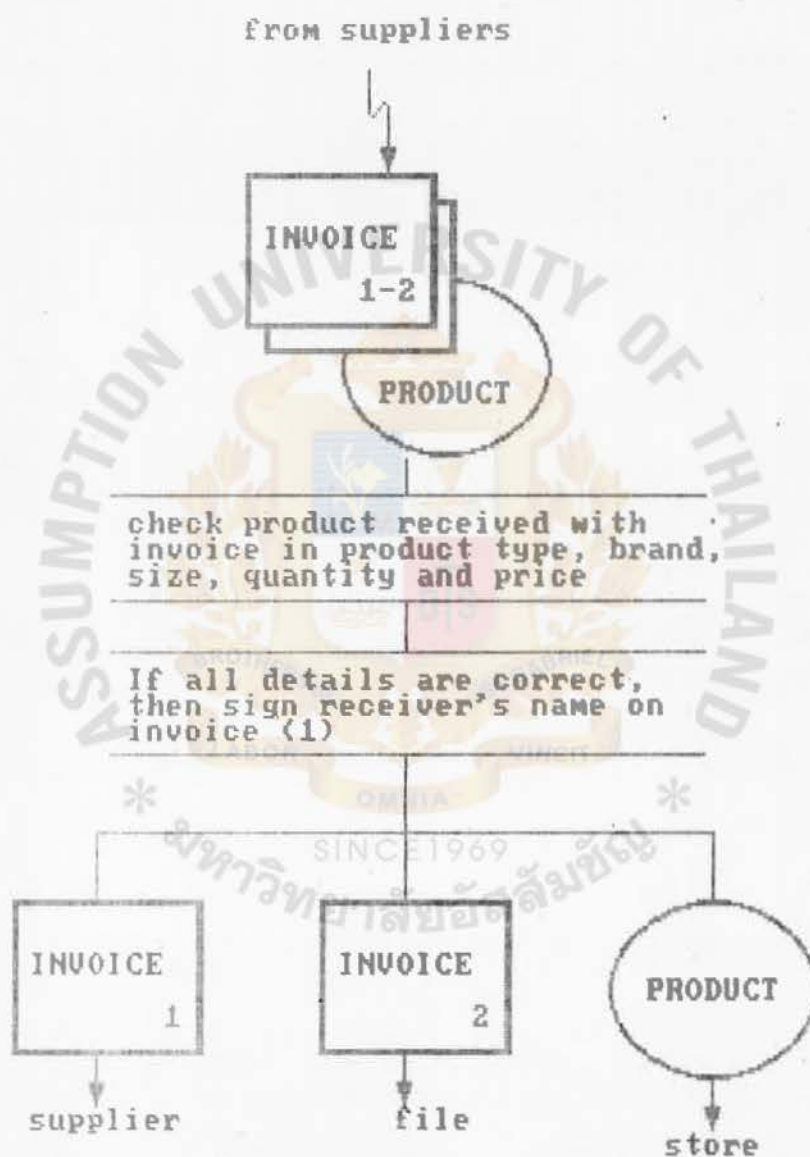


Figure 3.1.8 DATA FLOW DIAGRAM OF PURCHASING SYSTEM (continue)

DATA FLOW DIAGRAM OF PURCHASING SYSTEM (continue)

When receive products from suppliers
(three types of suppliers)

2. CASH PAYMENT METHOD

2.1 payment for medicine



Figure 3.1.9 DATA FLOW DIAGRAM OF PURCHASING SYSTEM (continue)

DATA FLOW DIAGRAM OF PURCHASING SYSTEM (continue)

When receive products from suppliers
(three types of suppliers)

2. CASH PAYMENT METHOD

2.2 payment for crude drugs

from suppliers

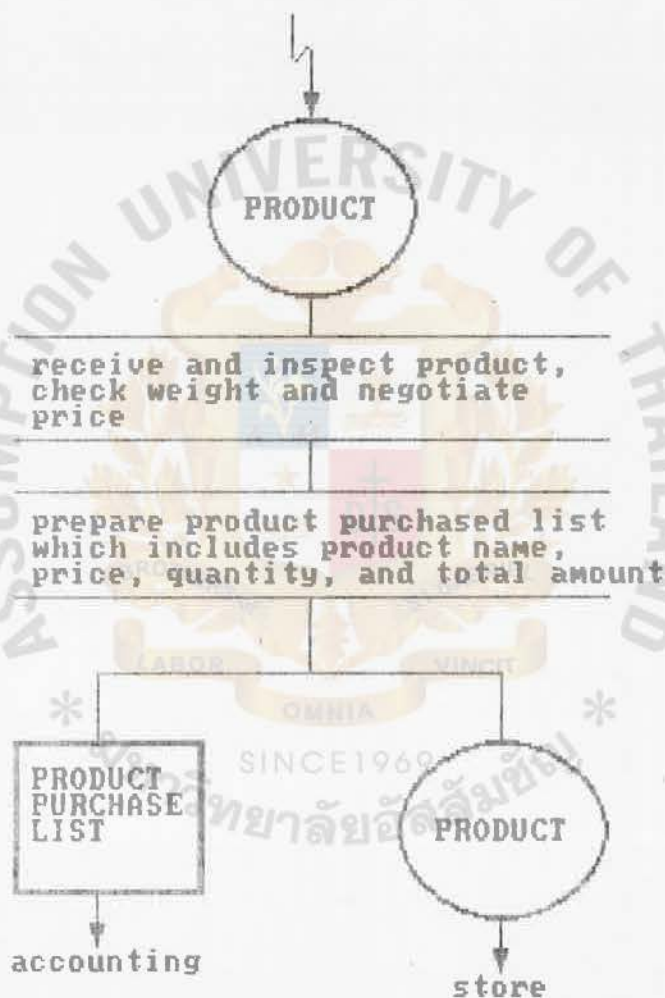


Figure 3.1.10 DATA FLOW DIAGRAM OF PURCHASING SYSTEM (continue)

DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM

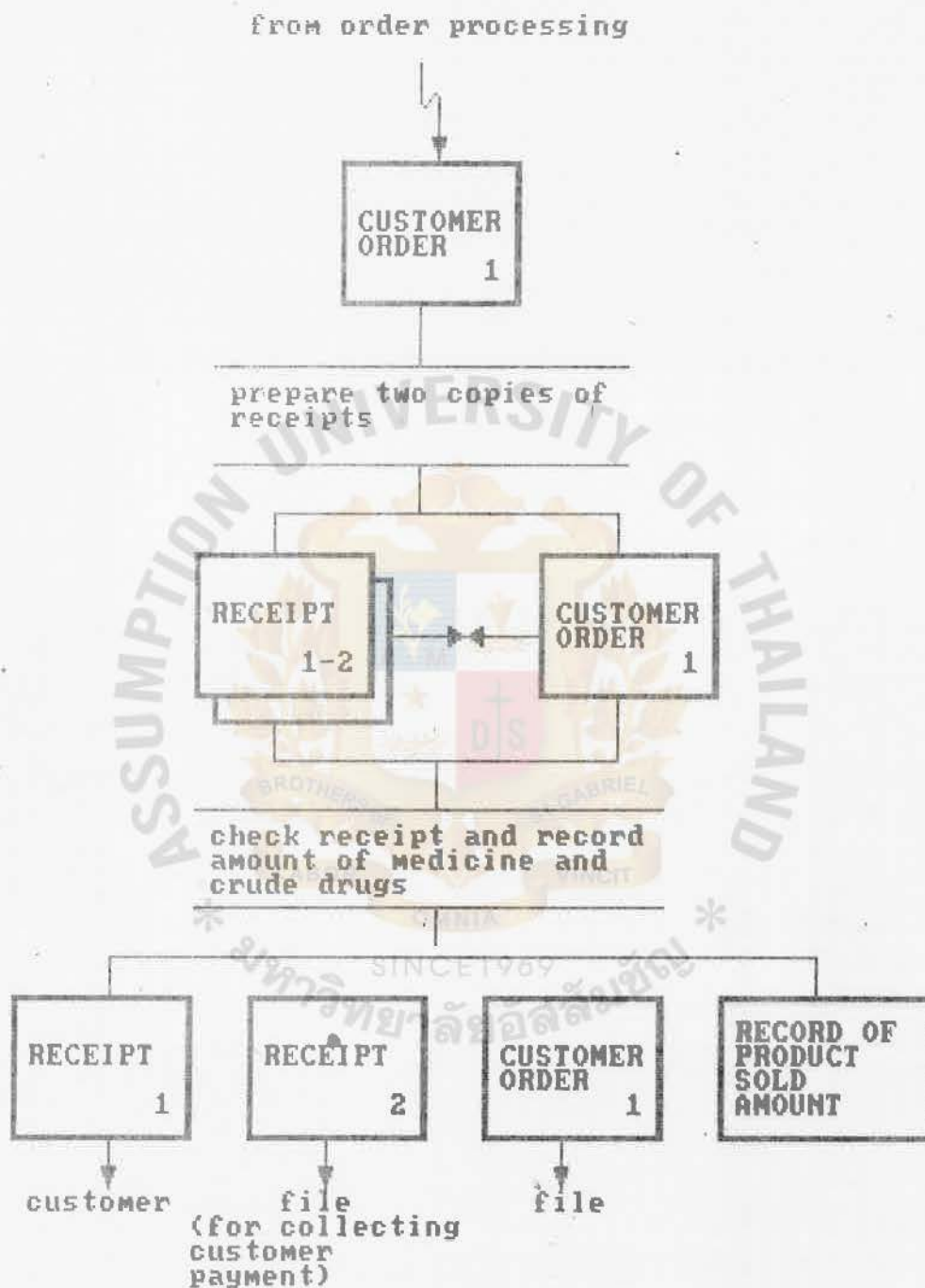


Figure 3.1.11 DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM

DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

RECEIVE OF CUSTOMER PAYMENT

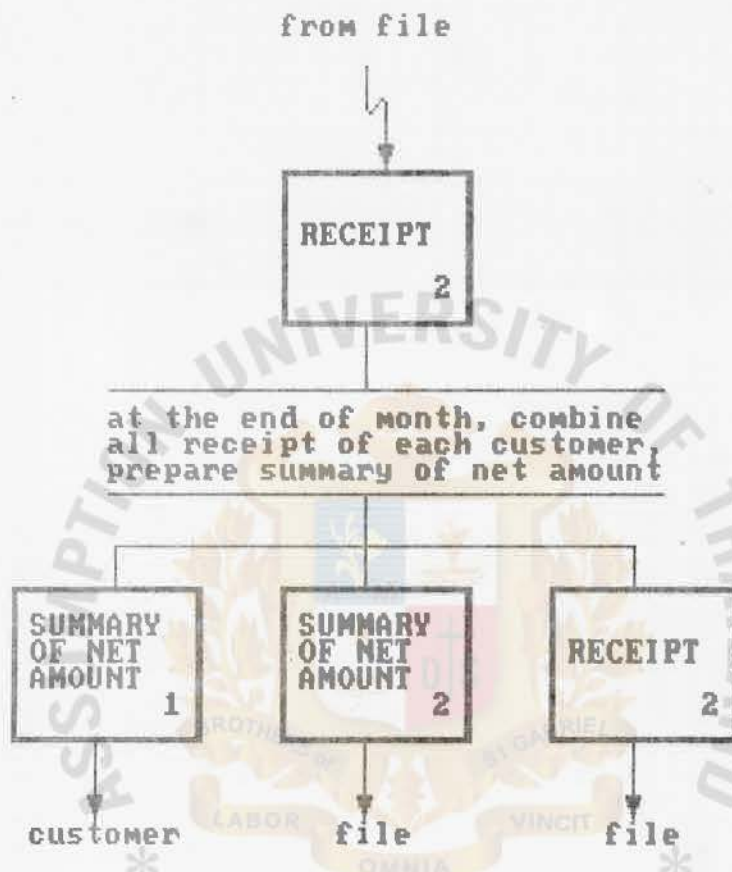


Figure 3.1.12 DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

RECEIVE OF CUSTOMER PAYMENT

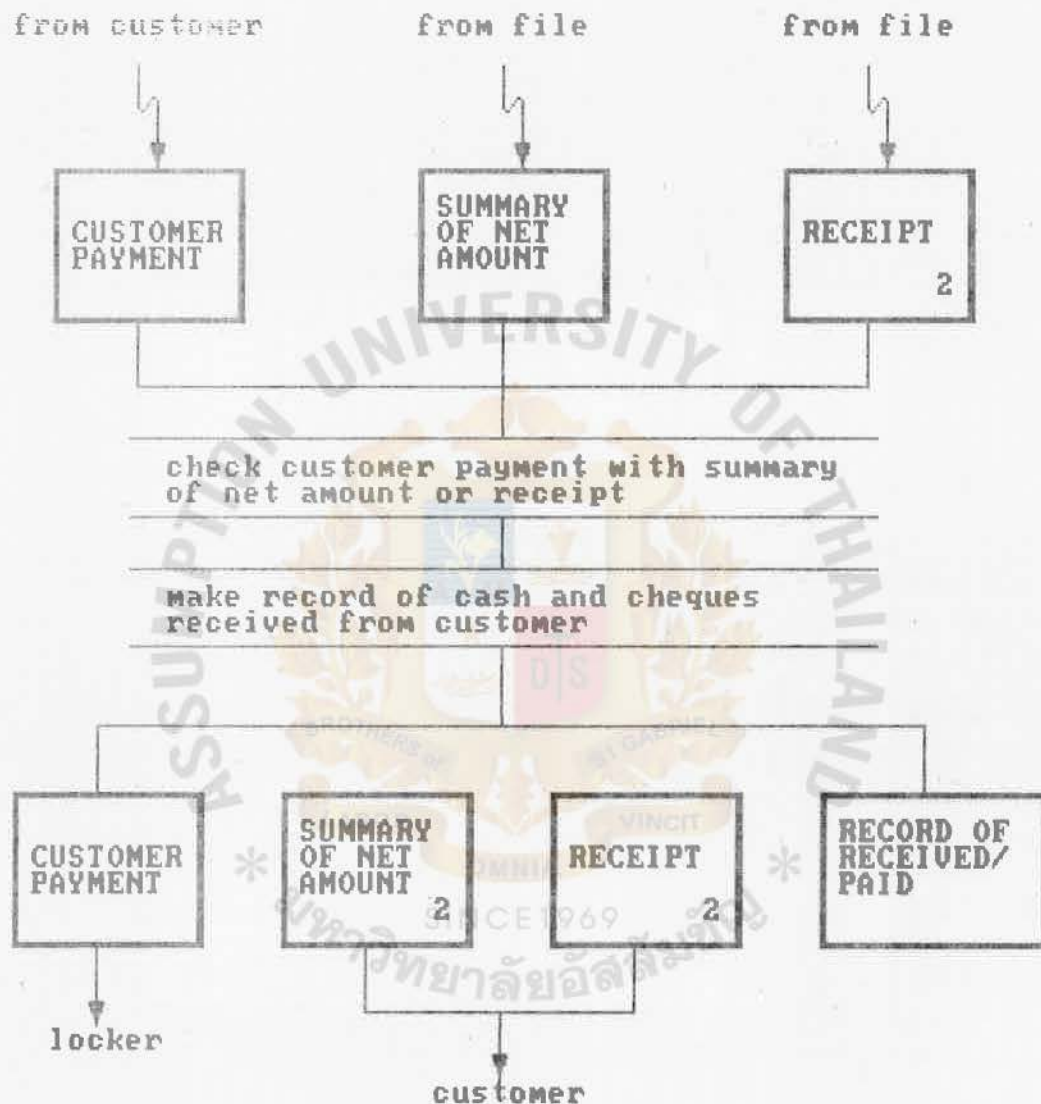


Figure 3.1.13 DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

PAYMENT OF PURCHASE ORDER

when suppliers collect order payment

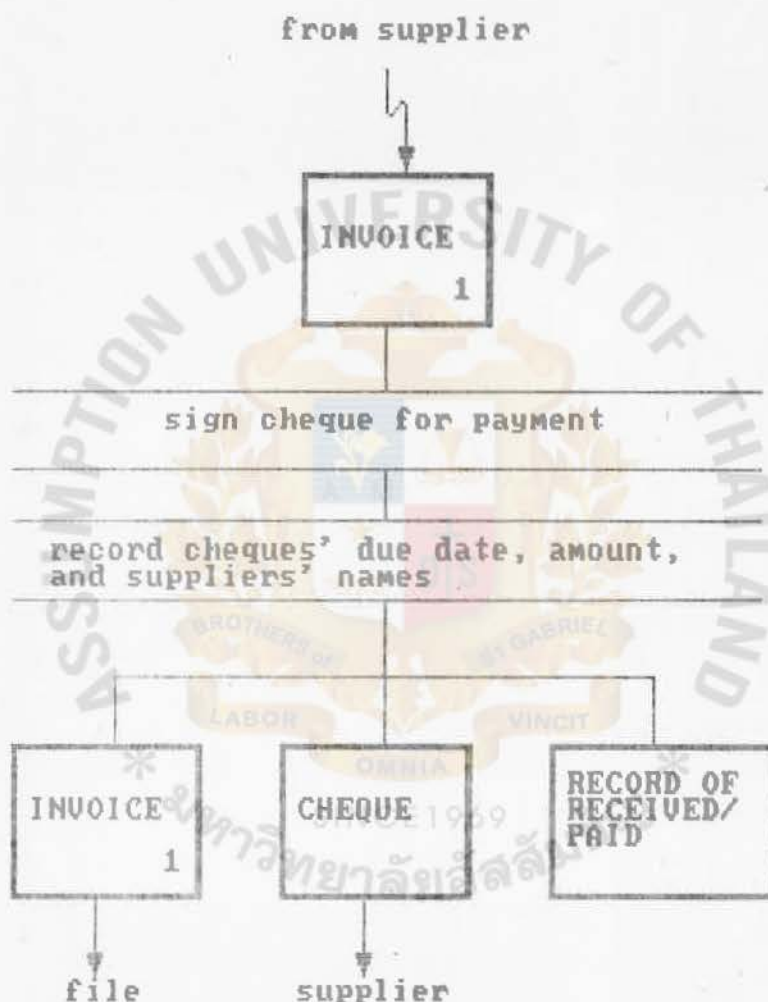


Figure 3.1.14 DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

PAYMENT OF PURCHASE ORDER

when suppliers collect order payment (crude drugs)

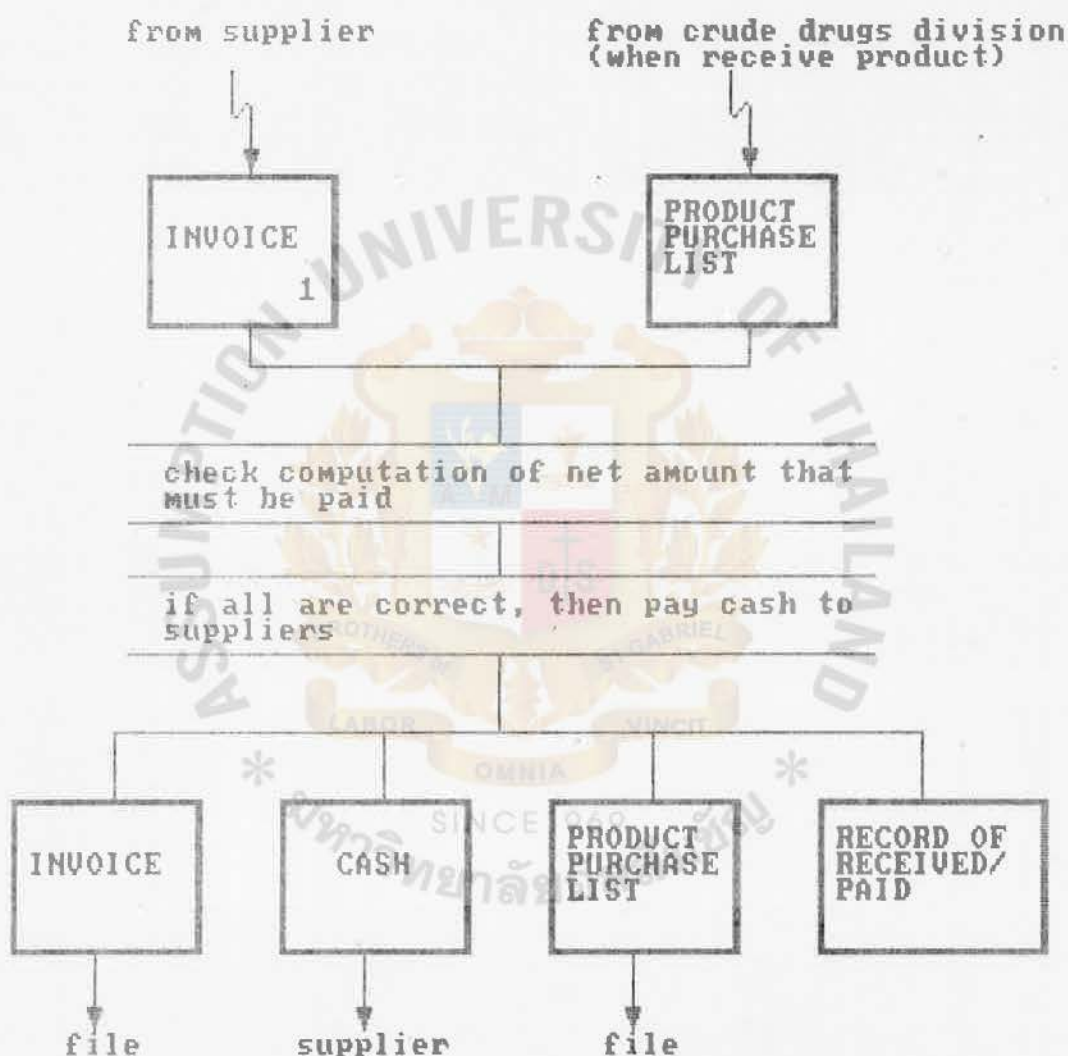


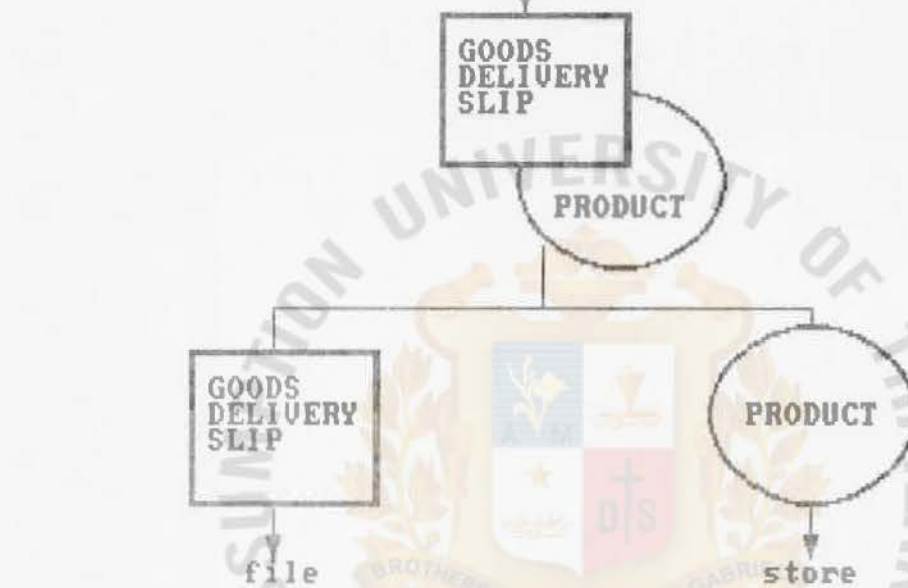
Figure 3.1.15 DATA FLOW DIAGRAM OF ACCOUNTING SYSTEM (continue)

DATA FLOW DIAGRAM OF INVENTORY SYSTEM

STORE OF MEDICINE

when receive product

from purchasing division



when deliver product

from order processing

from store

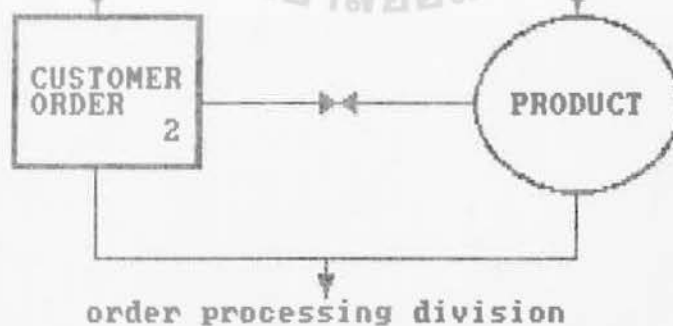


Figure 3.1.16 DATA FLOW DIAGRAM OF INVENTORY SYSTEM

DATA FLOW DIAGRAM OF INVENTORY SYSTEM (continue)

STORE OF CRUDE DRUGS

when receive product

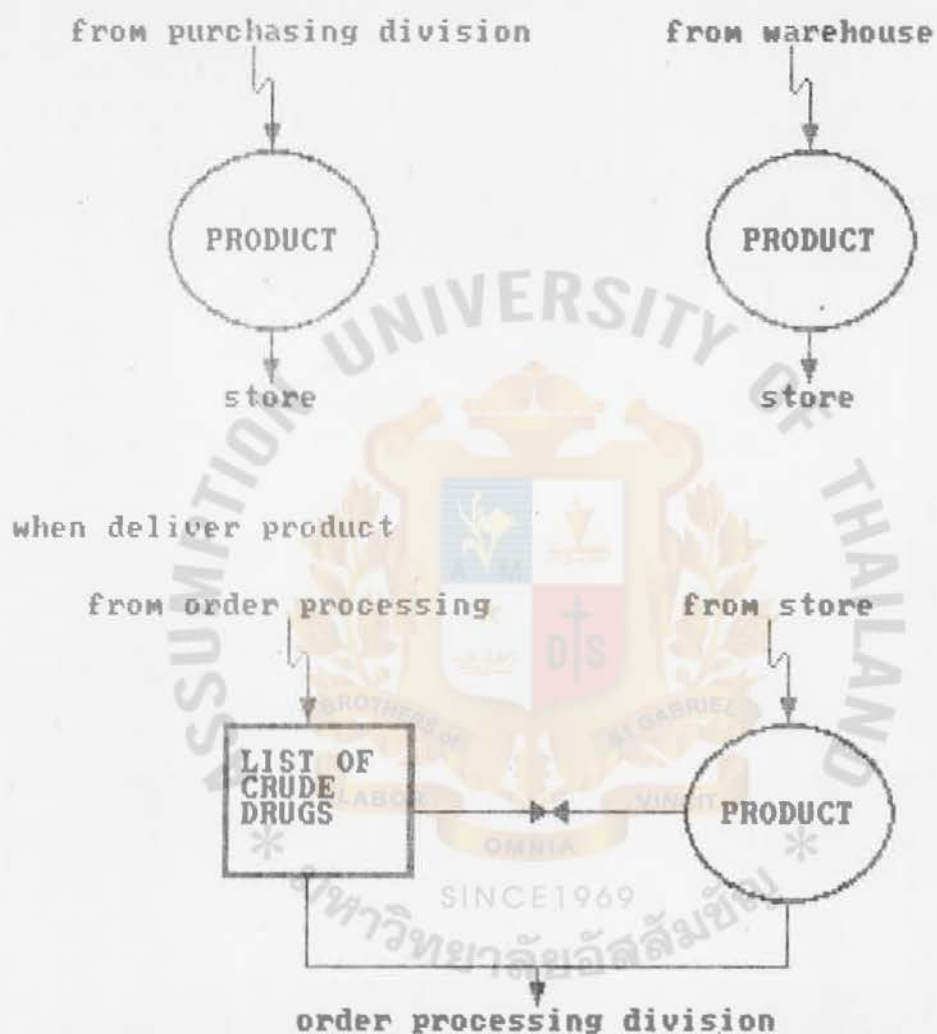


Figure 3.1.17 DATA FLOW DIAGRAM OF INVENTORY SYSTEM (continue)

DATA FLOW DIAGRAM OF INVENTORY SYSTEM (continue)

CRUDE DRUGS WAREHOUSE

when receive product

from supplier

from purchasing division

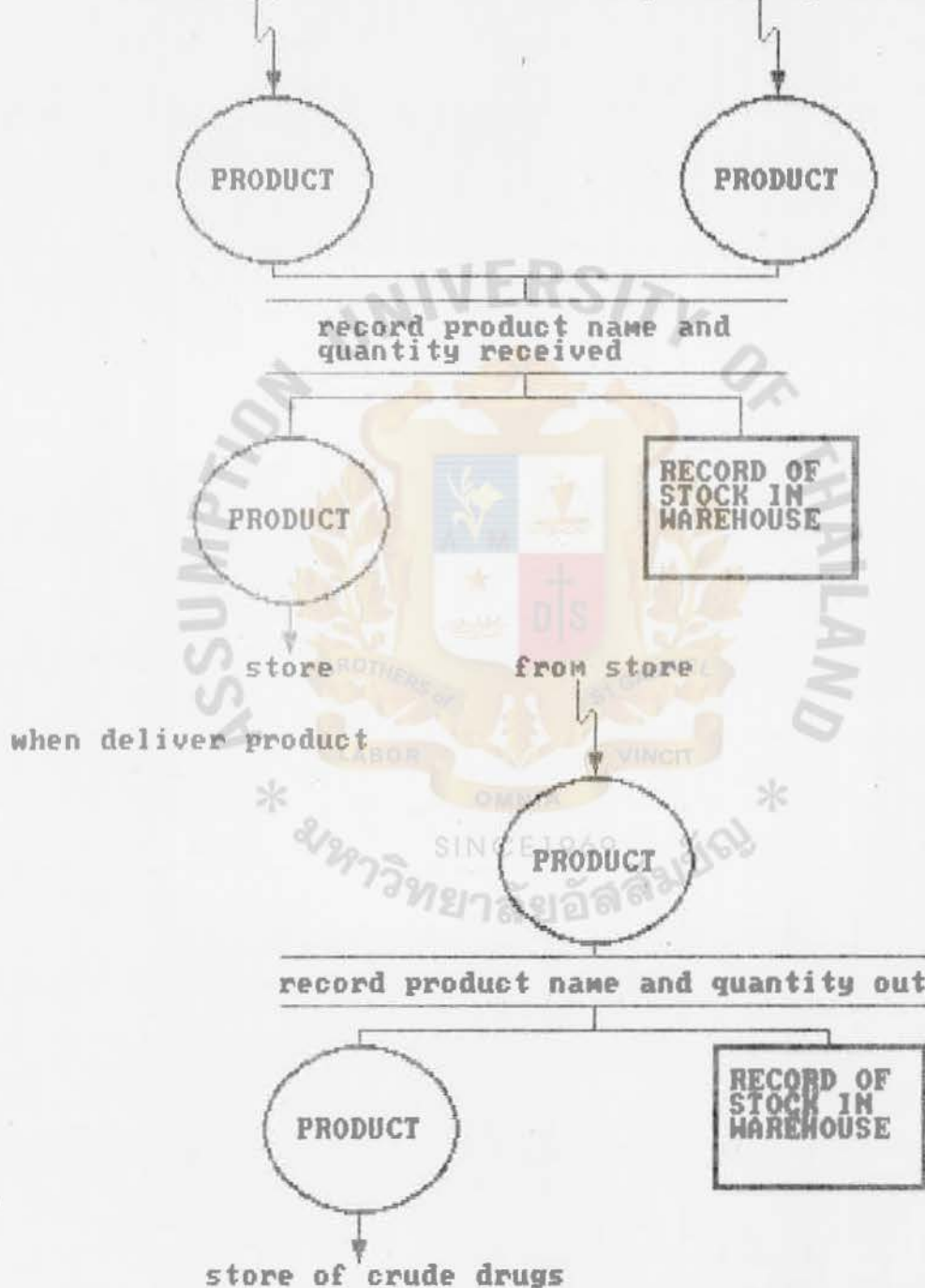


Figure 3.1.18 DATA FLOW DIAGRAM OF INVENTORY SYSTEM (continue)

3.2 Explanation of the Physical Model

The physical model of the area under study will be described as follows.

3.2.1 Order Processing System

From the dataflow diagram shown in figure 3.1.4, 3.1.5 and 3.1.6, the customers make orders of purchase to the firm, the firm receives orders from customers by telephone and letter. When the customers make orders by telephone, the clerk will prepare two copies of customers orders. These orders will be checked. If they include both medicine and crude drugs, the clerk will make a list of crude drug items for the workers to prepare these products. The copy of customer order will be sent to medicine division and the list of crude drugs will be sent to crude drugs division. Then workers will prepare products according to these orders. The other copy of customer order will be kept by the manager so that he can check whether some items which are not the firm's product line will be purchased. Then the manager has to order these items from another suppliers. This customer order will be used for setting price and making out receipts after the products have been prepared and checked.

When the workers of both medicine and crude drugs divisions have finished preparing the products as ordered, they bring these products out from the stores. The products of the same customer will be placed at the same locations for convenience of the checker to check their products. The customer orders will be used for checking brands, sizes and quantities. If all of them are correct, the workers pack these products and prepare for dispatching.

3.2.2 Purchasing System

From the dataflow diagram shown in figure 3.1.7, 3.1.8, 3.1.9 and 3.1.10, after checking stock of products in the stores and the warehouse, the workers list out the items that have small amount left. This list of products will be sent to the manager. The manager will order these items from the suppliers. This list will be kept in the temporary file so that it can be checked whether the products have been ordered and received. Some types of crude drugs cannot be purchased from the suppliers when needed. The firm cannot contact the suppliers because most of them are villagers in the country. These people come together with their goods and the firm buys these crude drugs from them without any prior order. Therefore, when some crude drugs are out of stock, the firm has to purchase from another firms or wait for weeks or months for these products.

The purchasing system of the firm can be classified into three types.

3.2.2.1 Purchase with credit term

After sending purchased orders to the suppliers, they dispatch their goods to the firm with 2 copies of invoices. The inspector checks these products with the invoices for products' types, brands, sizes, quantities and prices. If all details are correct, the inspectors who receives products will sign receiver's name on the invoice and return it to the supplier, the other copy of the invoice will be kept in the file for later payment. Then the products will be placed in the stores.

3.2.2.2 Purchase with cash payment

1.) Medicine Items

The suppliers dispatch their products to the firm with an invoice. The checker will check these products from the invoice for their types, brands, sizes, quantities and prices. If they are correct, the invoice will be sent to the accounting division to prepare for cash payment.

2.) Crude Drugs Items

The suppliers send the products to the firm without any invoice. When the workers receive products from these suppliers, they check the products in their quality, types and weights. The price will be bargained at that time. The workers will list all the products received and send this list to the accounting division for cash payment.

3.2.3 Accounting System

3.2.3.1 Method of Receivables

From the dataflow diagram shown in figure 3.1.11, 3.1.12 and 3.1.13, after the order processing division has prepared checked the products according to customer orders. The customer orders are sent to the accounting division to check whether any items in the customer orders have been cancelled. Then, two copies of receipts for these items will be prepared. The receipts will be checked with the customer orders again. From the receipts, there is another record of the amount of sales volumes which is separated in types of products lines. This record will show the amount of medicine and crude drugs sold in each day.

The receipt will be sent to the customers together with product and the firm receives cash for payment. Another copy of receipts will be kept in file. For some customers, the firm gives credit term for payment to them. The copy of receipts will be checked at the end of month

in order to receive payment from these customers. There will be a list of summary for each customer and this list will be sent to the customer to collect their payment.

When the customers make payments to the firm, these payment will be checked and the details of payment will be recorded. Then the firm sends them the copy of receipts.

3.2.3.2 Method of Payment

From the dataflow diagram shown in figure 3.1.14 and 3.1.15, the invoice received from the suppliers will be checked and paid in cheques for most suppliers. Some of the suppliers collect cash payment especially the villagers who supply crude drugs to the firm. After the payment is made, the details of payment which are the amount paid, details of cheques, suppliers' names and date of payment will be recorded.

3.2.4 Inventory System

From the dataflow diagram shown in figure 4.1.16, 3.1.17 and 3.1.18, the products received from the suppliers will be placed in their stores classified by product line. Once the finished medicine have been dispatched to the firm, big cartons are disassembled and small packages will be stacked on the racks of the stores.

The crude drugs are stored in a different way. These products are packed in sacks, after receiving these products, they will be moved to the warehouse.

Medicines are taken out of the stores according to customers' orders. The crude drugs in the warehouse usually transported to the firm when the goods in the firm are out of stock, or when the customers make orders in large volume.

The inventory of crude drugs at the firm is prepared to customers by weights in sack packages. For small quantity, the products will be repacked by weights in paper bags.

The firm record the transactions of inventory only in the warehouse. When the firm receives products from suppliers or purchasing division, or dispatching them to the customers, the clerk will record the details of products received or dispatched. These details include products' types, names, quantities, prices, and date of transactions.



4 . NEW SYSTEM

4.1 Physical Model of the New System

The physical model of the new system is presented in dataflow diagrams shown in figure 4.1 and 4.2. And the main work functions are divided into 7 activities identified by the activities diagrams shown in figure 4.3. The activities of the new system are as follows.

1. Record Customer Directory
2. Record Supplier Directory
3. Record Product Information
4. Receive Product and Update Data
5. Deliver Product and Update Data
6. Edit/Delete Data
7. Print Reports and Display on Screen

4.1.1 Record Customer Directory

This activity is the initial step of the system and considered to be essential. As does how a customer mean to an entrepreneur, the user usually requires the customer records as prior information in setting up a database in any system. Show how everyone follows the 'Come First' rule ? In fact, output of periodic sales figure gives no meaning at all to management planner without tracing it back to its origin. Using computerized inventory system, customer information is recorded in computer file for a lot of usages. In this step, user of the system has to append customer information to computer file by using inventory program developed. From the main menu of the program, the user selects the choice of input data program to append customer information which includes the following details.

- Customer's code
- Customer's name

- Name of whom the firm can contact with
- Customer's address
- Tax ID.
- Telephone number
- Fax number
- Account type
- Customer's type
- Beginning amount on credit
- Credit amount of this period
- Current balance on credit
- Last sales date
- Last payment date
- Last sales amount
- Last payment amount

All these details are stored in the database file called "CUSTOMER.DBF". These data will be shown in the customer directory report and also used in many other related functions in the program such as inquiry of customer's code from the screen of computer.

4.1.2 Record Supplier Directory

Supplier information is another important component of the inventory control system. In the activity of recording supplier directory, user of the system has to input supplier information to the system in the same way as recording customer information. To use inventory program, the user selects the choice of input data from the main menu in order to append supplier information which includes the following details.

- Supplier's code
- Supplier's name
- Name of whom the firm can contact with
- Supplier's address
- Tax ID.

- Telephone number
- Fax number
- Account type
- Credit term
- Beginning amount on credit
- Credit amount of this period
- Current balance on credit
- Last purchase date
- Last payment date
- Last purchase amount
- Last payment amount

All these details are stored in the database file called "SUPPLIER.DBF". These data will be shown in the supplier directory report and also used in many other related functions in the program.

4.1.3 Record Product Information

May be, product information is most important in the system. If not, why must inventory control system exist for our business. And the firm judges the system's value on how effective it could handle product's problems.

The user of the system selects the choice of input data from the main menu of inventory program to append product information to the system. The details of these information are as following.

- Product's code
- Product's description
- Product's location (Store)
- Purchase/Sell item with or without maintaining quantities on hand
- Minimum quantities on hand
- Quantities to order each time
- Measure of product purchased

- Supplier's code
- Last purchase date
- Last purchase unit
- Product's lot number
- Standard cost
- Average cost
- Last purchase price
- Last sales date
- Last sales unit
- Alternative supplier's code
- Beginning unit on hand
- Unit of product on hand

These details of information are stored in the database file called "PRODUCT.DBF".

Due to the nature of business and the products themselves, the products can be sold to customers by many units of measurement. For example, the products can be weighted by kilogram, or chang (Thai unit: 1 chang equals 0.6 kilogram). The price of products in chang may not be exactly 0.6 multiple of that in kilogram because of decimal numbers occur after unit conversion which gives unpractical selling prices. Therefore, the prices have to be set, not directly from calculation, separately each item for kilogram and chang-basis prices. Some products can have more than one or two types of measurement. The inventory program stores prices and measures of products in another file for ease of use. The database file called "PPRICE.DBF" serves this requirement. Data in PRODUCT.DBF and PPRICE.DBF are used in many reports which are Product Listing, Medicine Listing, Crude Drugs Listing, Product Price Listing, Medicine Price Listing, Crude Drugs Price Listing and also used in the function of Product Information Inquiry from Screen.

4.1.4 Receive Product and Update Data

Once the firm purchases goods from a supplier, the user inputs details of the products received by referring to its invoice or goods delivery slip. Using the inventory program, the user selects the choice of daily transaction program from the main menu and inputs these following details.

- Reference number (invoice number or goods delivery slip number)
- Purchase date
- Supplier's code
- Product's code
- Unit purchased
- Measure of product purchased
- Purchased price

All these details are stored in the database file called "INTRAN.DBF". Every time of inputting these data, the inventory program will automatically update the data in PRODUCT.DBF.

At the end of each month, the user has to update these database file by selecting monthly update program from the menu. The program will transfer data in INTRAN.DBF to a new database file called "AINTRAN.DBF" which is a database file keeping accumulated transaction of products received in each day.

4.1.5 Deliver Product and Update Data

'Deliver product' does not only tell the quantity of goods retrieved from the inventory balance. It makes a sheerful complement to a business for the figure of 'Deliver product' directly reflects the firm's earning.

The transactions of selling or delivery of products have to be recorded using the same method as receiving

products. The user inputs details of products by referring to invoices or goods delivery slips issued by Purchasing Division. Using the inventory program, user selects the choice of daily transaction program from the main menu and input these following details of transactions.

- Reference number (invoice number or goods delivery slip number)
- Sold date
- Customer's code
- Product's code
- Unit sold
- Measure of product sold
- Selling price
- Cost of product purchased

All these details are stored in database file called "OUTTRAN.DBF". The inventory program will also automatically update data in PRODUCT.DBF the way as the function of receiving products does. For monthly update, the data in OUTTRAN.DBF will be transferred to a new database file called "AOUTTRAN.DBF" which is a database file for accumulated transactions of product delivered.

4.1.6 Edit/Delete Data

Because wrong data makes wrong and misled information, the user has to correct those incorrect data input to the system. The inventory program provides function of edit and delete to helps the user edits those data easily. The correction of customer, supplier or product information can be easily edited by using the same mode as appending these information. In case of editing data in the records of daily transactions, after the data has been transferred to the file of accumulated transactions, if there is any changes, the data must be first restored to daily transaction file. When the process of editing data has

been finished, the user has to reupdate the database file as mentioned in the update function.

4.1.7 Print Reports and Display on Screen

Reports are essential documents required in the inventory system management. The inventory program of this system creates many reports such as following.

- Customer Directory Reports
- Supplier Directory Reports
- Product Listing
- Medicine Listing
- Crude Drugs Listing
- Product Price Listing
- Medicine Price Listing
- Crude Drugs Price Listing

For the program of displaying information on screen, user can inquire information by selecting data inquiry program from the main menu of inventory program. Data inquiry displays product information and is used for searching customer code.

DATA FLOW DIAGRAM OF INVENTORY SYSTEM (NEW SYSTEM)

Receive Products

After receiving products

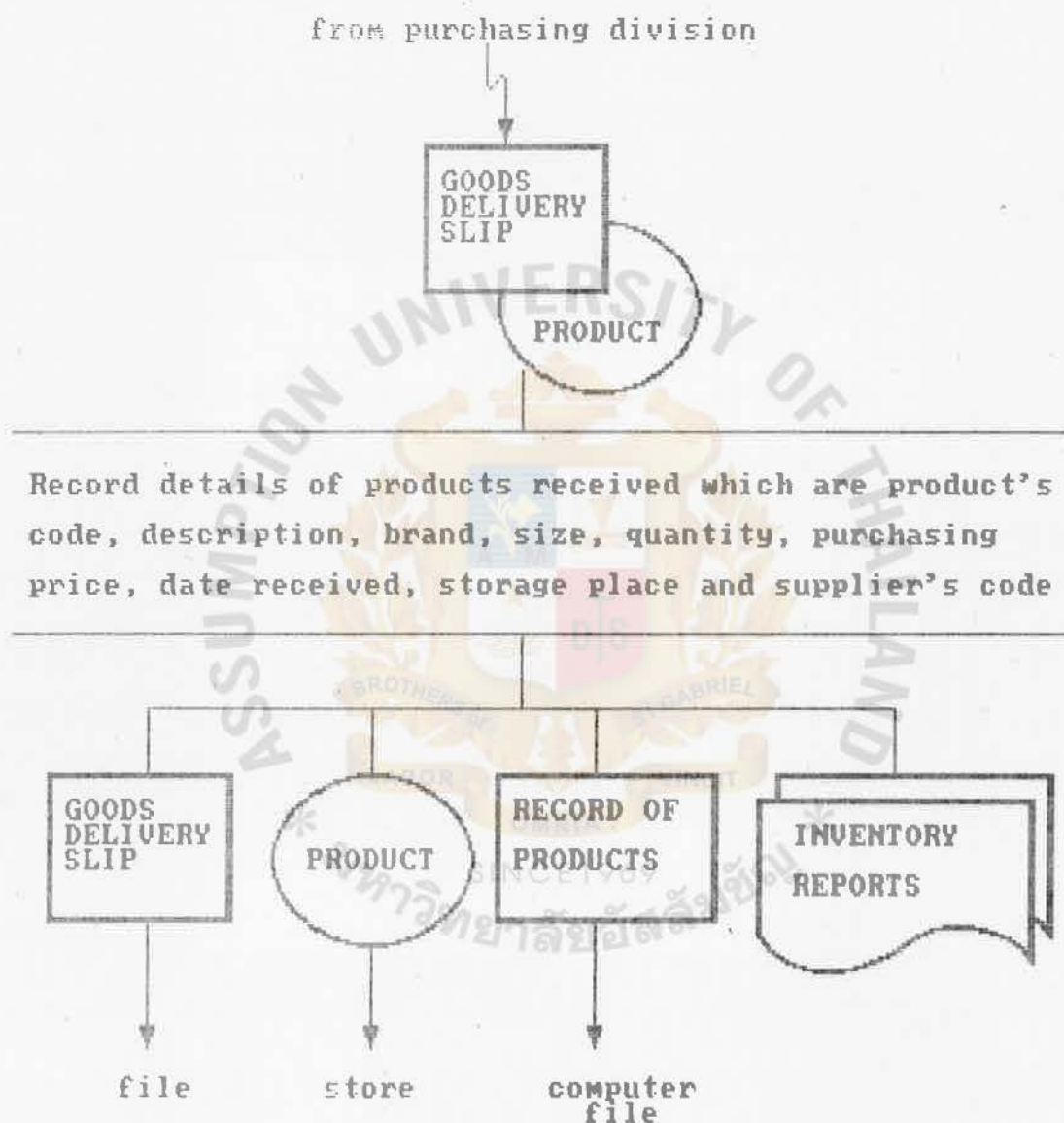


Figure 4.1 DATA FLOW DIAGRAM OF INVENTORY SYSTEM (NEW SYSTEM)

DATA FLOW DIAGRAM OF INVENTORY SYSTEM (NEW SYSTEM) (Continue)

Deliver Products

After receiving customer order, the worker prepares products out of stores.

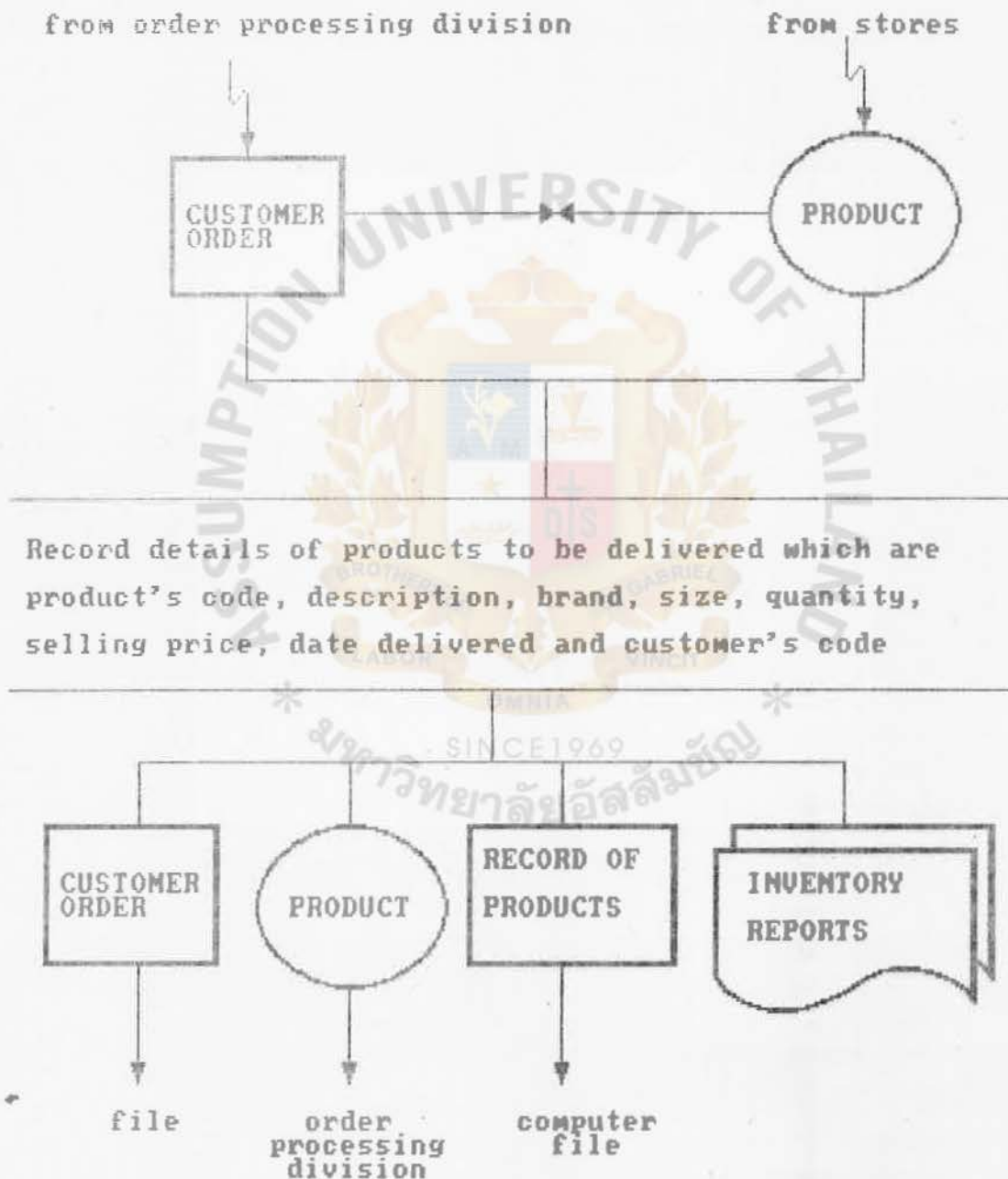


Figure 4.2 DATA FLOW DIAGRAM OF INVENTORY SYSTEM (NEW SYSTEM) (Continue)

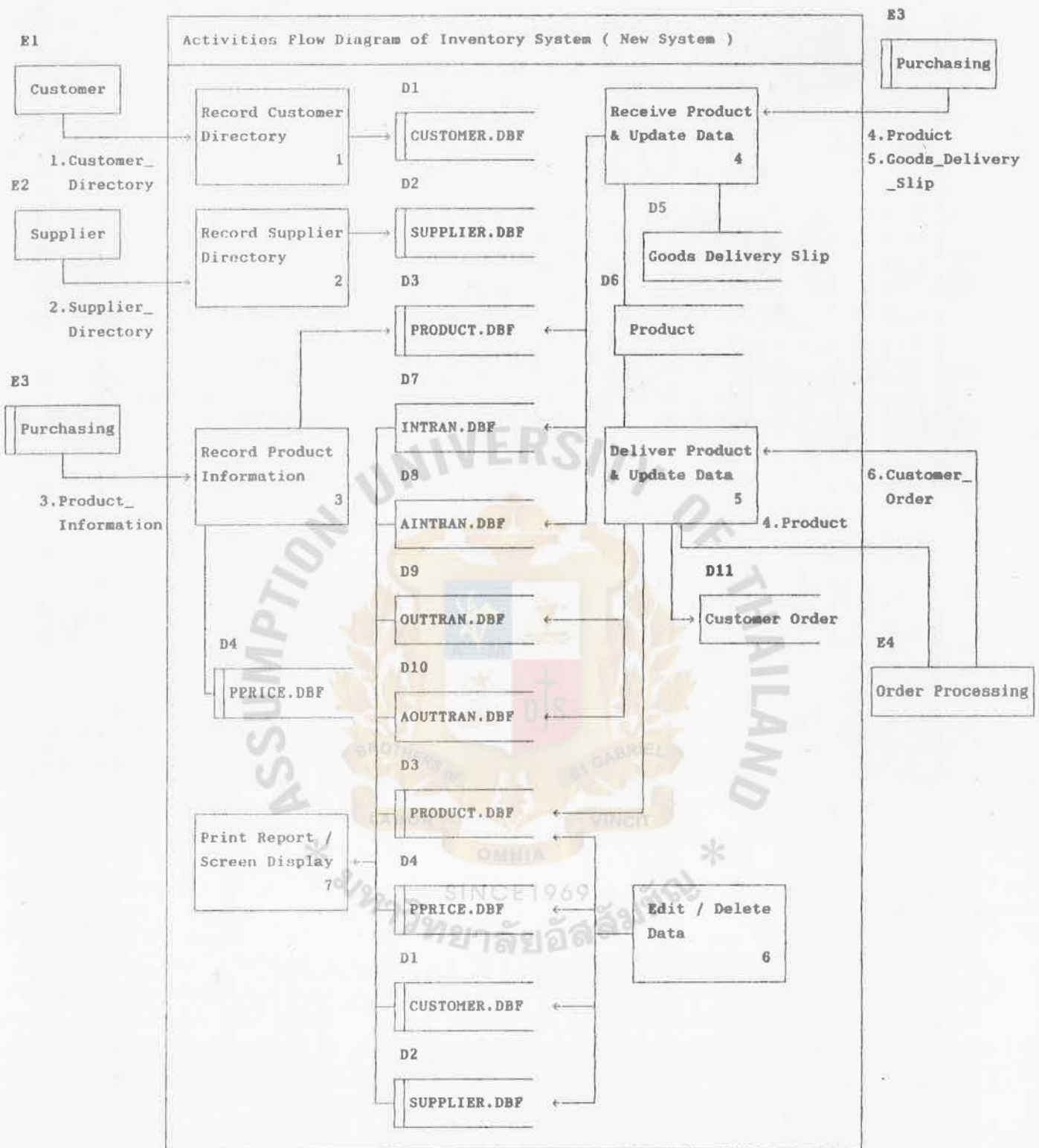


Figure 4.3 Activities Flow Diagram of Inventory System (New System)

4.2 Computer Programs for Inventory Control of The New System

The programs written for this computerized inventory system are developed by using Clipper language as mentioned in Clipper Summer'88. The data file structures are defined by using the techniques of data model in the database book of Mary E.S Loomis. The programs are developed by using the techniques of Inventory Control and Analysis of Science, Engineering & Education. They are developed to ease the work functions of the company as shown in the inventory system main menu in figure 4.4.



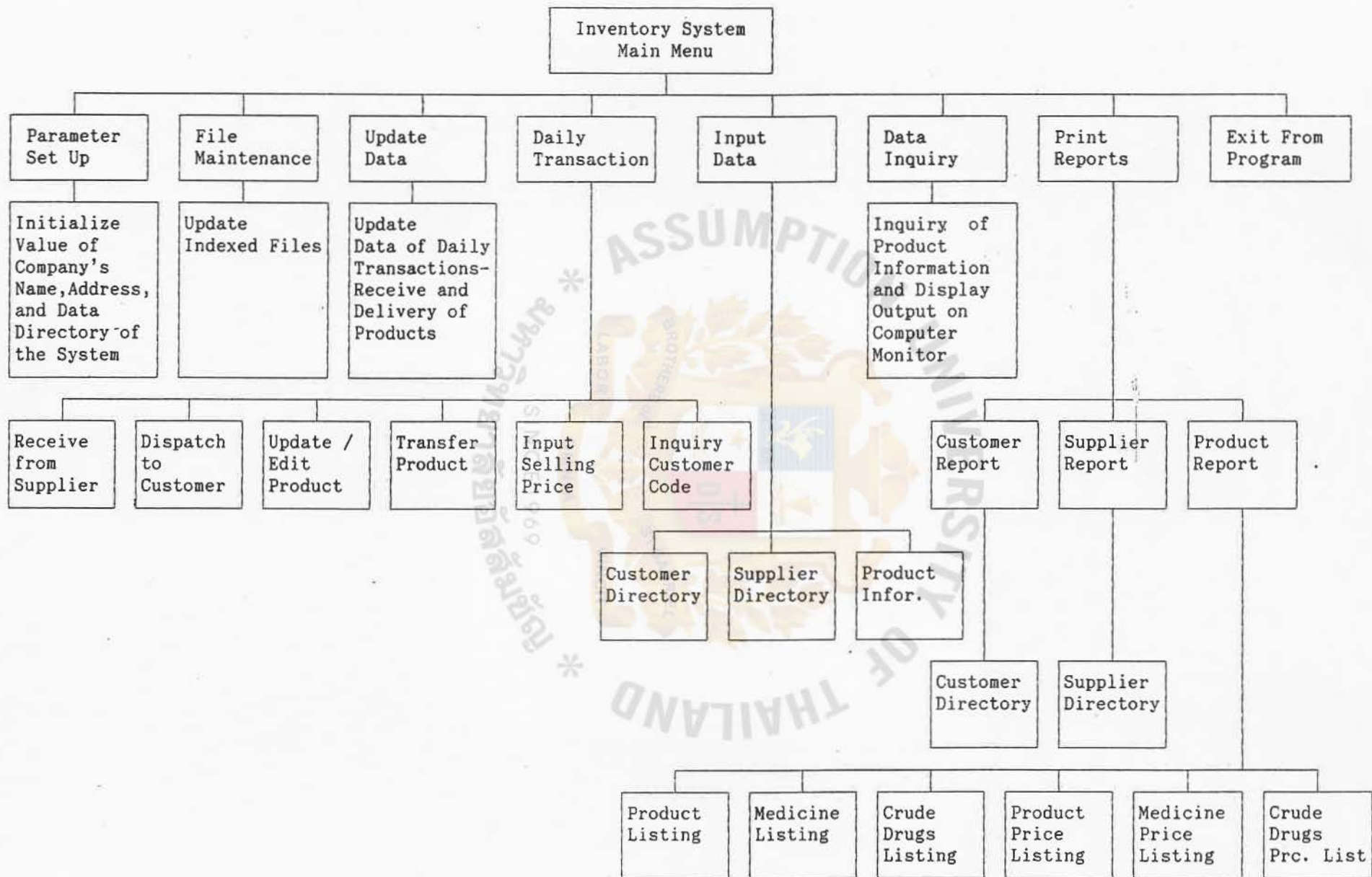


Figure 4.4 : Functional Diagram of Inventory System Program.

4.2.1 Program for Setting Up Parameters

Of these parameters to be concerned initially as the program implemented, company name, address and data directory (log drive) are to be set up and remained fixed throughout this program's usage. However, if the user would like to, these parameters can be newly set up to do any corrections or changes countlessly to suit the user/users' work. For example, in case that some other company of the same line wishes to use this software in their work, they can use it with ease and have no need to change any part of the program. Such as report headings or any titles shown on the screen. They just set up new company name and address in the parameters, the software is then ready for use.

4.2.2 Program for Maintenance of Database Files

This is to rebuild an indexed file in case there are some data in the file not properly put into order. To reindex, the user selects File Maintenance mode from the Main Menu. Then a message on the screen 'Would you like to reindex file?' is shown. The user is expected to choose any file/files in database to be indexed.

4.2.3 Program for Updating Data

Generally, users in all levels need some periodic reports for their appraisal. This mode gives the users convenience when they would like to know the company's transactions within any periodic length of time. The manager will be able to have a half year or second-quarter figure of sales volume on hand at just the day-end of that period. The clerk or bookkeeper will get a monthly or daily figure in report form on his/her finger tip within seconds. This helps to out offtime and process that have ever been much boring and clumsy.

The program of updating data provides for transferring data of daily transactions to be kept in another accumulated daily transactions file. The data in this accumulated daily transactions file will be used in producing monthly or quarterly reports as the user needs.

4.2.4 Program for Operating Daily Transactions

Daily transactions, which consist of chains of sales and buy figures all-day long, effect the last balance all the time. This mode enables the users to add up inventory when getting 'buy' figures and pull it back when getting 'sales' ones, for example. Business data, after each transaction or each day's transactions, have to be kept up-to-date always. The actual figures of that day could be obtained once the transactions journal is close.

4.2.5 Program for Inputting Data

The user chooses this mode to input new data or edit existing data in 3 directories : customers, suppliers and products' details.

4.2.5.1 Append/Edit customer directory. The screen shows following fields for data input.

- Customer's code
- Name
- Person to contact with
- Address
- Phone
- Fax
- Tax ID
- Account Type
- Customer Type
- Beginning amount on credit

- This period amount on credit
- Current balance on credit
- Last sales date
- Last payment date
- Last sales amount
- Last payment amount

4.2.5.2 Append/Edit supplier directory. The screen shows following fields for data input.

- Supplier's code
- Name
- Person to contact with
- Address
- Phone
- Fax
- Tax ID
- Account Type
- Credit term
- Beginning amount on credit
- This period amount on credit
- Current balance on credit
- Last purchase date
- Last payment date
- Last purchase amount
- Last payment amount

4.2.5.3 Append/Edit product information. The screen shows following fields for data input.

- Product's code
- Description
- Location or store
- Purchase / sell item with or without maintaining quantities on hand
- Minimum quantities on hand
- quantities to order each time

- Measure of product purchased
- Supplier's code
- Last purchase unit
- Product's lot number
- Standard cost
- Average cost
- Last purchase price
- Last sales date
- Last sales unit
- Alternative supplier's code
- Beginning unit of products on hand
- Unit of products on hand

4.2.6 Program for Inquiry of Data

Once the user switches to this mode, he is able to view any record in Customer, Supplier and Product directory. If the user chooses 'Customer', he requires to call the customer's code in order to access to its details. The user may directly key the customer's name or its first letter of alphabet and allows the screen to turn page by page, in case there are several names starting with that letter. (See Input Data for data details). He will do the same way to get into Supplier and Product Information Category, by keying their code, name or first letter of alphabet.

4.2.7 Program for Printing Reports

This mode generates many reports on the screen or through printer. Of the user's choice, he has wide range of reports to choose from. Daily, there is a report on business transactions. Monthly, he has other reports showing sales volume in total, of any customers, of specified areas. He may have reports showing top 10 customers or product items of highest turnover in yearly or monthly basis. Customer, supplier, product and price

lists are also possible by using this mode.

4.3 Some features of the program

1. Multiuser system

- The program is usable in LAN eg. many users work altogether.

2. High flexibility

- Any other organizations of the same feature can use this program without modification. Their users can use it at once by setting up new parameters (Company's name, address and log drive). (See Parameter Set-up for details).

3. Easy-to-use Menu

- Menu is designed to be used with ease for all-level users. It is modifiable at the user's desire.

4. Compatible to use

- It is compatible to use with both VGA and monochrome monitor.

5. Thai character mode provided

- It is usable in both Thai and English mode. This allows the user to switch from one to another mode in case he wants to draw a line or frame drawing. This is because the codes in these 2 modes are different.

6. Security facility

- There is password to prevent non-users, and damages to important data whether it is intentionally or not.

7. Expansibility

- file structure is written in the way that the system can be expanded to the work's need. The program is also usable in other departments which still employ manual system.

[26/11/91] © Inquiry Customer Code © [18:31:54]			
Cus_name	อ		
Code	Customer Name	Tel.	Ac.
911019	อ.ศิริวัฒนเกษย์()	294-3088	
911029	อมรสุาตร์ (ตราพงษ์)()	424-0090	
911034	ชัยมิ่งไอสถ()	438-4911	
911012	ชัยอันไอสถ()	454-1891-2	
-End..-			

Figure 4.5 : Example of Screen Display of Customer Code Inquiry.

[26/11/91]	* Inquiry Customer Code *			[18:06:05]
Cus. name	01			
Code	Customer	Name	Tel.	Ac.
911037	บริษัทสมรรถ (คอม.คอม.)()		566-1843	
911018	บริษัทสมรรถ (คอม.คอม.)()		510-9616	
+End..+				

Figure 4.6 : Example of Screen Display of Customer Code Inquiry.

Date : 13/07/91
Time : 17:46:21
Sorted by : Customer Code

THAI HUA CHAN DISPENSARY
236 Chakrawad Rd., BKK 10100
CUSTOMER DIRECTORY REPORT

Page: 1

No.	Cus_code	Customer Name	Address	Phone	Fax	Type
1.	911001	โศกนาถ		467-3726		
2.	911002	คิงเพ็กกี้	26 ซอยนวลทอง 2 ถนนพหลโยธิน กรุงเทพฯ	314-0172		
3.	911003	ชาวละออเกสิทธิ์ หจก.	146/12 สามแยกถนนพหลโยธิน กรุงเทพฯ	425-8332		
4.	911004	กิจเจริญเภสัช	1332/17 ศูนย์การค้าดาวคะนอง กรุงเทพฯ	468-4751		
5.	911005	เภสัชกรศิริวิทย์	2018 ถนนสุขุมวิท กรุงเทพฯ	311-0389	311-5652	
6.	911006	ชัยภูมิเภสัช		311-1396		
7.	911007	โคมพิณเภสัช (บางซื่อ)		433-4354		
8.	911008	ภูมิวิทย์				
9.	911009	วิทย์พงษ์ ก.29	วัดพระเชตุพน กรุงเทพฯ	225-2257		
10.	911010	ศิริวิทย์เภสัช (สะพานควาย)	1511/1 ถนนพหลโยธิน กรุงเทพฯ	279-9787		
11.	911011	หมอสี				
12.	911012	ชัยภูมิเภสัช	152/12 ม.1 ซ.76/1 เพชรเกษม กรุงเทพฯ	454-1891-2		
13.	911013	เภสัชกรพัฒนา				
14.	911014	เกรทเตอร์เภสัช จก.	489/2 ซ.บางซื่อ จิตติสันติวงศ์ กรุงเทพฯ	433-0061-6		
15.	911015	เภสัชกรวิมล	712-6 ถนนพหลโยธิน กรุงเทพฯ	262-1408		
16.	911016	วิมลเภสัช	421 ถนนพหลโยธิน กรุงเทพฯ	391-4709		
17.	911017	ดร.วิมล	40-2 ถนนพหลโยธิน กรุงเทพฯ	222-2369		
18.	911018	วิมลเภสัช	48/12-5 ถนนพหลโยธิน กรุงเทพฯ	510-9616		
19.	911019	อ.วิมลเภสัช	671/15-6 ถนนพหลโยธิน กรุงเทพฯ	294-3088		
20.	911020	วิมลเภสัช	19/1 ถนนพหลโยธิน กรุงเทพฯ	314-5121-2		
21.	911021	ศิริวิทย์ (วิภาฯ)	296 ซ.22 ถนนพหลโยธิน กรุงเทพฯ	427-1342	427-4875	
22.	911022	วิมลเภสัช	539 ถนนพหลโยธิน กรุงเทพฯ	465-4530		
23.	911023	วิมลเภสัช	4 ถนนพหลโยธิน กรุงเทพฯ	282-3405		
24.	911024	วิมลเภสัช	50-8 ถนนพหลโยธิน กรุงเทพฯ	222-5536		
25.	911025	วิมลเภสัช	69/20 จิตติสันติวงศ์ กรุงเทพฯ	412-2229		
26.	911026	วิมลเภสัช		460-0912		
27.	911027	วิมลเภสัช	14-20 ถนนพหลโยธิน กรุงเทพฯ	281-6664		
28.	911028	วิมลเภสัช	99/2 ซ.วิมล ถนนพหลโยธิน กรุงเทพฯ	211-2935	211-2407	
29.	911029	วิมลเภสัช (ศิริวิทย์)	108/32 ซ.8 บางกอกน้อย คลังหิน กรุงเทพฯ	424-0090		
30.	911030	วิมลเภสัช	306-3 ถนนพหลโยธิน กรุงเทพฯ	221-2380		
31.	911031	วิมลเภสัช	310 ถนนพหลโยธิน กรุงเทพฯ	221-1486		
32.	911032	วิมลเภสัช	25-7 ถนนพหลโยธิน กรุงเทพฯ	281-4276		
33.	911033	วิมลเภสัช (วิมล)	298/300 ถนนพหลโยธิน กรุงเทพฯ	517-1246		
34.	911034	วิมลเภสัช	676/46 ซ.ศิริวิทย์ 3 ถนนพหลโยธิน กรุงเทพฯ	438-4911		
35.	911035	ศิริวิทย์ (พรวน)	280/56-7 ถนนพหลโยธิน กรุงเทพฯ	412-2062	418-0560	
36.	911036	วิมลเภสัช	1332 ถนนพหลโยธิน กรุงเทพฯ	468-4841		
37.	911037	วิมลเภสัช (คอมเมียง)	219 ถนนพหลโยธิน กรุงเทพฯ	566-1843		
38.	911038	วิมลเภสัช	วัดพระเชตุพน กรุงเทพฯ	225-5135		
39.	911039	วิมลเภสัช	15/5 บางกอกน้อย คลังหิน กรุงเทพฯ	435-0564		
40.	911040	วิมลเภสัช (สามเสน)	582/1 ถนนพหลโยธิน กรุงเทพฯ	245-4201		
41.	911041	วิมลเภสัช	854/8 ตลาดพลู ริมทางรถไฟ กรุงเทพฯ	465-3086		
42.	911042	วิมลเภสัช	23 ถนนพหลโยธิน 3 ถนนสุขุมวิท 71 กรุงเทพฯ	392-4338	392-2045	
43.	911043	วิมลเภสัช	11-3 ถนนพหลโยธิน กรุงเทพฯ	223-2536		
44.	911044	วิมลเภสัช				
45.	911045	วิมลเภสัช	ซ.พหลโยธิน กรุงเทพฯ	215-7954		

Continue..

Figure 4.7 Example of Customer Directory Report Sorted by Code.

Date : 13/09/91
Time : 17:48:44
Sorted by :Customer Name

THAI HUA CHAN DISPENSARY
236 Chakrawad Rd., BKK 10100
CUSTOMER DIRECTORY REPORT

Page: 1

No.	Cus_code	Customer Name	Address	Phone	Fax	Type
1.	911004	ศิริเจริญเภสัช	1332/17 ศูนย์การค้าวชิราวงค์ กรุงเทพฯ	468-4751		
2.	911003	ชาวละออเภสัช หจก.	146/12 สามแยกป้อมพระจุลฑา กรุงเทพฯ	425-8332		
3.	911006	ชัยภูมิเภสัช		311-1396		
4.	911026	ชอยเภสัช		460-0912		
5.	911017	ตราแม่เลื่อน	40-2 ถ.จักรพงษ์ กรุงเทพฯ	222-2369		
6.	911031	ตราวิทย์	310 ถ.มหาธาตุ กรุงเทพฯ	221-1486		
7.	911002	ศิริเจริญ	26 ซอยพหลมทอง 2 ซอยพหลมทอง กรุงเทพฯ	314-0172		
8.	911016	บุลลเภสัช	421 ถ.เอกชัย กรุงเทพฯ	391-4709		
9.	911025	บางเสื่อเภสัช	69/90 จรัลสนิทวงศ์ กรุงเทพฯ	412-2229		
10.	911022	บุรินทร์พาณิชย์	539 ถ.เทอดไทย กรุงเทพฯ	465-4530		
11.	911046	บ้านลับพล		579-0362	579-0282	
12.	911027	ผดุงชีพ	14-20 ถ.จักรพงษ์ กรุงเทพฯ	281-6664		
13.	911023	พระจันทร์เภสัช	4 ซอยพหลมทอง กรุงเทพฯ	282-3405		
14.	911042	พาศรินทร์	23 ซ.ปสุวธรณ์ 3 ถ.สุขุมวิท 71 กรุงเทพฯ	392-4338	392-2045	
15.	911008	ภูมิรัตน์				
16.	911040	รุ่งเรืองเภสัช (สามเสน)	582/1 ซ.จันทน์วิทย์ กรุงเทพฯ	245-4201		
17.	911021	ภาณุทอง (ศิริเจริญ)	286 ซ.23 ถ.สุขุมวิท กรุงเทพฯ	427-1342	427-4875	
18.	911049	วังทองเภสัช (นนทบุรี)		526-1107		
19.	911009	วิเศษเภสัช ก.29	วัดพระเชตุพน กรุงเทพฯ	225-2257		
20.	911038	วิเศษเภสัช ค.18	วัดพระเชตุพน กรุงเทพฯ	225-5135		
21.	911010	ศิริจันทร์พาณิชย์ (สะพานควาย)	151/11 ถ.พหลโยธิน กรุงเทพฯ	279-9787		
22.	911035	ศิริเจริญเภสัช (พาราม)	260/56-7 ถ.ปิ่นเกล้า กรุงเทพฯ	412-2062	418-0560	
23.	911037	สิ่งของเภสัช (ดอนเมือง)	219 ถ.ศรีนคร กรุงเทพฯ	566-1843		
24.	911018	สุขประเสริฐเภสัช	48/18-9 กม.8 รามอินทรา กรุงเทพฯ	510-9616		
25.	911011	หมอศรี				
26.	911051	หมอประเสริฐ		585-6884		
27.	911019	อ.ศิริจันทร์เภสัช	671/15-6 ซ.ปารามินทร์ สาทร กรุงเทพฯ	294-3088		
28.	911029	อมรรักษ์ (ศรีนคร)	108/32 ซ.8 ซอยพหลมทอง คลองเตย กรุงเทพฯ	424-0090		
29.	911034	อภัยเภสัช	876/45 ซ.ลาดพร้าว 3 ถ.เจริญนคร กรุงเทพฯ	438-4911		
30.	911012	อภัยเภสัช	152/12 ม.1 ซ.76/1 แขวงปทุมวัน กรุงเทพฯ	454-1891-2		
31.	911028	สุขภัณฑ์พาณิชย์	99/2 ซ.เย็นใจ ถ.จันทน์ กรุงเทพฯ	211-2935	211-2407	
32.	911033	อภัยเภสัช (นนทบุรี)	298/300 รามอินทรา กรุงเทพฯ	517-1246		
33.	911014	เกรทเทอร์พาณิชย์ หจก.	489/2 ซ.บางเขิน จรัลสนิทวงศ์ กรุงเทพฯ	433-0061-6		
34.	911044	เจริญการค้า				
35.	911045	เจ้าอาว	ซ.พญาบาท กรุงเทพฯ	215-7954		
36.	911015	เทวกรรมเภสัช	712-6 ถ.พหลโยธิน กรุงเทพฯ	282-1408		
37.	911032	เภสัชวิทย์	25-7 ถ.พหลโยธิน กรุงเทพฯ	281-4276		
38.	911020	เลื่องเภสัช	19/1 ซ.สมานมิตร รามคำแหง กรุงเทพฯ	314-5121-2		
39.	911013	เออนเภสัช				
40.	911005	แก้วสารพัดเภสัช	2018 ถ.สุขุมวิท กรุงเทพฯ	311-0389	311-5652	
41.	911030	แพทย์ภิรมย์	306-8 ถ.มหาธาตุ กรุงเทพฯ	221-2380		
42.	911024	สมสคณ	56-8 ถ.จักรพงษ์ กรุงเทพฯ	222-8536		
43.	911050	แสงจันทร์		579-0052	579-7670	
44.	911036	แสงรุ่งเรือง	1332 ถ.ลาดพร้าว กรุงเทพฯ	468-4841		
45.	911047	พหลมทองการแพทย์		514-1112		

Figure 4.8 Example of Customer Directory Report Sorted by Name.

Continue..

Date : 13/09/91
Time : 17:50:53
Sorted by :Supplier Code

THAI HUA CHAN DISPENSARY
236 Chakrawad Rd., BKK 10100
SUPPLIER DIRECTORY REPORT

Page: 1

No.	Sup_code	Supplier Name	Address	Phone	Fax	Type
1.	100001	แสงอุทุมพรพาณิชย์	24-6 ถ.ทรงสวัสดิ์ กรุงเทพฯ	222-3387	222-4525-6	
2.	100002	คันทนา:คำทอง	670 ถ.เจริญกรุง กรุงเทพฯ	222-7426		
3.	100003	ช.เจริญเภสัช	524-6 ถ.จักรพงษ์ กรุงเทพฯ	225-0052	225-3227	
4.	100004	ครามกัญ - แม่เลื่อน	379 ซอยเลื่อนพุทธ กรุงเทพฯ	465-2557		
5.	100005	เลี่ยมมังกร	19/1 ซอยสนามจันทร์ ถ.รามคำแหง กรุงเทพฯ	314-5121-2		
6.	100006	วิชัยทองโอสถ	289 ถ.จรัลสนิทวงศ์ กรุงเทพฯ	411-1390-1		
7.	100007	บุลลฉ่องโอสถ	421 ถ.เอกราช กรุงเทพฯ	391-4709		
8.	100008	เพชรกรรมาโอสถ	712-6 ถ.กรุงเกษม กรุงเทพฯ	282-1408		
9.	100009	ทองอินทร์	206 ถ.เทศบาล 2 กรุงเทพฯ	465-3100		
10.	100010	บี เอ็ม ชั่ว	915 ถ.สมเด็จพระเจ้าพระยา กรุงเทพฯ	437-3264	437-5655	
11.	100011	บุญมี (หมอม)	56/8-12 ซอยศศิเทพ ถ.พระราม 1 กรุงเทพฯ	214-4111-2	214-4446	
12.	100012	ปลุกเสกโอสถ	55/23 ถ.สุขุมวิท กรุงเทพฯ	311-0192		
13.	100013	ปิยะชัยพาณิชย์	145 ซ.แก้วฟ้า สีพระยา กรุงเทพฯ	236-3051		
14.	100014	พระจันทร์โอสถ	4 ถ.จักรพรรดิพงษ์ กรุงเทพฯ	282-3405		
15.	100015	เรณูภาควิทยาธิปไตย	22 ถ.สามพระยา กรุงเทพฯ	281-4733		
16.	100016	พี เอ็ม พี	648 ซอยพระศิวะ ท่าดินแดง กรุงเทพฯ	437-4241		
17.	100017	ทองสงแสง	220/21 ซีนหุยส์ ซ. 3 ถ.จันทร์ กรุงเทพฯ	286-7523		
18.	100018	เขาราชธนเภสัช	1055/4 ซอยเขาราช สุนทร 71 กรุงเทพฯ	392-0995-6		
19.	100019	ไพฑูริยา	750 ถ.ศาลา กรุงเทพฯ	466-6254	466-0647	
20.	100020	สีปิ่นขาว ถกเปิด	43/8-10 เพชรเกษม 41 กรุงเทพฯ	413-3457		
21.	100021	อุบลสวรรค์	10-12 บางกอกน้อย กรุงเทพฯ	222-0344		
22.	100022	วิเศษรัตน์	93-5 ถ.พระราม 4 กรุงเทพฯ	221-0630	221-4449	
23.	100023	ดำรงยา (พระศรีนคร)	262 ถ.สุขสวัสดิ์ กรุงเทพฯ	427-0020		428-0655
24.	100024	ฟ้าเจริญโอสถ	238 ซอยฟ้าเจริญ ถ.จันทรา กรุงเทพฯ	466-4040-3		
25.	100025	วิเศษยา (วิเศษยา)	80/3-4 ซอยวิเศษ ถนนสุขุมวิท กรุงเทพฯ	415-1401		416-7475
26.	100026	อารยะโอสถ ธรรม	247/11 ถ.เจริญนคร กรุงเทพฯ	437-6112	437-2875	
27.	100027	เออาร์	1018/2 ถ.ศาลา 2 กรุงเทพฯ	468-4950		
28.	100028	โอสถอินทร์	30 ซ.สุขุมวิท 5 กรุงเทพฯ	318-1591	318-1597	
29.	100029	อภินันท์-เวชภัณฑ์	145-9 ถ.จรัลสนิท กรุงเทพฯ	222-5795		
30.	100030	แสงสว่างการค้า	160 ซอยวัดจันทร์ประดิษฐ์ กรุงเทพฯ	457-1020-1		
31.	100031	รวมทอง	688/30-1 ซ.เทพา จรัลสนิทวงศ์ กรุงเทพฯ	424-2587		
32.	100032	ตราจิตร	ถนนแก้ว ถ.จักรวรรดิ กรุงเทพฯ	222-0484		
33.	100033	ครามังกร	2/8 สุขุมวิท 20 กรุงเทพฯ	260-1469		
34.	100034	ตราเสือ 11 คิว	2/20 ซ.อารี 5 ถ.พหลโยธิน กรุงเทพฯ	279-4258-9		
35.	100035	อังกษครา	1-5 ซอยอโศก กรุงเทพฯ	234-0174	234-5540	
36.	100036	สามัคคีเภสัช (สีฟ้า)	2601 สุขุมวิท บางจาก กรุงเทพฯ	311-0150		331-5685
37.	100037	เคแอล		438-8759	438-5760	
38.	100038	วิภาวิชัย	70/66 ซ.จรัลสนิท กรุงเทพฯ	253-7868		
39.	100039	วิชัยวิชัย	413/1 ถ.สีสุภาพ กรุงเทพฯ	465-1456		
40.	100040	ตราสิงห์ทอง	1099 ม.12 บางนา-ตรา กรุงเทพฯ	393-9311-3	398-2111	

End

Figure 4.9 Example of Supplier Directory Report Sorted by Code.

Date : 13/09/91
Time : 17:52:41
Sorted by :Supplier Name

THAI HUA CHAN DISPENSARY
236 Chakrawad Rd., BKK 10100
SUPPLIER DIRECTORY REPORT

Page: 1

No.	Sup_code	Supplier Name	Address	Phone	Fax	Type
1.	100002	คันทันค้าทอง	670 ก.เจริญกรุง กรุงเทพฯ	222-7426		
2.	100031	จอมทอง	699/30-1 ซ.เทพาทร จรัลสนิทวงศ์ กรุงเทพฯ	424-2587		
3.	100003	ซ.เจริญเภสัช	524-6 ก.จักรพงษ์ กรุงเทพฯ	225-0052	225-3227	
4.	100004	ครามทอง - แม่เลื่อน	379 ซอยเลื่อนอนุสรณ์ กรุงเทพฯ	465-2557		
5.	100033	ครามังกร	2/8 สุขุมวิท 20 กรุงเทพฯ	260-1469		
6.	100040	ครามสิงห์ทอง	1099 ม.12 บางนา-ตราด กรุงเทพฯ	393-9311-3	393-2111	
7.	100032	ครามจิตคาร	สภามหา ก.จักรวรรดิ กรุงเทพฯ	222-0484		
8.	100034	ครามสี 11 หัว	2/20 ซ.อารี 5 ก.พลายโพน กรุงเทพฯ	279-4258-9		
9.	100006	กาวทองไอศกร	289 ก.จรัลสนิทวงศ์ กรุงเทพฯ	411-1390-1		
10.	100007	บุรฉลองไอศกร	421 ก.เอกมัย กรุงเทพฯ	391-4709		
11.	100010	บี เอ็ม ซี	915 ก.สมเด็จพระเจ้าพระยา กรุงเทพฯ	437-3264	437-5655	
12.	100011	บุญมี (หม่อม)	56/8-12 ซอยศักดิ์งาม ก.พระราม 1 กรุงเทพฯ	214-4111-2	214-4446	
13.	100012	บุญเกิดไอศกร	55/23 ก.สุขุมวิท กรุงเทพฯ	311-0192		
14.	100039	บุญจันทร์ไอศกร	413/1 ก.อิสรภาพ กรุงเทพฯ	465-1456		
15.	100014	พระจันทร์ไอศกร	4 ก.จักรพรรดิพงษ์ กรุงเทพฯ	282-3405		
16.	100016	พี เอ็ม พี	648 ซอยพระศิวะ ทำดินแดง กรุงเทพฯ	437-4241		
17.	100017	ยอดทองเภสัช	220/21 เขินหลุยส์ ซ.3 ก.จันทร์ กรุงเทพฯ	286-7523		
18.	100038	รักทองไอศกร	70/66 ซ.จตุรศรม กรุงเทพฯ	253-7868		
19.	100020	สีบ้านหัว คกบัต	43/8-10 เพชรเกษม 41 กรุงเทพฯ	413-3457		
20.	100021	สุกสว่างหม่อม	10-12 ปากคลองตลาด กรุงเทพฯ	222-0344		
21.	100022	วิเศษฉิม	93-5 ก.พระราม 4 กรุงเทพฯ	221-0630	221-4449	
22.	100036	สามัคคีเภสัช (ซีมา)	2601 สุขุมวิท บางจาก กรุงเทพฯ	311-0150		331-5685
23.	100023	สามยาไทย (ศรีศิริรักษ์)	262 ก.สุขสวัสดิ์ กรุงเทพฯ	427-0020		428-0655
24.	100025	สามยาไทย (เชียงใหม่)	20/2-4 ซอยวัดกอก 5 หมู่ 5-ปากท่อ กรุงเทพฯ	415-1401		416-7475
25.	100024	สามเจริญไอศกร	233 ซอยหัวจรเข้ ก.จตุราศ กรุงเทพฯ	466-4040-3		
26.	100035	อังกษกรราญ	1-5 ซอยหัวจรเข้ ก.จตุราศ กรุงเทพฯ	234-0174	234-5540	
27.	100026	อังกษกรราญ คราวมือ	247/11 ก.เจริญนคร กรุงเทพฯ	437-6112	437-2875	
28.	100027	อังกษกรราญ-เวียงหัวจรเข้	145-9 ก.จักรวรรดิ กรุงเทพฯ	222-5795		
29.	100037	เค.เอส.ที		438-8759	438-5760	
30.	100005	เพชรกรรไอศกร	712-6 ก.เจริญนคร กรุงเทพฯ	282-1408		
31.	100013	เพชรกรรไอศกร	22 ก.สมเด็จพระเจ้า กรุงเทพฯ	281-4733		
32.	100018	เพชรกรรไอศกร	1033/4 ซอยเขาวงกต สุขุมวิท 71 กรุงเทพฯ	392-0995-6		
33.	100005	เลี้ยวมังกร	19/1 ซอยสุขุมวิท ก.รามคำแหง กรุงเทพฯ	314-5121-2		
34.	100027	เอ.อาร์	10/8-12 ก.ศาลา 2 กรุงเทพฯ	468-4950		
35.	100030	แสงสว่างคราต่างดาว	180 ซอยวัดจันทร์ประดิษฐ์ กรุงเทพฯ	457-1020-1		
36.	100001	แสงสุกสว่างมา	24-6 ก.ทรงสวัสดิ์ กรุงเทพฯ	222-3387	222-4525-6	
37.	100013	วิชัยอินทรา	145 ซ.พญาไท สหราช กรุงเทพฯ	236-3051		
38.	100019	วิชัยทอง	750 ก.ศาลา 2 กรุงเทพฯ	466-6254	466-0647	
39.	100028	วิชัยทอง	30 ซ.สุขุมวิท 5 กรุงเทพฯ	318-1591	318-1597	
40.	100009	ทองอินทรา	206 ก.เทศบาล 2 กรุงเทพฯ	465-3100		

End

Figure 4.10 Example of Supplier Directory Report Sorted by Name.

Date : 14/09/91
 Time : 13:01:38
 Sorted by : Product Code

THAI NGA CHAN DISPENSARY
 236 Chaiwong Rd., BKK 10100
 PRODUCT LISTING

Page: 1

Product Code	Product Description	Supplier Code	Price	Measure	Minimum	Quantity on hand	Last Sale Date	Last Pur Date	Last Pur Unit	Average Cost
1800011	สิ่ง ยาหม่อง ส.	100040	26.00	ล	100	108.00	13/09/91	10/09/91	100.00	
1800022	สิ่ง ยาหม่อง ก.	100040	54.00	ล	100	118.00	13/09/91	08/09/91	100.00	
1800033	สิ่ง ยาหม่อง ล.	100040	30.00	ล	100	130.00	13/09/91	08/09/91	200.00	
1800044	สิ่ง ยาหม่อง จีว	100040	20.00	ล	200	380.00	12/09/91	12/09/91	400.00	
1800056	สิ่ง ยาหม่อง ซาก	100040	86.00	ล	50	91.00	13/09/91	08/09/91	50.00	
1800061	ถ้วยทอง ยาหม่อง ส.	100006	68.00	ล	50	79.00	12/09/91	06/09/91	50.00	
1800072	ถ้วยทอง ยาหม่อง ก.	100006	56.00	ล	100	96.00	11/09/91	10/09/91	100.00	
1800083	ถ้วยทอง ยาหม่อง ล.	100006	32.00	ล	100	110.00	11/09/91	10/09/91	100.00	
1800094	ถ้วยทอง ยาหม่อง จีว	100006	20.00	ล	200	450.00	08/09/91	12/09/91	400.00	
1800106	ถ้วยทอง ยาหม่อง ซาก	100006	88.00	ล	50	106.00	11/09/91	12/09/91	100.00	
1100111	น้ำใช้ คราญ	100035	50.00	ล	50	80.00	13/09/91	20/08/91	50.00	
1100121	น้ำใช้ คราญ	100035	60.00	ล	50	89.00	12/09/91	20/08/91	50.00	
1100131	น้ำใช้ คราญ	100035	60.00	ล	50	55.00	12/09/91	20/08/91	50.00	
1P00141	ผลิตภัณฑ์ ซาก	100011	162.00	ก	20	22.00	13/09/91	05/09/91	20.00	
1P00152	ผลิตภัณฑ์ ซอง	100011	74.00	ช	200	200.00	13/09/91	12/09/91	200.00	
260005A	ฟันผง		40.00	กก	100	165.00	12/09/91	14/08/91	200.00	28.00
260010A	อบเชยผง		120.00	กก	100	130.00	06/09/91	10/09/91	100.00	98.00
260011B	อบเชยผง		65.00	กก	100	125.00	07/09/91	20/08/91	158.00	38.00
2L0007A	มะนาว		10.00	ช	100	128.00	08/09/91	20/08/91	250.00	
2P0006A	ฟันผง									
2P0009A	ฟันผง		80.00	กก	100	225.00	11/09/91	05/09/91	260.00	
260001A	ฟันผง		30.00	ช	50	156.50	14/09/91	08/09/91	120.50	33.00

Continue..

Figure 4.11 Example of Product Listing Sorted by Code.

Date : 14/09/91
 Time : 13:03:09
 Sorted by : Product Description

THAI HUA CHAK DISPENSARY
 236 Chakrawad Rd., BKK 10100
 PRODUCT LISTING

Page: 1

Product Code	Product Description	Supplier Code	Price	Measure	Minimum	Quantity on hand	Last Sale Date	Last Pur Date	Last Pur Unit	Average Cost
2R0003A	ชาคัน									
2R0001A	ชาผง		30.00	ท	50	156.50	14/09/91	08/09/91	120.50	30.00
2B0005A	จีนผง		40.00	กก	100	165.00	12/09/91	14/05/91	200.00	28.00
2P0006A	จีนผงผง									
2R0004A	คอกกิกุล									
1B00072	ถ้วยทอง ขาหม่อง ก.	100006	56.00	ล	100	96.00	11/09/91	10/09/91	100.00	
1B00106	ถ้วยทอง ขาหม่อง รุค	100006	88.00	ล	50	106.00	11/09/91	12/09/91	100.00	
1B00094	ถ้วยทอง ขาหม่อง จิว	100006	20.00	ล	200	450.00	08/09/91	12/09/91	400.00	
1B00061	ถ้วยทอง ขาหม่อง พ.	100006	68.00	ล	50	79.00	12/09/91	06/09/91	50.00	
1B00083	ถ้วยทอง ขาหม่อง ล.	100006	32.00	ล	100	110.00	11/09/91	10/09/91	100.00	
1P00141	ผักกั๊กมอมี รุค	100011	162.00	ก	20	22.00	13/09/91	05/09/91	20.00	
1P00152	ผักกั๊กมอมี ร่อง	100011	74.00	ช	200	200.00	13/09/91	12/09/91	200.00	
2L0007A	มะนาว		10.00	ท	100	128.00	08/09/91	20/08/91	250.00	
2R0008A	ระย้อม ราก									
2P0009A	ระย้อมผง		80.00	กก	100	225.00	11/09/91	05/09/91	260.00	
1B00022	สิ่ง ขาหม่อง ก.	100040	54.00	ล	100	118.00	13/09/91	08/09/91	100.00	
1B00056	สิ่ง ขาหม่อง รุค	100040	86.00	ล	50	91.00	13/09/91	08/09/91	50.00	
1B00044	สิ่ง ขาหม่อง จิว	100040	20.00	ล	200	380.00	12/09/91	12/09/91	400.00	
1B00011	สิ่ง ขาหม่อง พ.	100040	66.00	ล	100	108.00	13/09/91	10/09/91	100.00	
1B00033	สิ่ง ขาหม่อง ล.	100040	30.00	ล	100	150.00	13/09/91	06/09/91	200.00	
2B0011B	อบเชยฐาน		65.00	กก	100	125.00	07/09/91	20/05/91	158.00	38.00
2B0010A	อบเชยนอก		120.00	กก	100	130.00	06/09/91	10/07/91	100.00	98.00
1L00131	แก้วหัด คราญ	100035	60.00	ล	50	55.00	12/09/91	20/06/91	50.00	
1L00111	แก้วหัด คราญ	100035	60.00	ล	50	80.00	13/09/91	20/08/91	50.00	

Continue...

Figure 4.12 Example of Product Listing Sorted by Description.

ABAC
GRADUATE SCHOOL LIBRARY

Date : 14/09/91 THAI HUA CHAN DISPENSARY
Time : 13:18.15 236 Chakrawad Rd., BKK 10100
Sorted by : Product Code **PRODUCT PRICE LISTING**

Page: 1

Product Code	Product Description	Date	Meas	Purchase Unit	Price Meas	Sell Price	T
1B00011	สิง ขาหม่อง ผ.	10/09/91	ล	100.00	64.00 ล	66.00	A
1B00022	สิง ขาหม่อง ก.	08/09/91	ล	100.00	52.00 ล	54.00	A
1B00033	สิง ขาหม่อง ล.	08/09/91	ล	200.00	28.00 ล	30.00	A
1B00044	สิง ขาหม่อง จีว	12/09/91	ล	400.00	18.00 ล	20.00	A
1B00056	สิง ขาหม่อง ขาค	08/09/91	ล	50.00	84.00 ล	86.00	A
1B00061	กัษทอง ขาหม่อง ผ.	06/09/91	ล	50.00	66.00 ล	68.00	A
1B00072	กัษทอง ขาหม่อง ก.	10/09/91	ล	100.00	54.00 ล	56.00	A
1B00083	กัษทอง ขาหม่อง ล.	10/09/91	ล	100.00	30.00 ล	32.00	A
1B00094	กัษทอง ขาหม่อง จีว	12/09/91	ล	400.00	18.00 ล	20.00	A
1B00106	กัษทอง ขาหม่อง ขาค	12/09/91	ล	100.00	86.00 ล	88.00	A
1L00111	แก๊ว ทราย	20/08/91	ล	50.00	55.00 ล	60.00	A
1L00121	แก๊ว ทราย	20/08/91	ล	50.00	55.00 ล	60.00	A
1L00131	แก๊ว ทราย	20/08/91	ล	50.00	55.00 ล	60.00	A
1P00141	โรตัมมอวี่ ขาค	05/09/91	ก	20.00	160.00 ก	162.00	A
1P00152	โรตัมมอวี่ ขอน	12/09/91	ช	200.00	74.00 ช	74.00	A
2B0005A	จันแดง	14/08/91	ก	200.00	25.00 ก	40.00	A
2B0010A	อบเชยดอก	10/09/91	ก	100.00	95.00 ก	120.00	A
2B0011B	อบเชยดอก	20/08/91	ก	158.00	40.00 ก	65.00	A
2L0007A	มะกอก	20/08/91	ก	250.00	5.00 ช	10.00	A
2P0006A	จันแดง	04/09/91	ก	180.00	40.00		
2P0009A	ระยอมน	05/09/91	ก	260.00	60.00 ก	80.00	A
2R0001A	ชาแห้ง	08/09/91	ก	120.50	30.00 ช	30.00	A
2R0002A	โพลสด	13/09/91	ก	100.00	20.00 ก	25.00	A
2R0003A	ชาดำ	01/09/91	ก	100.00	10.00		
2R0004A	ดอกคิวด	16/08/91	ก	156.80	85.00		
2R0008A	ระยอมน ราช	05/07/91	ก	208.00	47.00		

End of Report

Figure 4.13 Example of Product Price Listing Sorted by Code.

Date : 14/09/91 THAI HUA CHAN DISPENSARY
 Time : 13:19:39 236 Chakrawad Rd.. BKK 10100
 Sorted by :Product Description PRODUCT PRICE LISTING

Page: 1

Product Code	Product Description	Date	Meas	Purchase Unit	Price	Meas	Sell Price	T
2R0003A	ขี้ผึ้ง	01/09/91	กก	100.00	10.00			
2R0001A	ขี้ผึ้ง	08/09/91	กก	120.50	30.00	ช	30.00	A
2R0005A	ขี้ผึ้ง	14/08/91	กก	200.00	25.00	กก	40.00	A
2P0006A	ขี้ผึ้ง	04/09/91	กก	130.00	40.00			
2R0004A	ขี้ผึ้ง	16/08/91	กก	156.80	85.00			
1B00072	ขี้ผึ้ง ยี่ห้อ ก.	10/09/91	ล	100.00	54.00	ล	56.00	A
1B00106	ขี้ผึ้ง ยี่ห้อ ข.	12/09/91	ล	100.00	86.00	ล	88.00	A
1B00094	ขี้ผึ้ง ยี่ห้อ จ.	12/09/91	ล	400.00	18.00	ล	20.00	A
1B00061	ขี้ผึ้ง ยี่ห้อ ฉ.	06/09/91	ล	50.00	66.00	ล	68.00	A
1B00083	ขี้ผึ้ง ยี่ห้อ ค.	10/09/91	ล	100.00	30.00	ล	32.00	A
1P00141	ขี้ผึ้ง ยี่ห้อ ง.	05/09/91	ก	20.00	160.00	ก	162.00	A
1P00152	ขี้ผึ้ง ยี่ห้อ ด.	12/09/91	ช	200.00	74.00	ช	74.00	A
2L0007A	ขี้ผึ้ง	20/08/91	กก	250.00	5.00	ช	10.00	A
2R0008A	ขี้ผึ้ง	05/07/91	กก	208.00	47.00			
2P0009A	ขี้ผึ้ง	05/09/91	กก	260.00	60.00	กก	80.00	A
1B00022	ขี้ผึ้ง ยี่ห้อ ก.	08/09/91	ล	100.00	52.00	ล	54.00	A
1B00056	ขี้ผึ้ง ยี่ห้อ ข.	08/09/91	ล	50.00	84.00	ล	86.00	A
1B00044	ขี้ผึ้ง ยี่ห้อ จ.	12/09/91	ล	400.00	18.00	ล	20.00	A
1B00011	ขี้ผึ้ง ยี่ห้อ ฉ.	10/09/91	ล	100.00	64.00	ล	66.00	A
1B00033	ขี้ผึ้ง ยี่ห้อ ค.	08/09/91	ล	200.00	28.00	ล	30.00	A
2B0011B	ขี้ผึ้ง	20/08/91	กก	158.00	40.00	กก	65.00	A
2B0010A	ขี้ผึ้ง	10/09/91	กก	100.00	95.00	กก	120.00	A
1L00131	ขี้ผึ้ง	20/08/91	ล	50.00	55.00	ล	60.00	A
1L00111	ขี้ผึ้ง	20/08/91	ล	50.00	55.00	ล	60.00	A
1L00121	ขี้ผึ้ง	20/08/91	ล	50.00	55.00	ล	60.00	A
2R0002A	ขี้ผึ้ง	13/09/91	กก	100.00	20.00	กก	25.00	A

End of Report

Figure 4.14 Example of Product Price Listing Sorted by Description.

5. CONCLUSION & RECOMMENDATION

Because of the nature of business that performs as a wholesaler which has a lot of products. The prices of each product are different due to the nature of product itself and the unit of measurement of product sold. The large amount of product types and quantities, and also the large numbers of trading transactions occur each day, the processes of daily transactions seem to be busy and difficult with manually operations. The computerized system is then developed to support the work of this business. The computer will be used in the daily business operations which are the daily records of trading transactions. The records will be updated daily in the evening and this will also be used in the inventory control system.

The new system design of this computerized inventory system provides the ease of daily operations. The computer programs are developed for many usages. There are 7 main programs used to support the daily transactions of the system which are - 1. program for setting up parameters, 2. program for maintenance of database files, 3. program for updating data, 4. program for operating daily transactions, 5. program for inputting data, 6. program for inquiry of data and 7. program for printing reports.

To use computer, the products in the stock can be checked easier, the exact quantities can be known. Some products are not necessary to be stocked in too many quantities, therefore to know the existing status is important and this can also protect the problem of loss from theft. The new system also provides many advantages to the firm. The design of data structures and the program coding provides the flexibility of use and can be easily modified for future use of the expanding business. To enhance the business, all the existing system must be well

managed and formed, only manual system cannot be used to control the large number of transactions. Therefore the computerized system provided for this business is considered to be a high return investment.

Since the inventory control system is the most important part of the overall system, it is considered to be developed into computerized system before any other parts. When the inventory control system is computerized, it will be easy to continue to another work functions. The recommendation of this business is to developed another system to be computerized. This is the way to conduct the business to be expanded in the near future. The daily business transactions of the firm can be processed by using personal computer and the programs developed is designed for the future. The programs can also run on the PC LAN system. The initial step is to implement the new system by using one personal computer. Because it is the most practical method to developed the system due to the low cost of investment and the high volume of daily business transactions.

REFERENCES

1. Computer Micro System co.,Ltd. Inventory Control and Analysis. Bangkok:Science,Engineering & Education,1990.
2. DacEasy Inc. DacEasy Accounting. Dallas:DacEasy,Inc., 1989.
3. FitzGerald, Jerry, FitzGerald,Ardra. Fundamentals of System Analysis. New York:McGrawHill,1989.
4. Mary E.S.Loomis. The Database Book. New York: Macmillan Publishing Company,1987.
5. Nantucket Corp. Dipper Summer'88. California:USA Nantucket, 1987.



A. DATA DICTIONARY & DATA STORES

Data dictionary for data flow shown in Figure 4.3 are as follows.

Data flow	Description
1. Customer_directory	<p>a record of customer information which are customer's name, address, telephone, fax including:-</p> <ul style="list-style-type: none"> - account information such as account type and customer type - balance information such as beginning amount, this period amount and current balance - sales / payment information such as last sales date, last payment date, last sales amount and last payment amount.
2. Supplier_directory	<p>a record of supplier information which are supplier's name, address, telephone, fax including:-</p> <ul style="list-style-type: none"> - account information such as account type and credit term available - balance information such as beginning amount, this period amount and current balance - purchase / payment information such as last purchase date, last payment date, last purchase amount and last payment amount.

Data flow	Description
3. Product_information	a record of product information which involves product's description, storage, minimum amount required, measure of product purchased, supplier of product, lot number, last purchase date, last purchase price, sales information such as measure of product sold, sales price, last sales date, alternative supplier, beginning unit, last purchase unit last sales unit, and unit on hand.
4. Product	items in company's product lines which are medicine and crude drugs.
5. Goods_delivery_slip	when the company purchase products from suppliers, they dispatched products with goods_delivery slip which contains the details of supplier's name, product's description, unit purchased, price and net amount after checked and received products, the receiver signed on this slip and this will be a reference slip when this amount is sued to payment. Then, the the supplier prepared invoice in stead of this slip.

Data flow	Description
6. Customer_order	order of purchasing products from customers which includes product's description, unit purchased and customer's name.



Name of Data Store : D1 : CUSTOMER DIRECTORY	
Name of Data Structure	Name of Data Element
CUSTOMER	CCODE CNAME CONTACT ADDRESS CITY ZIP COUNTRY TAXID PHONE1 PHONE2 FAX CUSTYPE ACCTYPE BEGAMT TPERIOD CURBAL LSDATE LPDATE LSAMT LPAMT

Logical data dictionary for data store D1 shown in Figure 4.3.

Name of Data Store : D2 : SUPPLIER DIRECTORY	
Name of Data Structure	Name of Data Element
SUPPLIER	SCODE SNAME CONTACT ADDRESS CITY ZIP COUNTRY TAXID PHONE1 PHONE2 FAX ACCTYPE BEGAMT TPERIOD CURBAL PURDATE PAYDATE PURAMT PAYAMT

Logical data dictionary for data store D2 shown in Figure 4.3.

Name of Data Store : D3 : PRODUCT INFORMATION	
Name of Data Structure	Name of Data Element
PRODUCT	PCODE DESCRIPT BIN INVITEM MINIMUM ORDER PMEASURE {SCODE} LPDATE LPUNIT LOTNO STDCOST AVGCOST LPPRICE LSDATE LSUNIT ASCODE1 ASCODE2 BEGUNIT OHUNIT

Logical data dictionary for data store D3 shown in Figure 4.3.

Name of Data Store : D4 : PRICE TABLE	
Name of Data Structure	Name of Data Element
PPRICE	{PCODE} SMEASURE SPRICE TYPE

Logical data dictionary for data store D4 shown in Figure 4.3.

Name of Data Store : D5 : GOODS DELIVER SLIP	
Name of Data Structure	Name of Data Element
GDS	GDS_REFER DDATE {SNAME} {DESCRIPT} UNIT PPRICE PAMOUNT

Logical data dictionary for data store D5 shown in Figure 4.3.

Name of Data Store : D6 : PRODUCT	
Name of Data Structure	Name of Data Element
PROD	{DESCRIPT} {SPRICE} EXPIRE_DATE {LOT_NO}

Logical data dictionary for data store D6 shown in Figure 4.3.

Name of Data Store : D7 : PRODUCT RECEIVED TRANSACTION	
Name of Data Structure	Name of Data Element
INTRAN	REFER_NO B_DATE {SCODE} {PCODE} UNIT PMEASURE BPRICE TIME

Logical data dictionary for data store D7 shown in Figure 4.3.

Name of Data Store: D8 : ACCUMULATED RECEIVED TRANSACTION	
Name of Data Structure	Name of Data Element
AINTRAN	REFER_NO B_DATE {SCODE} {PCODE} UNIT PMEASURE BPRICE TIME

Logical data dictionary for data store D8 shown in Figure 4.3.

Name of Data Store : D9 : PRODUCT DELIVERY TRANSACTION	
Name of Data Structure	Name of Data Element
OUTTRAN	REFER_NO S_DATE {CCODE} {PCODE} UNIT SMEASURE SPRICE COST TIME

Logical data dictionary for data store D9 shown in Figure 4.3.

Name of Data Store: D10: ACCUMULATED DELIVERY TRANSACTION	
Name of Data Structure	Name of Data Element
AOUTTRAN	REFER_NO S_DATE {CCODE} {PCODE} UNIT SMEASURE SPRICE COST TIME

Logical data dictionary for data store D10 shown in Figure 4.3.

Name of Data Store : D11 : CUSTOMER ORDER	
Name of Data Structure	Name of Data Element
CO	{CNAME} DATE DESCRIPT UNIT PRICE

Logical data dictionary for data store D11 shown in Figure 4.3.

B. EXAMPLES OF THE FIRM'S
DOCUMENT AND FORMS



ห้างขายยาไทยฮั่วจั้น
 236 แขวงหน้าวัดจักรวรรดิ กรุงเทพฯ 10100
 โทร. 221-3480, 221-9573, 225-6373

เลขที่.....
 หน้า.....

ใบรับคั่งซื้อสินค้า

ชื่อลูกค้า.....

วันที่.....

ลำดับที่	รายการ	จำนวน	ราคา/หน่วย	รวม	หมายเหตุ
					

ผู้รับ

ผู้ส่ง

ผู้ตรวจสอบ

เลขที่ 5940

業藥棧華泰

面 對 門 飯 三 越 京 泰 住
號 六 三 二 牌 門

2213480  2219573

วันที่ ๘ / ๒๕๖๕

ทอญ

89

เลขที่ 5945

90

	1/2	๑๐๐	๕๐-๕๐	1๐๕๕
				3 A.S.
3-7-33	2 ๐.๕		5-	5-
24-8-33	5-		4.๐๐	10-
28-8-33		1 ๐.๕		9-
12-9-33	2-		5-	11-
9-10-33		๑-		๑-
12-10-33		1 ๒		8-
12-10-33		1-		๗-
18-10-33		1		6
๑6-10-33	1 ๐.๕		5-	๗-
31-10-33	1-		5	8-
2-11-33	13-		5	๑1-
๗-11-33	3-			๑4-
๑8-11-33	3-			๑๗-
๒3-11-33	11			๑9-
๒4-11-33	๒			๑1๐-
11-12-33	1			๑๒-
1-12-33	๒-			๑4-
1๑-12-33		2๐.๒		๑๒-
16-1-34		1 ๗		๑1-
๗-3-34		1		๕๐-

C. STANDARD FORMATS OF CODES

Design of Standard Formats of Codes

1. Standard of identification of product using product's code

Product's code (PCODE field) used in database is represented by 7 Alphanumeric in the following format :

X	X	X	X	X	X	X
---	---	---	---	---	---	---

1. Product size :

- 1 = No.1, Largest Size
- 2 = No.2, Large size
- 3 = No.3, Medium size
- 4 = No.4, Small size
- 5 = No.5, Smallest size
- 6 = Others

2. Product quality:

- A = grade A
- B = grade B
- C = grade C

1. & 2. Product serial number : 0001-9999

1. Product type :

- L = Liquid, oil, syrubb
- C = Capsule, tablet, pill
- P = Powder
- B = Balm, Cream
- O = Others

2. Product type :

- B = Branch, plant
- R = Roots
- L = Leaves
- F = Fruit
- T = Tablet, pill
- P = Powder
- O = Oil
- U = Other types

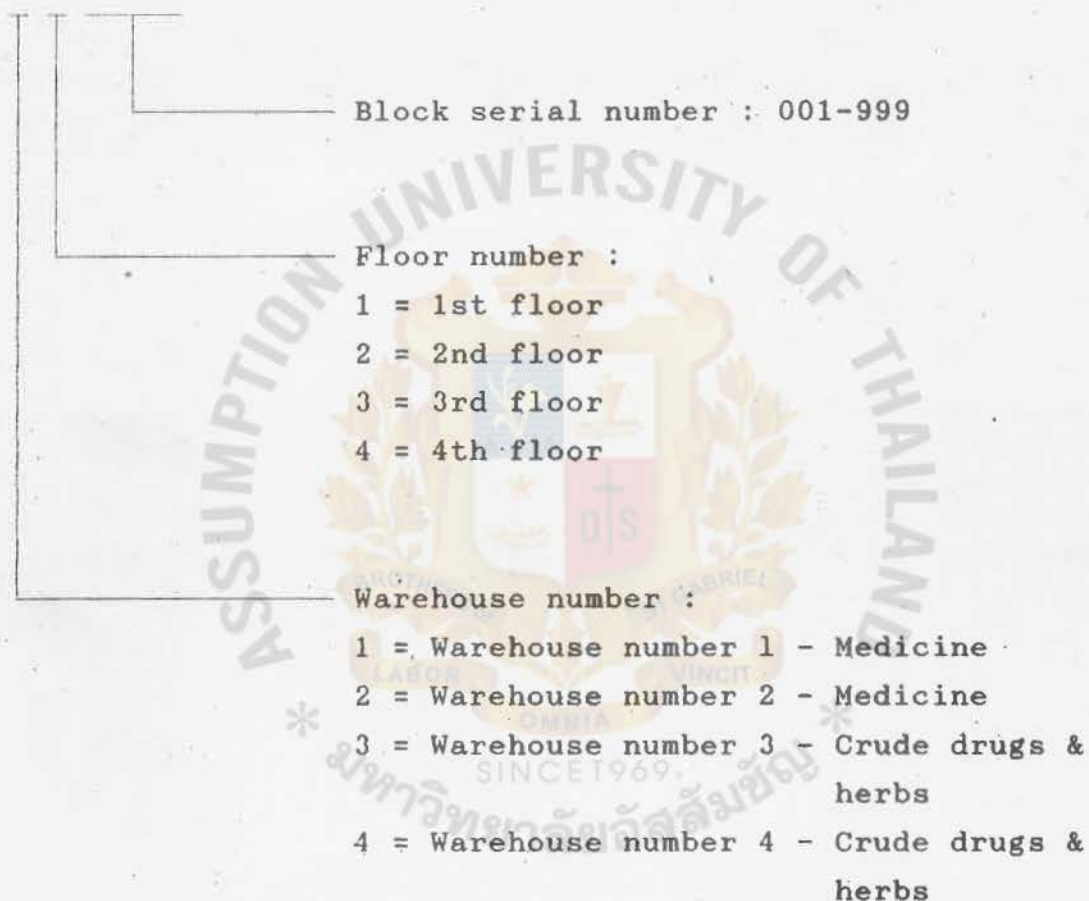
Product line :

- 1. Medicine
- 2. Crude drugs & Herbs

2. Standard of identification of product's location using code

Product's location code (BIN field) used in database is represented by 5 Alphanumeric in the following format :

X	X	X	X	X
---	---	---	---	---



D. DATABASE FILE STRUCTURES OF THE NEW SYSTEM

Database File Structures of the New System

1. Structure for database : CUSTOMER.DBF

Indexed file : CUSCODE.NTX - Indexed on CCODE

CUSNAME.NTX - Indexed on CNAME

Field Name	Type	Width	Dec	Description
CCODE	Character	6		Customer's code
CNAME	Character	30		Customer's name
CONTACT	Character	30		Name to contact with
ADDRESS	Character	30		Customer's address
CITY	Character	15		City
ZIP	Character	5		Zip code
COUNTRY	Character	15		Country
TAXID	Character	10		Customer's Tax ID
PHONE1	Character	10		Telephone number
PHONE2	Character	10		Telephone number
FAX	Character	10		Fax number
ACCTYPE	Character	1		Account type 1 - Cash account 2 - Credit account
CUSTYPE	Character	1		Classification of Customer eg. A,B,C
BEGAMT	Numeric	11	2	Beginning amount on credit
TPERIOD	Numeric	11	2	This period credit amount
CURBAL	Numeric	11	2	Current balance on credit
LSDATE	Date	8		Last sales date
LPDATE	Date	8		Last payment date

Field Name	Type	Width	Dec	Description
LSAMT	Numeric	11	2	Last sales amount
LPAMT	Numeric	11	2	Last payment amount



2. Structure for database : SUPPLIER.DBF

Indexed file: SUPCODE.NTX - Indexed on SCODE

SUPNAME.NTX - Indexed on SNAME

Field Name	Type	Width	Dec	Description
SCODE	Character	6		Supplier's code
SNAME	Character	30		Supplier's name
CONTACT	Character	30		Name to contact with
ADDRESS	Character	30		Supplier's address
CITY	Character	15		City
ZIP	Character	5		Zip code
COUNTRY	Character	15		Country
TAXID	Character	10		Supplier's Tax ID
PHONE1	Character	10		Telephone number
PHONE2	Character	10		Telephone number
FAX	Character	10		Fax number
ACCTYPE	Character	1		Account type 1 - Cash account 2 - Credit account
TERM	Character	8		Credit term code
BEGAMT	Numeric	11	2	Beginning amount on credit
TPERIOD	Numeric	11	2	This period credit amount
CURBAL	Numeric	11	2	Current balance on credit
PURDATE	Date	8		Last purchase date
PAYDATE	Date	8		Last payment date
PURAMT	Numeric	11	2	Last purchase amount
PAYAMT	Numeric	11	2	Last payment amount

3. Structure for database : PRODUCT.DBF

Indexed file : PRODCODE.NTX - Indexed on PCODE

PRODNAME.NTX - Indexed on DESCRIPT+
PCODE

Field Name	Type	Width	Dec	Description
PCODE	Character	7		Product's code
DESCRIPT	Character	30		Product's description
BIN	Character	5		Product's location
INVITEM	Character	1		Purchase/sell item without maintaining quantities on hand
MINIMUM	Numeric	5		Minimum quantities on hand
ORDER	Numeric	9	2	Quantities to order each time
PMEASURE	Character	2		Measure of product purchased eg.kg=kilogram,dz=dozen
SCODE	Character	6		Supplier's code
LPDATE	Date	8		Last purchase date
LPUNIT	Numeric	9	2	Last purchase unit
LOTNO	Character	15		Product's lot number
STDCOST	Numeric	8	2	Standard cost
AVGCOST	Numeric	8	2	Average cost
LPPRICE	Numeric	8	2	Last purchase price
LSDATE	Date	8		Last sales date
LSUNIT	Numeric	9	2	Last sales unit
ASCODE1	Character	6		Alternative supplier's code 1
ASCODE2	Character	6		Alternative supplier's code 2

Field Name	Type	Width	Dec	Description
BEGUNIT	Numeric	9	2	Beginning unit of product
OHUNIT	Numeric	9	2	Unit of product on hand
REMARK	Character	1		Remark



4. Structure for database : PPRICE.DBF

Indexed file: PPCODE.NTX - Indexed on PCODE

Field Name	Type	Width	Dec	Description
PCODE	Character	7		Product's code
SMEASURE	Character	2		Measure of product sold
SPRICE	Numeric	8	2	Selling price
TYPE	Character	1		Classification of customer
REMARK	Character	1		Remark



5. Structure for database : INTRAN.DBF

Indexed file: INPCODE.NTX - Indexed on PCODE

INREFER.NTX - Indexed on REFER_NO

INSCODE.NTX - Indexed on SCODE

Field Name	Type	Width	Dec	Description
REFER_NO	Character	6		Reference number
B_DATE	Date	8		Purchased date
SCODE	Character	6		Supplier's code
PCODE	Character	7		Product's code
UNIT	Numeric	9	2	Unit purchased
PMEASURE	Character	2		Measure of product purchased
BPRICE	Numeric	8	2	Purchased price
TIME	Character	8		Data updated time
REMARK	Character	1		Remark

6. Structure for database : AINTRAN.DBF

Indexed file : AINPCODE.NTX - Indexed on PCODE

AINREFER.NTX - Indexed on REFER_NO

AINSCODE.NTX - Indexed on SCODE

Field Name	Type	Width	Dec	Description
REFER_NO	Character	6		Reference number
B_DATE	Date	8		Purchased date
SCODE	Character	6		Supplier's code
PCODE	Character	7		Product's code
UNIT	Numeric	9	2	Unit purchased
PMEASURE	Character	2		Measure of product purchased
BPRICE	Numeric	8	2	Purchased price
TIME	Character	8		Data updated time
REMARK	Character	1		Remark

7. Structure for database : OUTTRAN.DBF

Indexed file : OUTPCODE.NTX - Indexed on PCODE

OUTREFER.NTX - Indexed on REFER_NO

OUTSCODE.NTX - Indexed on SCODE

Field Name	Type	Width	Dec	Description
REFER_NO	Character	6		Reference number
S_DATE	Date	8		Sold date
CCODE	Character	6		Customer's code
PCODE	Character	7		Product's code
UNIT	Character	9	2	Unit sold
SMEASURE	Character	2		Measure of product sold
SPRICE	Numeric	8	2	Selling price
COST	Numeric	8	2	Cost of product purchased
TIME	Character	8		Data updated time
REMARK	Character	1		Remark

8. Structure for database. : AOUTTRAN.DBF

Indexed file: AOUTPCODE.NTX - Indexed on PCODE

AOUTREF.NTX - Indexed on REFER_NO

AOUTSCODE.NTX - Indexed on SCODE

Field Name	Type	Width	Dec	Description
REFER_NO	Character	6		Reference number
S_DATE	Date	8		Sold date
CCODE	Character	6		Customer's code
PCODE	Character	7		Product's code
UNIT	Character	9	2	Unit purchased
SMEASURE	Character	2		Measure of product sold
SPRICE	Numeric	8	2	Selling price
COST	Numeric	8	2	Cost of product purchased
TIME	Character	8		Data updated time
REMARK	Character	1		Remark

E.DESIGN OF COMPUTER SCREEN
DISPLAYS



Inventory Main menu

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transactions
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

1. Parameter Set up

Main Menu of the Inventory System of Crude Drugs Supplies.

Inventory System of crude drugs supplies V.1.0
By S. Pongprueksa

THAI HUA CHAN DISPENSARY

Monday November 25,1991
18:39:47

Inventory Main menu

- | | |
|--------------|--------------------------|
| 1. Parameter | Set up parameter |
| 2. File Main | |
| 3. Update Da | |
| 4. Daily Tra | Company name : |
| 5. Input Dat | THAI HUA CHAN DISPENSARY |
| 6. Data Inqu | Address : |
| 7. Print Rep | 236 Chakrawad Rd., BKK |
| 8. Exit | Zip Code : 10100 |
| | Data Directory : y: |

1. Parameter Set up

Screen of Setting up Parameters.

Inventory Main menu

1. Parameter
2. File Main
3. Update Da
4. Daily Tra
5. Input Dat
6. Data Inqu
7. Print Rep
8. Exit

File maintenance

Database File Maintenance and
Indexed File Updating

Coffee break ...

Enter Password :

2. File Maintenance

Screen of Maintenance of Database Files.

Inventory Main

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transaction
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

3. Update Data

1. Daily Update
2. Monthly Update
3. Backup Data
4. Restore Data

1. Daily Update

Screen of Updating Data.

3. Update

1. Daily Update
2. Monthly Update
3. Backup Data
4. Restore Data

Monthly Update

This process is used when monthly reports requires.The process will transfer data data to new file. Please back up before running this process.

Enter Password :

2. Monthly Update

Screen of Updating Data for Monthly Update Process.

3. Update

1. Daily Update
2. Monthly Update
3. Backup Data
4. Restore Data

Backup Data

This process is used before updating.
When data is updated in the end of month
it will be changed.

Enter Password :

3. Backup Data

Screen of Updating Data for Back up Data Process.

Restore Data	
3. Update	
<ul style="list-style-type: none">1. Daily Update2. Monthly Update3. Backup Data4. Restore Data	<p>This process is for restoring database file from user disk drive to working directory. The user disk drive can be backed up by selecting Backup data mode</p> <p>Enter Password :</p>

4. Restore Data

Screen of Updating Data for Restore Data Process.

Inventory Main

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transaction
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

Daily transaction

1. Receive from supplier
2. Sell to customer
3. Update/Edit product
4. Transfer store
5. Input sell price
6. Inquiry customer code
7. Inquiry supplier code

4. Transfer store

Screen of Operating Daily Transactions.

Monday November 25, 1991
18:53:00

Date _____ Invoice no. _____

Supplier code _____

Account type [] 1. Cash 2. Margin [] Day

P_Code	Description	Unit	Mea	Price	Amount

Input invoice number and ENTER

Screen of Inputting Products Received from Supplier in the Operating Daily Transactions Process.

Inventory System of crude drugs supplies V.1.0
By S. Pongprueksa THAI HUA CHAN DISPENSARY

Monday November 25,1991
18:53:00

Input Sell product to customer

Date

Invoice no.

Customer code

Account type []

1. Cash 2. Margin [] Day

P_code

Description

Unit

Meas

Price

Amount

** Total **

Screen of Inputting Products Sold to Customer in the
Operating Daily Transactions Process.

[25/11/91] © Inquiry Customer Code © [18:56:40]			
Cus_name			
Code	Customer Name	Tel.	Ac.
			

Enter name/partial name to find customer code ,or ENTER key to exit

Screen of inquiry Customer Code in the Operating Daily Transactions Process.

Inventory Main

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transactio
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

Input Data

1. Customer Directory
2. Supplier Directory
3. Product Information
- 4.
- 5.
6. Exit

1. Customer Directory

Screen of Inputting Data.

Inventory System of crude drugs supplies V.1.0
By S. Pongprueksa

Monday November 25,1991
18:59:41

----- Append/Edit Customer -----

Code

----- Customer Information -----

Name

Contact

Address

City

Country

Zip

Phone

Fax

Tax ID

----- Account Information -----

Account Type

Customer Type

----- Balance Information -----

----- Sales/Payment Information -----

Beginning

Last Sales Date

This Period

Last Payment Date

Current Balance

Last Sales Amount

Last Payment Amount

Screen of Appending/Editing Customer Directory.

Inventory Main	Input Data
1. Parameter Set up	1. Customer Directory
2. File Maintenance	2. Supplier Directory
3. Update Data	3. Product Information
4. Daily Transaction	4.
5. Input Data	5.
6. Data Inquiry	6. Exit
7. Print Report	
8. Exit	

1. Customer Directory

Screen of Inputting Data.

Inventory System of crude drugs supplies V.1.0
By S. Pongprueksa

Supplier Directory

Monday November 25,1991
19:01:47

----- Append/Edit Supplier -----
Code
----- Supplier Information -----
Name
Contact
Address
City
Country
Zip
Phone
Fax
Tax ID
----- Account Information -----
Account Type
----- Balance Information -----
Beginning
This Period
Current Balance
----- Purchase/Payment Information -----
Terms Code
Last Purchase Date
Last Payment Date
Last Purchase Amount
Last Payment Amount

Screen of Appending/Editing Supplier Directory.

Inventory System of crude drugs supplies V.1.0
By S. Pongprueksa Product Information

Monday November 25,1991
19:02:29

----- Append/Edit Product -----				
Code -----				
----- Product Information -----				
Description		Inventory [Y/N]		
Bin		Reorder		
Minimum		Sales Information -----		
Purchase Information -----		Sales Information -----		
Measure		Last Sales Date		
Sup.No		Last Sales Date		
Last Purchase Date		Last Sales Date		
Lot No.		Last Sales Date		
Costs -----		Alternative Supplier -----		
Std.		Sup.No		
Avg.		Sup.No		
Last Purchase Price		Sup.No		
Units -----		Alternative Supplier -----		
Beginning	Last Purchase	Units	Last Sales	On Hand

Screen of Appending/Editing Product Information.

PRODUCT INQUIRY BY PRODUCT							
Product:							
Code	Product Description	Bin	Mea	Price	Cost	Unit OnHand	

Input Product Description for Inquiry

[Esc]-Exit

Screen of Inquiry Product.

Inventory Main

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transaction
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

Print Reports

1. Customer Reports
2. Supplier Reports
3. Product Reports
4. Exit

1. Customer Reports

Screen of Printing Reports.

Inventory Main		Print Reports	
1. Parameter Set up	1. Customer	Print Reports	
2. File Maintenance	2. Supplier		
3. Update Data	3. Product	1. Customer Directory	
4. Daily Transactio	4. Exit	2.	
5. Input Data		3.	
6. Data Inquiry		4.	
7. Print Report		5. Exit	
8. Exit			

1. Customer Directory

Screen of Printing Reports of Customer Directory.

Inventory Main

1. Parameter Set up
2. File Maintenance
3. Update Data
4. Daily Transaction
5. Input Data
6. Data Inquiry
7. Print Report
8. Exit

Print Reports

1. Customer
2. Supplier
3. Product
4. Exit

Customer Directory

Sorted by Code/Name

1. Customer Directory

Screen of Printing Reports of Customer Directory
for Selection of Sorting Method.

Inventory Main		Print Reports	
1. Parameter Set up	1. Customer	Print Reports	
2. File Maintenance	2. Supplier		
3. Update Data	3. Product	1.	
4. Daily Transactio	4. Exit	2. Supplier Directory	
5. Input Data		3.	
6. Data Inquiry		4.	
7. Print Report		5. Exit	
8. Exit			

1.

Screen of Printing Reports of Supplier Directory.

Inventory Main		Print Reports	
1. Parameter Set up	1. Customer	Supplier Directory	
2. File Maintenance	2. Supplier		
3. Update Data	3. Product		
4. Daily Transaction	4. Exit	Sorted by Code/Name	
5. Input Data			
6. Data Inquiry			
7. Print Report			
8. Exit			

2. Supplier Directory

Screen of Printing Reports of Supplier Directory
for Selection of Sorting Method.

Inventory Main		Print Reports	
1. Parameter Set up	1. Customer	Print Reports	
2. File Maintenance	2. Supplier	1. Product List	
3. Update Data	3. Product	2. Medicine List	
4. Daily Transactio	4. Exit	3. Crude Drugs List	
5. Input Data		4. Product Price List	
6. Data Inquiry		5. Medicine Price List	
7. Print Report		6. Crude Drugs Price List	
8. Exit		7. Exit	

1. Product List

Screen of Printing Reports of List of Products.

Inventory Main	Print Reports			
1. Parameter Set up 2. File Maintenance 3. Update Data 4. Daily Transaction 5. Input Data 6. Data Inquiry 7. Print Report 8. Exit	<table border="1"><thead><tr><th>Product List</th></tr></thead><tbody><tr><td>1. Customer 2. Supplier 3. Product 4. Exit</td></tr><tr><td>Sorted by Code/Name</td></tr></tbody></table>	Product List	1. Customer 2. Supplier 3. Product 4. Exit	Sorted by Code/Name
Product List				
1. Customer 2. Supplier 3. Product 4. Exit				
Sorted by Code/Name				

1. Product List

Screen of Printing Reports of List of Products for
Selection of Sorting Method.

F. SOURCE PROGRAMS

```

*:-----*:
*: Program.: Project.prg *:
*: Written.: Ms. Suwanna Pongprueksa *:
*: Date....: Febuary 18,1991 *:
*: Note....: Inventory System of Crude Drugs Supplies *:
*:          : Support LAN and Multiuser *:
*:          : Compiled by Clipper Summer 88 or more *:
*:          : *:
*:          : Main program : Function Menul.prg *:
*:          MMenu() : In menul.prg *:
*:          Moveto() : This program *:
*:          Movego() *:
*:          S_color() *:
*:-----*:

```

Parameter th

```
if type("th") <> 'C'
```

```
    Th = 'E'
```

```
endif
```

```
Thai = .F.
```

```
if 'T' $ Upper(th)
```

```
    Thai = .T.
```

```
Endif
```

Set exclusive off

```
Set date brit          && Use date format dd/mm/yy format
```

Restore from Inv additive

```
Public Pcolor1,Pcolor2,Pcolor3,Pcolor4,Pcolor5,Pcolor6
```

```
Public Pcolor7,Pcolor8,Pcolor9,Pcolor10
```

```
Public box1,box2,box3,b1,b2,b3,m4dr
```

```
Public Max_row,Inv_comp,Inv_add,Inv_zip,Inv_driv,i
```

```
Declare msmea[15],msprice[15],mtype[15]
```

```
Box1 = inv_box1
```

```
box2 = inv_box2
```

```
box3 = inv_box3
```

```
*Set Typeahead to
* Limittation of program
```

```
set default to &inv_driv
```

```
Do S_color()
```

```
*wait ' '
```

```
*-----*
```

```
MMENU('E',trim(inv_comp),0,0,23,79,.T.,'5') && MAIN MENU
```

```
MMENU('E',' Inventory Main menu ',7,27,20,58,.F.,'2')
```

```
Ti1 = '1. Parameter Set up '
```

```
Ti2 = '2. File Maintenance '
```

```
Ti3 = '3. Update Data '
```

```
Ti4 = '4. Daily Transactions '
```

```
Ti5 = '5. Input Data '
```

```
Ti6 = '6. Data Inquiry '
```

```
Ti7 = '7. Print Report '
```

```
Ti8 = '8. Exit '
```

```
Save screen to Invmenu
```

```
Do while .T.
```

```
*Set key 27 to && Initial ESC key
```

```
Restore screen from Invmenu
```

```
Set console on
```

```
Set key -4 to Setup && Function F5 is used for setup
```

```
Set key -8 to Inv_box && Setup box of character
```

```
set message to 24 center
```

```
Set color to &Pcolor8
```

```
@ 24,00 clear to 24,79
```

```
@ 11,30 Prompt ti1 message ti1
```

```
@ 12,30 Prompt ti2 message ti2
```

```
@ 13,30 Prompt ti3 message ti3
```

```
@ 14,30 Prompt ti4 message ti4
```



```

@ 15,30 Prompt ti5 message ti5
@ 16,30 Prompt ti6 message ti6
@ 17,30 Prompt ti7 message ti7
@ 18,30 Prompt ti8 message ti8

```

```

menu to dl

```

```

set color to &Pocolor1

```

```

aa = Moveto(7,27,20,66, 5,-1)      && Move to column 5

```

```

Do Case

```

```

    Case dl = 1                      && Set up

```

```

        Do setup

```

```

    Case dl = 2                      && File maintain

```

```

        Do Maintain

```

```

    Case dl = 3

```

```

        Do Inv_upd

```

```

    Case dl = 4

```

```

        Do Inv_tran

```

```

    Case dl = 5

```

```

        Ti51 = '1. Customer Directory '

```

```

        Ti52 = '2. Supplier Directory '

```

```

        Ti53 = '3. Product Information'

```

```

        Ti54 = '4. '

```

```

        Ti55 = '5. '

```

```

        Ti56 = '6. Exit '

```

```

MMENU('E',' Input Data- ',08,27,19,58,.F.,'7')

```

```

Save screen to M_scr5

```

```

Do while .T.

```

```

    Set key 27 to

```

```

    Rest screen from M_scr5

```

```

    set message to 24 center

```

```

    Set color to &Pcolor1

```

```

    @ 12,30 Prompt ti51 message ti51

```

```

    @ 13,30 Prompt ti52 message ti52

```

```

    @ 14,30 Prompt ti53 message ti53

```

```

    @ 15,30 Prompt ti54 message ti54

```

```

    @ 16,30 Prompt ti55 message ti55

```

```

@ 17,30 Prompt ti56 message ti56
menu to d50
Do case
    Case d50 = 1
        inputcus()
    Case d50 = 2
        inputsup()
    Case d50 = 3
        inputpro()
    Case lastkey() = 27.or.d50 = 6
        Exit
    Endcase
Enddo
Case d1 = 6
    Pinquir()
Case d1 = 7
    && Print Report
    Ti71 = '1. Customer Reports '
    Ti72 = '2. Supplier Reports '
    Ti73 = '3. Product Reports '
    Ti74 = '4: Exit '
    Set color to &pcolor1
    MMENU('E',' Print Reports ',08,27,18,55,.F.,'7')
    Save screen to M_scr7
    Do while .T.
        Set key 27 to
        Rest screen from M_scr7
        set message to 24 center
        Set color to &pcolor1
        @ 12,30 Prompt ti71 message ti71
        @ 13,30 Prompt ti72 message ti72
        @ 14,30 Prompt ti73 message ti73
        @ 15,30 Prompt ti74 message ti74
        menu to d70
    Do case
        Case d70 = 1
            Ti711 = '1. Customer Directory '
            Ti712 = '2. '

```

```

Ti713 = '3.
Ti714 = '4.
Ti715 = '5. Exit
set color to
MMENU('E',' Print Reports ',10,41,20,72,.F.,'9')

```

```

Set color to
Save screen to M_scr701
Do while .T.

```

```

    Set key 27 to
    Rest screen from M_scr701
    set message to 24 center
    Set color to
    @ 24,00 clear to 24,79
    @ 14,43 Prompt ti711 message ti711
    @ 15,43 Prompt ti712 message ti712
    @ 16,43 Prompt ti713 message ti713
    @ 17,43 Prompt ti714 message ti714
    @ 18,43 Prompt ti715 message ti715
    menu to d701

```

```

Do case

```

```

    case d701 = 1
        custdir()
    case d701 = 2
    case d701 = 3
    case d701 = 4

```

```

    case lastkey() = 27 .or. d701 = 5
        exit

```

```

Endcase

```

```

Enddo

```

```

Case d70 = 2

```

```

    Ti721 = '1.
    Ti722 = '2. Supplier Directory
    Ti723 = '3.
    Ti724 = '4.
    Ti725 = '5. Exit
    set color to

```

MMENU('E',' Print Reports ',10,41,20,72,.F.,'9')

Set color to

Save screen to M_scr702

Do while .T.

Set key 27 to

Rest screen from M_scr702

set message to 24 center

Set color to

@ 24,00 clear to 24,79

@ 14,43 Prompt ti721 message ti721

@ 15,43 Prompt ti722 message ti722

@ 16,43 Prompt ti723 message ti723

@ 17,43 Prompt ti724 message ti724

@ 18,43 Prompt ti725 message ti725

menu to d702

Do case

case d702 = 1

case d702 = 2

supdir()

case d702 = 3

case d702 = 4

case lastkey() = 27 .or.d702 = 5

exit

Endcase

Enddo

Case d70 = 3

Ti731 = '1. Product List '

Ti732 = '2. Medicine List '

Ti733 = '3. Crude Drugs List '

Ti734 = '4. Product Price List '

Ti735 = '5. Medicine Price List '

Ti736 = '6. Crude Drugs Price List'

Ti737 = '7. Exit '

set color to

MMENU('E',' Print Reports ',10,41,20,72,.F.,'9')

Set color to

Save screen to M_scr700


```

Do while .T.
    Set key 27 to
    Rest screen from M_scr700
    set message to 24 center
    Set color to
    @ 24,00 clear to 24,79 .
    @ 13,43 Prompt ti731 message ti731
    @ 14,43 Prompt ti732 message ti732
    @ 15,43 Prompt ti733 message ti733
    @ 16,43 Prompt ti734 message ti734
    @ 17,43 Prompt ti735 message ti735
    @ 18,43 Prompt ti736 message ti736
    @ 19,43 Prompt ti737 message ti737
    menu to d700
    Do case
        case d700 = 1
            prodlist()
        case d700 = 2
            mlist([1])
        case d700 = 3
            mlist([2])
        case d700 = 4
            prslist()
        case d700 = 5
            mplist()
        case d700 = 6
            cplist()
        case lastkey() = 27 .or.d700 = 7
            exit
    Endcase
Enddo
Case lastkey() = 27.or.d70 = 4
    Exit
Endcase
Enddo
Case Lastkey()=27.or.d1 = 8    && Exit condition
    set color to

```

clear

Return

Endcase

Enddo

Return



```

*:-----*:
*: Program.: Maintain.Prg *:
*: Update...: Ms. Suwanna Pongprueksa *:
*: Date.....: 10/04/1991 *:
*: Note.....: File maintenance *:
*:-----*:

```

```
MMENU('E',' File maintenance ',10,20,21,60,.F.,'5')
```

```
store ' ' to wait_subst
```

```
Set color to W
```

```
@ 14,23 say "Database File Maintenance and "
```

```
@ 15,23 say "Indexed File Updating "
```

```
@ 17,23 say " Coffee break ... "
```

```
Set color to &Pcolor1
```

```
mpr = .F.
```

```
Lisa = .T.
```

```
pass = ALLTRIM(UPPER(GETE("NAME")))+[2]
```

```
@ 20,23 say Space(30)
```

```
@ 20,23 say 'Enter Password :'
```

```
set console off
```

```
accept to dpass
```

```
If upper(dpass) <> pass
```

```
? CHR(7)+CHR(7)
```

```
Set color to &Pcolor6
```

```
@ 20,23 say Space(30)
```

```
@ 20,23 say 'Password Error '
```

```
Set color to &Pcolor1
```

```
wait ' '
```

```
Return
```

```
Endif
```

```
Lisa = .T.
```

```
Select 1
```

```
File10 = [Customer.dbf] && Customer file
```

```
File11 = [cuscode.ntx]
```

```
File12 = [cusname.ntx]
```

```

File20 = [Supplier.dbf]           && Supplier
File21 = [Supcode.ntx]
File22 = [Supname.ntx]
File30 = [Product.dbf]           && Product
File31 = [Prodname.ntx]
File32 = [Prodcode.ntx]
File40 = [Intran.dbf]             && Intran
File41 = [inpcode.ntx]
File42 = [inrefer.ntx]
File43 = [Inscore.ntx]
File50 = [Pprice.dbf]             && price
File51 = [ppcode.ntx]
File60 = [AIntran.dbf]            && AIntran
File61 = [Ainpcode.ntx]
File62 = [Ainrefer.ntx]
File63 = [AInscore.ntx]
File70 = [Outtran.dbf]            && Outtran
File71 = [Outpcode.ntx]
File72 = [Outrefer.ntx]
File73 = [Outscore.ntx]
File80 = [Aouttran.dbf]           && AOuttran
File81 = [AOutpcod.ntx]
File82 = [AOutrefe.ntx]
File83 = [AOutscod.ntx]

Close Data                         && Close all database
Select 1

```

```

mpr = .F.
@ 20,23 Say " "
@ 20,23 say " Rebuild customer file (y/n) ? " get mpr picture 'y'
read
If mpr
    If file('&File10').and.file('&File11').and.file('&File12')
        If Net_usel('&File10',.T.,30)
            Set index to &File11,&File12
            Reindex

```



```

        Set index to
        Use
    Else
        Set color to &Pcolor3
        wa = ' '
        @ 24,0 Say 'Open file &File10 error,Please check ';
        get wa
        Set color to &Pcolor1
        read
    Endif
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '
    @ 24,0 Say 'File &File10,&File11,&File12 not found ,'+;
    'Please check ' get wa
    Set color to &Pcolor1
    read
Endif
Endif
mpr = .F.
@ 20,23 Say "
@ 20,23 say"Rebuild Supplier.dbf file (y/n)? "get mpr ;
picture 'y'
read
If mpr
    If file('&File20').and.file('&File21').and.file('&File22')
        If Net_usel('&File20',.T.,30)
            Set index to &File21,&File22
            Reindex
            Set index to
            Use
        Else
            Set color to &Pcolor3
            wa = ' '
            @ 24,00 Say 'Open file &File20 error,Please check ';
            get wa

```

```

        Set color to &Pcolor1
        read
    Endif
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '
    @ 24,00 Say 'File &File20,&File21,&File22 not found,'+;
    'Please check '
    @ 24,50 get wa
    Set color to &Pcolor1
    read
Endif
Endif
mpr = .F.
@ 20,23 Say "
@ 20,23 say " Rebuild Product .dbf file (y/n) ? "
@ 20,59 get mpr picture 'y'
read
If mpr
If file('&File30').and.file('&File31').and.file('&File32')
    If Net_usel('&File30',.T.,30)
        Set index to &File31,&File32
        Reindex
        Set index to
        use
    Else
        Set color to &Pcolor3
        wa = ' '
        @ 24,0 Say 'Open file &File30 error,Please check ' get wa
        Set color to &Pcolor1
        read
    Endif
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '

```

```

@ 24,0 Say 'File &File30,&File31,&File32 not found ,Please'+;
'check '
@ 24,69 get wa
Set color to &Pcolor1
read
Endif
Endif
mpr = .F.
@ 20,23 Say " "
@ 20,23 say" Rebuild Intran.dbf file (y/n) ? "get mpr picture'y'
read
If mpr
If file('&File40').and.file('&File42').and.file('&File43');
.and. file('&File41')
If Net_usel('&File40',.T.,30)
Set index to &File42,&File43,&File41
Reindex
Set index to
Use
Else
Set color to &Pcolor3
wa = ' '
@ 24,0 Say 'Open file &File40 error,Please check 'get wa
Set color to &Pcolor1
read
Endif
Else
Lisa = .F.
Set color to &Pcolor3
wa = ' '
@ 24,0 Say'File &File40,&File42 &File43 not found,Please'+;
' check'
@ 24,69 get wa
Set color to &Pcolor1
read
Endif
Endif

```

```

mpr = .F.
@ 20,23 Say "
@ 20,23 say" Rebuild Pprice.dbf file (y/n) ? "get mpr picture'y'
read
If mpr
If file('&File50').and.file('&File51')
    If Net_usel('&File50',.T.,30)
        Set index to &File51
        Reindex
        set index to
        Use
    Else
        Set color to &Pcolor3
        wa = ' '
        @ 24,0 Say 'Open file &File50 error,Please check ' get wa
        Set color to &Pcolor1
        read
    Endif
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '
    @ 24,0 Say 'File &File50,&File51 not found ,Please check';
    get wa
    Set color to &Pcolor1
    read
Endif
Endif

mpr = .F.
@ 20,23 Say "
@ 20,23 say " Rebuild AIntran.dbf file (y/n) ? " get mpr;
picture 'y'
read
If mpr
If file('&File60').and.file('&File62').and.file('&File63');
    .and. file('&File61')

```



```

If Net_usel('&File60',.T.,30)
    Set index to &File61,&File62,&File63
    Reindex
    Set index to
    Use
Else
    Set color to &Pcolor3
    wa = ' '
    @ 24,0 Say.'Open file &File60 error,Please check ' get wa
    Set color to &Pcolor1
    read
Endif
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '
    @ 24,0 Say 'File &File60,&File61 &File62 not found ,Please'+;
    ' check'
    @ 24,69 get wa
    Set color to &Pcolor1
    read
Endif
Endif

mpr = .F.
@ 20,23 Say " "
@ 20,23 say" Rebuild Outtran.dbf file (y/n) ? "get mpr picture'y'
read
If mpr
If file('&File70').and.file('&File72').and.file('&File73').and.;
file('&File71')
If Net_usel('&File40',.T.,30)
    Set index to &File71,&File72,&File73
    Reindex
    Set index to
    Use
Else

```

```

Set color to &Pcolor3
wa = ' '
@ 24,0 Say 'Open file &File70 error,Please check ' get wa
Set color to &Pcolor1
read
Endif
Else
Lisa = .F.
Set color to &Pcolor3
wa = ' '
@ 24,00 Say 'File &File70,&File71 &File72 not found ,Please'+;
' check '
@ 24,69 get wa
Set color to &Pcolor1
read
Endif
Endif

mpr = .F.
@ 20,23 Say "
@ 20,23 say " Rebuild Aouttran.dbf file (y/n) ? "
@ 20,62 get mpr picture 'y'
read
If mpr
If file('&File80').and.file('&File82').and.file('&File83').and.;
file('&File81')
If Net_usel('&File80',.T.,30)
Set index to &File81,&File82,&File83
Reindex
Set index to
Use
Else
Set color to &Pcolor3
wa = ' '
@ 24,0 Say 'Open file &File80 error,Please check ' get wa
Set color to &Pcolor1
read

```

```

    Endif .
Else
    Lisa = .F.
    Set color to &Pcolor3
    wa = ' '
    @ 24,0 Say 'File &File80,&File81 &File82 not found,Please'+;
    ' check'
    @ 24,69 get wa
    Set color to &Pcolor1
    read

```

```

Endif
Endif
Return

```

```

Procedure Mainhelp
Clear gets
Save screen to HelpCset
MMENU('T',' Help Menu '+Str(Help_code,2),3,20,21,69,.F.,'9')
Set color to &Pcolor1
dd = ' '
@ 6,21 clear to 20,68
Select 10
Use help
If Help_code > Lastrec().or.Help_code = 0
    Go top
Else
    Go Help_code
Endif
Set cursor on
* MEMOEDIT(Help1,6,21,20,68,.T.,"",45)
Set color to &Pcolor1
Rest screen from HelpCset
Rele HelpCset
use
Return

```

```

FUNCTION NET_USE1
PARAMETERS file, ex_use, wait
PRIVATE forever
set exclusive off
file = file
if .not.file('&file+'.dbf')
    forever = .f.
else
    forever = (wait = 0)
endif
DO WHILE (forever .OR. wait > 0)

    IF ex_use                                && exclusive
        USE &file EXCLUSIVE
    ELSE
        USE &file                            && shared
    ENDIF

    IF .NOT. NETERR()                        && USE succeeds
        RETURN (.T.)
    ENDIF

    INKEY(1)                                && wait 1 second
    wait = wait - 1
ENDDO
? 'Open file error '+file+'.dbf ,Please check '
wait
RETURN (.F.)                                && USE fails
* End - NET_USE1

```


Function InputCus

ret = .t.

IF .NOT.FILE('CUSTOMER.DBF')

@ 22,21,24,67 box box1

@ 23,26 say 'Open File Error. File Not Found.' GET RET

read

RETURN(.F.)

ENDIF

USE CUSTOMER INDEX CUSCODE

MMENU('T','Customer Directory',0,0,23,79,.T.,'5').&&

@ 06,04 say '----- Append/Edit Customer '+';

'-----'

@ 07,04 say 'Code'

@ 08,04 say '----- Customer Information '+';

'-----'

@ 09,04 say 'Name'

@ 10,04 say 'Contact'

@ 10,53 say 'Phone'

@ 11,04 say 'Address'

@ 12,04 say 'City'

@ 12,30 say 'Zip'

@ 12,53 say 'Fax'

@ 13,04 say 'Country'

@ 13,53 say 'Tax ID'

@ 15,04 say '----- Account Information '+';

'-----'

@ 16,04 say 'Account Type | Customer Type'

@ 17,04 say '----- Balance Information ----- ;

Sales/Payment Information -----'

@ 18,04 say 'Beginning | Last Sales Date'

@ 19,04 say 'This Period | Last Payment '+';

'Date'

@ 20,04 say 'Current Balance | Last Sales '+';

'Amount'

@ 21,04 say ' | Last Payment '+';

'Amount'

Save screen to cinpscrn

Do while .t.

restore screen from cinpscrn

acode = space(6)

@ 07,09 get acode

READ

aappen = .t.

If acode = space(6).or.Lastkey() = 27

exit

Endif

seek acode

If found()

aname = cname

acon = contact

aaddr1 = address

acity = city

azip = zip

acountry = country

ataxid = taxid

aphone1 = phone1

aphone2 = phone2

afax = fax

aaccty = acctype

acustype = custype

abegin = begamt

atperiod = tperiod

acurbal = curbal

alsdate = lsdate

alpdata = lpdata

alsamt = lsamt

alpamt = lpamt

@ 09,09 say aname

@ 10,12 say acon

@ 11,12 say aaddr1

@ 12,09 say acity

```

@ 12,34 say azip
@ 13,12 say acountry
@ 10,60 say aphone1
@ 11,60 say aphone2
@ 12,60 say afax
@ 13,60 say ataxid
@ 16,17 say aaccty
@ 16,58 say acustype
@ 18,21 say abegin picture '@Z 99,999,999.99'
@ 19,21 say atperiod picture '@Z 99,999,999.99'
@ 20,21 say acurbal picture '@Z 99,999,999.99'
@ 18,60 say alsdate picture 'xx/xx/xx'
@ 19,60 say alpdate picture 'xx/xx/xx'
@ 20,60 say alsamt picture '@Z 99,999,999.99'
@ 21,60 say alpamt picture '@Z 99,999,999.99'
aedit = .f.
@ 22,25,24,63 box box1
@ 23,26 say ' Edit Customer Directory [Y/N] '
@ 23,61 get aedit picture 'Y'
read
If .not. aedit
    loop
endif
aappen = .f.
Else
    aname = space(50)
    acont = space(30)
    aaddr1 = space(30)
    acity = space(15)
    azip = space(5)
    acountry = space(15)
    ataxid = space(10)
    aphone1 = space(15)
    aphone2 = space(15)
    afax = space(15)
    aaccty = space(1)
    acustype = space(1)

```

```

        abegin    = 0
        atperiod  = 0
        acurbal   = 0
        alsdate   = date()
        alpdate   = date()
        alsamt    = 0
        alpamt    = 0
Endif
@ 09,09 get aname
@ 10,12 get acont
@ 11,12 get aaddr1
@ 12,09 get acity
@ 12,34 get azip
@ 13,12 get acountry
@ 10,60 get aphone1
@ 11,60 get aphone2
@ 12,60 get afax
@ 13,60 get ataxid
@ 16,17 get aaccty
@ 16,58 get acustype
@ 18,21 get abegin    picture '@Z 99,999,999.99'
@ 19,21 get atperiod  picture '@Z 99,999,999.99'
@ 20,21 get acurbal   picture '@Z 99,999,999.99'
@ 18,60 get alsdate   picture 'xx/xx/xx'
@ 19,60 get alpdate   picture 'xx/xx/xx'
@ 20,60 get alsamt    picture '@Z 99,999,999.99'
@ 21,60 get alpamt    picture '@Z 99,999,999.99'
read
asave = .t.
@ 22,25,24,63 box box1
@ 23,26 say '      Save Customer Directory [Y/N] '
@ 23,61 get asave picture 'Y'
read
If .not. asave
    loop
Endif
If aappen

```



```

        Append blank
    endif
    If Rlock()
        Replace ccode    with acode
        Replace cname    with aname
        Replace contact  with acont
        Replace address  with aaddr1
        Replace city     with acity
        Replace zip      with azip
        Replace country  with acountry
        Replace taxid    with ataxid
        Replace phone1   with aphone1
        Replace phone2   with aphone2
        Replace fax      with afax
        Replace acctype  with aaccty
        Replace custype  with acustype
        Replace begamt   with abegin
        Replace tperiod  with atperiod
        Replace curbal   with acurbal
        Replace lsdate   with alsdate
        Replace lpddate  with alpddate
        Replace lsamt    with alsamt
        Replace lpamt    with alpamt
        Unlock
    Endif
Enddo
CLOSE DATABASE
Return[]

```

Function inputsup

ret = .t.

IF .NOT.FILE('SUPPLIER.DBF')

 @ 22,21,24,67 box box1

 @ 23,26 say 'Open File Error. File Not Found.' GET RET

 read

 RETURN(.F.)

ENDIF

USE SUPPLIER INDEX SUPCODE

MMENU('T','Supplier Directory',0,0,23,79,.T.,'5')

@ 06,04 say '----- Append/Edit Supplier '+'
'-----'

@ 07,04 say 'Code'

@ 08,04 say '----- Supplier Information '+'
'-----'

@ 09,04 say 'Name'

@ 10,04 say 'Contact'

@ 10,53 say 'Phone'

@ 11,04 say 'Address'

@ 12,04 say 'City'

@ 12,30 say 'Zip'

@ 12,53 say 'Fax'

@ 13,04 say 'Country'

@ 13,53 say 'Tax ID'

@ 15,04 say '----- Account Information '+'
'-----'

@ 16,04 say 'Account Type'

@ 16,39 say 'Terms Code'

@ 17,04 say '----- Balance Information -----' ;

Purchase/Payment Information ----'

@ 18,04 say 'Beginning | Last Purchase'+;
' Date'

@ 19,04 say 'This Period | Last Payment'+;
' Date'

@ 20,04 say 'Current Balance | Last Purchase'+;
' Amount'

```

@ 21,04 say '
' Amount'
Save screen to sinpscrn
Do while .t.
    restore screen from sinpscrn
    acode = space(6)
    @ 07,09 get acode
    READ
    aappen = .t.
    If acode = space(6).or.Lastkey() = 27
        *clear
        exit
    Endif
    seek acode
    If found()
        aname      = sname
        acont      = contact
        aaddr1     = address
        acity      = city
        azip       = zip
        acountry   = country
        ataxid     = taxid
        aphonel    = phonel
        aphone2    = phone2
        afax       = fax
        aaccty     = acctype
        aterm      = term
        abegin     = begamt
        atperiod   = tperiod
        acurbal    = curbal
        apurdate   = purdate
        apaydate   = paydate
        apuramt    = puramt
        apayamt    = payamt
    @ 09,09 say aname
    @ 10,12 say acont
    @ 11,12 say aaddr1

```

```

@ 12,09 say acity
@ 12,34 say azip
@ 13,12 say acountry
@ 10,60 say aphone1
@ 11,60 say aphone2
@ 12,60 say afax
@ 13,60 say ataxid
@ 16,17 say aaccty
@ 16,50 say aterm
@ 18,21 say abegin picture '@Z 99,999,999.99'
@ 19,21 say atperiod picture '@Z 99,999,999.99'
@ 20,21 say acurbal picture '@Z 99,999,999.99'
@ 18,60 say apurdate picture 'xx/xx/xx'
@ 19,60 say apaydate picture 'xx/xx/xx'
@ 20,60 say apuramt picture '@Z 99,999,999.99'
@ 21,60 say apayamt picture '@Z 99,999,999.99'
aedit = .f.
@ 22,25,24,63 box box1
@ 23,26 say ' Edit Supplier Directory [Y/N] '
@ 23,61 get aedit picture 'Y'
read
If .not. aedit
    loop
endif
aappen = .f.
Else
    aname      = space(50)
    acont      = space(30)
    aaddr1     = space(30)
    acity      = space(15)
    azip       = space(5)
    acountry   = space(15)
    ataxid     = space(10)
    aphone1    = space(15)
    aphone2    = space(15)
    afax       = space(15)
    aaccty     = space(1)

```



```

    aterm      = space(8)
    abegin     = 0
    atperiod   = 0
    acurbal    = 0
    apurdate   = date()
    apaydate   = date()
    apuramt    = 0
    apayamt    = 0
Endif

@ 09,09 get aname
@ 10,12 get acont
@ 11,12 get aaddr1
@ 12,09 get acity
@ 12,34 get azip
@ 13,12 get acountry
@ 10,60 get aphone1
@ 11,60 get aphone2
@ 12,60 get afax
@ 13,60 get ataxid
@ 16,17 get aaccty
@ 18,21 get abegin picture '@Z 99,999,999.99'
@ 19,21 get atperiod picture '@Z 99,999,999.99'
@ 20,21 get acurbal picture '@Z 99,999,999.99'
@ 18,60 get apurdate picture 'xx/xx/xx'
@ 19,60 get apaydate picture 'xx/xx/xx'
@ 20,60 get apuramt picture '@Z 99,999,999.99'
@ 21,60 get apayamt picture '@Z 99,999,999.99'
read
asave = .t.
@ 22,25,24,63 box box1
@ 23,26 say '      Save Supplier Directory [Y/N] '
@ 23,61 get asave picture 'Y'
read
If .not. asave
    loop
endif
If aappen

```

```

Append blank
endif
If Rlock()
    Replace scode with acode
    Replace sname with aname
    Replace contact with acont
    Replace address with aaddr1
    Replace city with acity
    Replace zip with azip
    Replace country with acountry
    Replace taxid with ataxid
    Replace phone1 with aphone1
    Replace phone2 with aphone2
    Replace fax with afax
    Replace acctype with aaccty
    Replace term with aterm
    Replace begamt with abegin
    Replace tperiod with atperiod
    Replace curbal with acurbal
    Replace purdate with apurdate
    Replace paydate with apaydate
    Replace puramt with apuramt
    Replace payamt with apayamt
Unlock
Endif
Enddo
CLOSE DATABASE
Return[]

```

```

Function inputpro
Declare msmea[15],msprice[15],mtype[15]
afill(msmea,space(2))
afill(msprice,0)
afill(mtype,space(1))

ret = .t.
IF .NOT.FILE('PRODUCT.DBF')
    @ 22,21,24,67 box box1
    @ 23,26 say 'Open File Error. File Not Found.' GET RET
    read
    RETURN(.F.)
ENDIF.
SELECT 1
USE PRODUCT INDEX PRODCODE
Select 2
Use pprice index ppcode
select 1
MMENU('T','Product Information',0,0,23,79,.T.,'5')
@ 05,02 say '----- Append/Edit Product '+';
',-----'
@ 06,02 say 'Code'
@ 07,02 say '----- Product Information '+';
',-----'
@ 08,02 say 'Description'
@ 09,02 say 'Bin'
@ 09,53 say 'Inventory [Y/N]'
@ 10,02 say 'Minimum'
@ 10,53 say 'Reorder'
@ 11,02 say '----- Purchase Information ----- '+';
'Sales Information -----'
@ 12,02 say 'Measure'
@ 13,02 say 'Sup.No'
@ 14,02 say 'Last Purchase Date'
'Date'
@ 15,02 say 'Lot No.'
@ 16,02 say '----- Costs ----- '+';
'Alternative Supplier -----'

```

```

@ 17,02 say 'Std.          Avg.          | Sup.No'
@ 18,02 say 'Last Purchase Price          |'
@ 19,02 say '----- Units '+';
'-----'

@ 20,02 say 'Beginning          Last Purchase          Last '+';
' Sales          On Hand'

Save screen to pinpscrn

```

Do while .t.

Select 1

restore screen from pinpscrn

acode = space(7)

@ 06,07 get acode

READ

aappen = .t.

If acode = space(7).or.Lastkey() = 27

exit

Endif

seek acode

If found()

adesc = descript

abin = bin

ainvitem = invitem

aminimum = minimum

aorder = order

apmeas = pmeasure

ascode = scode

alpdate = lupdate

alpunit = lpunit

alotno = lotno

astdcost = stdcost

aavgcost = avgcost

alpprice = lpprice

alsdate = lsdate

alsunit = lsunit

aascode1 = ascode1

aascode2 = ascode2


```

abegunit = begunit
aohunit = ohunit
@ 08,14 say adesc
@ 09,06 say abin
@ 09,69 say ainvitem
@ 10,10 say aminimum picture '@Z 99,999'
@ 10,61 say aorder picture '@Z 999,999.99'
@ 12,10 say apmeas
@ 13,09 say ascode
@ 14,21 say alpdata picture 'xx/xx/xx'
@ 15,10 say alotno
@ 17,06 say astdcost picture '@Z 99,999.99'
@ 17,24 say aavgcost picture '@Z 99,999.99'
@ 18,22 say alpprice picture '@Z 99,999.99'
@ 14,57 say alsdate picture 'xx/xx/xx'
@ 17,48 say aascode1
@ 18,48 say aascode2
@ 21,02 say abegunit picture '@Z 999,999.99'
@ 21,22 say alpunit picture '@Z 999,999.99'
@ 21,44 say alsunit picture '@Z 999,999.99'
@ 21,63 say aohunit picture '@Z 999,999.99'

aedit = .f.
@ 22,25,24,63 box box1
@ 23,26 say ' Edit Product Information [Y/N]
@ 23,62 get aedit picture 'Y'
read
If .not. aedit
    loop
endif
aappen = .f.
Else
    adesc = space(30)
    abin = space(5)
    ainvitem = .t.
    aminimum = 0
    aorder = 0

```

```

apmeas  = space(8)
ascode  = space(6)
alpdate = date()
alpunit = 0
alotno  = space(15)
astdcost = 0
aavgcost = 0
alpprice = 0
asmeas1  = space(8)
asprice1 = 0
asmeas2  = space(8)
asprice2 = 0
alsdate  = date()
alsunit  = 0
aascode1 = space(6)
aascode2 = space(6)
abegunit = 0
aohunit  = 0
Endif

@ 08,14 get adesc
@ 09,06 get abin
@ 09,69 get ainvitem picture 'Y'
@ 10,10 get aminimum picture '@Z 99,999'
@ 10,61 get aorder picture '@Z 999,999.99'
@ 12,10 get apmeas
@ 13,09 get ascode
@ 14,21 get alpdate picture 'xx/xx/xx'
@ 15,10 get alotno
@ 17,06 get astdcost picture '@Z 99,999.99'
@ 17,24 get aavgcost picture '@Z 99,999.99'
@ 18,22 get alpprice picture '@Z 99,999.99'
@ 14,57 get alsdate picture 'xx/xx/xx'
@ 17,48 get aascode1
@ 18,48 get aascode2
@ 21,02 get abegunit picture '@Z 999,999.99'
@ 21,22 get alpunit picture '@Z 999,999.99'

```

```

    @ 21,44 get alsunit picture '@Z 999,999.99'
    @ 21,63 get aohunit picture '@Z 999,999.99'
    read
*-----
*Declare msmea[15],msprice[15],mtype[15]
afill(msmea,space(2))
afill(msprice,0)
afill(mtype,space(1))
SELECT 2
use pprice index ppcode
save screen to pricescr
MMENU('T','Price Table',05,30,21,69,.f.,'4')
@ 06,31 say ' Customer Type; Measure ; Price '
mpcode = acode
seek mpcode
i = 0
If found()
    Do while .not.eof().and.Acode = Mpcode.and.i <= 12
        i = i+1
        * Ed = iif(i>12,12,i)
        msmea[i] = smeasure
        msprice[i] = sprice
        mtype[i] = type
        Dsp(i+7,i)
        Skip
    Enddo
    Read
Endif
Do while .t.
    i = i + 1
    Dsp(7+i,i)
    Read
    If msmea[i] == Space(2).or.Lastkey() = 27
        Exit
    Endif
    * i = i+1
Enddo

```

restore screen from pricescr

*Return[]

* prtable()

asave = .t.

@ 22,25,24,63 box box1

@ 23,26 say ' Save Product Information [Y/N] '

@ 23,60 get asave picture 'Y'

read

If .not. asave

loop

endif

If aappen

SELECT 1

Append blank

endif

select 1

If Rlock()

Replace pcode with acode

Replace descript with adesc

Replace bin with abin

Replace invitem with ainvitem

Replace minimum with aminimum

Replace order with aorder

Replace pmeasure with apmeas

Replace scode with ascode

Replace lpdate with alpdate

Replace lpunit with alpunit

Replace lotno with alotno

Replace stdcost with astdcost

Replace avgcost with aavgcost

Replace lpprice with alpprice

Replace lsdate with alsdate

Replace lsunit with alsunit

Replace ascode1 with aascode1

Replace ascode2 with aascode2


```

        Replace begunit with abegunit
        Replace ohunit with aohunit
        Unlock
    Endif
    Select 2
    For j = 1 to i-1
        If msprice[j] <> 0
            Append Blank
            If Rlock()
                Replace pcode with acode
                Replace smeaure with msmea[j]
                Replace sprice with msprice[j]
                Replace type with mtype[j]
                Unlock
            Endif
        Endif
    Next
    Select 1
Enddo
CLOSE DATABASE.
Return[]

Function Dsp
Parameter line,ii.
if ii > 0
    @ line,38 Get mtype[ii]
    @ line,50 Get msmea[ii]
    @ line,60 Get msprice[ii] picture '@Z 99,999.99'
Endif
Return[]

```

```

Function custdir
set color to
MMENU('T',' Customer Directory ',10,41,20,72,.F.,'9')
Set color to
select 1
use customer index cuscode,cusname
SET DEVICE TO SCREEN
cn = space(1)
ps = space(1)
@ 15,47 say 'Sorted by Code/Name '
Set color to &pcolor5
@ 15,57 say 'C'
@ 15,62 say 'N'
Set color to
@ 15,67 get cn
read
repsort = space(12)
DO CASE
    CASE CN $ 'cC'
        set order to 1
        repsort = 'Customer Code'
    OTHERWISE
        set order to 2
        repsort = 'Customer Name'
ENDCASE
IF LASTKEY() = 27
    RETURN[]
ENDIF
CHKPRN4()

GO TOP
PAGE = 0
LINE = 60
atype = space(6)
NO = 1
H1 = 'Date : '+DTOC( DATE() )+SPACE(46)+INV_COMP+SPACE(9)+;
    'Page: '

```

```

H2   = 'Time : '+TIME()+SPACE(45)+TRIM(INV_ADD)+' '+';
      TRIM(INV_ZIP)
H3   = 'Sorted by :'+repsort+space(38)+'CUSTOMER DIRECTORY '+';
      'REPORT'
H4   = REPLI('-',130)
H5   = ' No. Cus_code      Customer Name'+;
      '                          Address'+;
      '                          Phone      Fax'+;
      '                          Type'

```

```
DO WHILE .NOT. EOF()
```

```
DO CASE
```

```
  CASE ACCTYPE = '1'
```

```
    ATYPE = 'cash '
```

```
  CASE ACCTYPE = '2'
```

```
    ATYPE = 'credit'
```

```
  OTHERWISE
```

```
    ATYPE = SPACE(6)
```

```
ENDCASE
```

```
IF LINE >= 46
```

```
  LINE = 1
```

```
  PAGE = PAGE+1
```

```
  IF PAGE > 1
```

```
    EJECT
```

```
  ENDIF
```

```
  ? H1+STR(PAGE,4,0)
```

```
  ? H2
```

```
  ? H3
```

```
  ? H4
```

```
  ? H5
```

```
  ? H4
```

```
ENDIF
```

```
? STR(NO,3,0)+' . '+CCODE+' '+';
```

```
SUBSTR((CNAME+SPACE(THLEN(CNAME))+SPACE(10)),1,32)
```

```
?? SUBSTR((ALLTRIM(ADDRESS)+' '+ALLTRIM(CITY)+' '+';
```

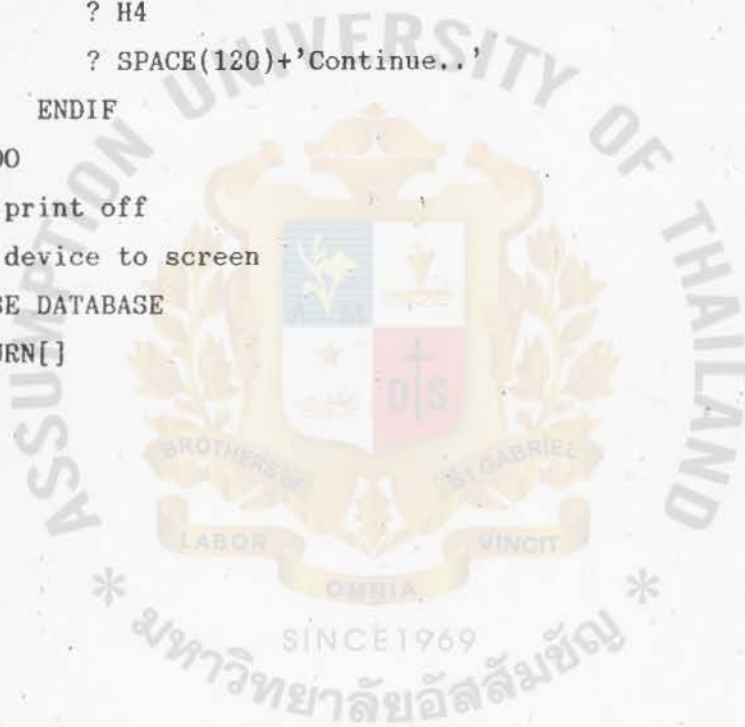
```
ALLTRIM(ZIP)+' '+ALLTRIM(COUNTRY)+;
```

```
SPACE(THLEN(ADDRESS+CITY+ZIP+COUNTRY))+SPACE(30)),1,46)+;
```

```

SUBSTR((ALLTRIM(PHONE1)+' '+ALLTRIM(PHONE2))+
SPACE(20)),1,20)+' '+FAX+' '+ATYPE
LINE = LINE+1
NO = NO+1
SKIP
IF EOF()
    ? H4
    ? space(125)+'End'
    EJECT
ENDIF
IF .NOT. EOF() .AND. LINE >= 46
    ? H4
    ? SPACE(120)+'Continue..'
ENDIF
ENDDO
set print off
set device to screen
CLOSE DATABASE
RETURN[]

```




```

Function supdir
set color to
MMENU('T',' Supplier Directory ',10,41,20,72,.F.,'9')
Set color to
select 1
use supplier index supcode,supname
SET DEVICE TO SCREEN
cn = space(1)
ps = space(1)
@ 15,47 say 'Sorted by Code/Name '
Set color to &pcolor5
@ 15,57 say 'C'
@ 15,62 say 'N'
Set color to
@ 15,67 get cn
read
report = space(12)
DO CASE
CASE CN $ 'cC'
set order to 1
report = 'Supplier Code'
OTHERWISE
set order to 2
report = 'Supplier Name'
ENDCASE
IF LASTKEY() = 27
RETURN[]
ENDIF
CHKPRN4()

GO TOP
PAGE = 0
LINE = 60
atype = space(6)
NO = 1
H1 = 'Date : '+DTOC( DATE() )+SPACE(46)+INV_COMP+SPACE(9)+;
'Page: '

```

```

H2    = 'Time : '+TIME()+SPACE(45)+TRIM(INV_ADD)+' '+';
      TRIM(INV_ZIP)
H3    = 'Sorted by :'+repsort+space(38)+'SUPPLIER DIRECTORY '+';
      'REPORT'
H4    = REPLI('-',130)
H5    = ' No. Sup_code      Supplier Name'+;
      '                      Address'+;
      '                      Phone      Fax'+;
      '          Type'

```

```
DO WHILE .NOT. EOF()
```

```
DO CASE
```

```
  CASE ACCTYPE = '1'
```

```
    ATYPE = 'cash '
```

```
  CASE ACCTYPE = '2'
```

```
    ATYPE = 'credit'
```

```
  OTHERWISE
```

```
    ATYPE = SPACE(6)
```

```
ENDCASE
```

```
IF LINE >= 46
```

```
  LINE = 1
```

```
  PAGE = PAGE+1
```

```
  IF PAGE > 1
```

```
    EJECT
```

```
  ENDIF
```

```
  ? H1+STR(PAGE,4,0)
```

```
  ? H2
```

```
  ? H3
```

```
  ? H4
```

```
  ? H5
```

```
  ? H4
```

```
ENDIF
```

```
? STR(NO,3,0)+'.' '+SCODE+' '+';
```

```
SUBSTR((SNAME+SPACE(THLEN(SNAME))+SPACE(10)),1,32)
```

```
?? SUBSTR((ALLTRIM(ADDRESS)+' '+ALLTRIM(CITY)+' '+';
```

```
ALLTRIM(ZIP)+' '+ALLTRIM(COUNTRY)+;
```

```
SPACE(THLEN(ADDRESS+CITY+ZIP+COUNTRY))+SPACE(30)),1,46)+;
```

```

SUBSTR((ALLTRIM(PHONE1)+' '+ALLTRIM(PHONE2))+
SPACE(20)),1,20)+' '+FAX+' '+ATYPE
LINE = LINE+1
NO    = NO+1
SKIP
IF EOF()
    ? H4
    ? space(125)+'End'
    EJECT
ENDIF
IF .NOT. EOF() .AND. LINE >= 46
    ? H4
    ? SPACE(120)+'Continue..'
ENDIF
ENDDO
set print off
set device to screen
CLOSE DATABASE
RETURN[]

Function chkprn4
    pp = .t.
    If .not.isprinter()
        ok = .t.
        ? chr(7)+chr(7)
        @ 24,15 say 'Is printer ready ? (Y/N) ' get ok picture 'Y'
        read
        if .not.ok
            pp = .F.
        endif
    Endif
    If pp
        set print on
        set console off
        ? chr(27)+'@'
        ? chr(27)+'2'
        set devi to screen
    
```

```

    @ 24,25 say '    printing..
    set device to print
Else
    Set device to screen
    Set print off
Endif
return []

```

```

Function thlen

```

```

    Parameter thai

```

```

    a = 0

```

```

    For i = 1 to len(thai)

```

```

        if substr(thai,i,1) $ '

```

```

            a = a+1

```

```

        Endif

```

```

    Next

```

```

    Return(a)

```




```

Function prodlist
set color to
MMENU('T','Product List ',10,41,20,72,.F.,'9')
Set color to
select 1
use product index prodcodex,prodname
SELECT 2
USE PPRICE INDEX PPCODE
SELECT 1
SET DEVICE TO SCREEN
cn = space(1)
ps = space(1)
@ 15,47 say 'Sorted by Code/Name '
Set color to &pcolor5
@ 15,57 say 'C'
@ 15,62 say 'N'
Set color to
@ 15,67 get cn
read
repsort = space(19)
DO CASE
    CASE CN $ 'cC'
        set order to 1
        repsort = 'Product Code'
    OTHERWISE
        set order to 2
        repsort = 'Product Description'
ENDCASE
IF LASTKEY() = 27
    RETURN[]
ENDIF
*CHKPRN4()
select 1
GO TOP
PAGE = 0
LINE = 60
NO = 1

```

```

H1   = 'Date : '+DTC( DATE( ) )+SPACE(46)+INV_COMP+SPACE(9)+;
      'Page: '
H2   = 'Time : '+TIME( )+SPACE(45)+TRIM( INV_ADD )+' '+';
      TRIM( INV_ZIP )
H3   = 'Sorted by :'+repsort+space(35)+'PRODUCT LISTING'
H4   = REPLI( '- ',130)
H5   = 'Product      Product Description      Supplier      '+';
      'Price      Measure Minimum Quantity Last Sale '+';
      'Last Pur   Last Pur   Average'
H6   = ' Code                                     Code '+';
      ,
      , on hand   Date '+';
      ,
      Date      Unit      Cost'

```

```
DO WHILE .NOT. EOF( )
```

```
IF LINE >= 46
```

```
LINE = 7
```

```
PAGE = PAGE+1
```

```
IF PAGE > 1
```

```
? H4
```

```
? SPACE(120)+'Continue...'
```

```
* ? CHR(12) && EJECT
```

```
ENDIF
```

```
? H1+STR(PAGE,4,0)
```

```
? H2
```

```
? H3
```

```
? H4
```

```
? H5
```

```
? H6
```

```
? H4
```

```
ENDIF
```

```
column1 = space(50)
```

```
column2 = space(60)
```

```
select 1
```

```
column1 = PCODE+' '+SUBSTR((DESCRIPT+SPACE(THLEN(DESCRIPT)))+;
      SPACE(10)),1,30)+' '+SCODE+' '
```

```
column2 = tran(minimum,'@Z 99,999')+' '+';
```

```
      tran(ohunit,'@Z 999,999.99')+' '+dtoc(lsddate)+' '+';
```

```

dtoc(lpdate)+' '+tran(lpunit,'@Z 999,999.99')+' '+';
tran(avgcost,'@Z 99,999.99')

apcode = pcode
asprice = 0
asmeasure = space(2)
select 2
seek apcode
if found()
    asprice = sprice
    asmeasure = smeasure
Else
    asprice = 0
    asmeasure = space(2)
Endif
? column1
line = line+1
Do while .not. eof() .and. Apcode = Pcode
    ?? ' '+tran(sprice,'99,999.99')+' '+smeasure+' '+column2
    column1 = space(51)
    column2 = space(60)
    skip
    line = line+1
    if apcode = pcode
        ? column1
        line = line+1
    endif
Enddo
NO = NO+1
Select 1
SKIP
IF EOF()
    ? H4
    ? space(125)+'End'
ENDIF
ENDDO
set print off

```

set device to screen

CLOSE DATABASE

Return[]

Function mlist

Parameter Chk

repname = space(19)

if chk = '1'

repname = 'MEDICINE LISTING'

else

repname = 'CRUDE DRUGS LISTING'

endif

set color to

MMENU('T',repname,10,41,20,72,.F.,'9')

Set color to

select 1

use product index prodcode,prodname

Set filter to Substr(Pcode,1,1) = Chk

SELECT 2

USE PPRICE INDEX PPCODE

Set filter to Substr(Pcode,1,1) = Chk

SELECT 1

SET DEVICE TO SCREEN

cn = space(1)

ps = space(1)

@ 15,47 say 'Sorted by Code/Name'

Set color to &pcolor5

@ 15,57 say 'C'

@ 15,62 say 'N'

Set color to

@ 15,67 get cn

read

repsort = space(19)

DO CASE

CASE CN \$ 'cC'

set order to 1

repsort = 'Product Code'


```

    OTHERWISE
        set order to 2
        repsort = 'Product Description'
    ENDCASE

    IF LASTKEY() = 27
        RETURN[]
    ENDIF

    *CHKPRN4()

    select 1
    GO TOP
    PAGE = 0
    LINE = 60
    NO = 1
    H1 = 'Date : '+DTC(DATE())+SPACE(46)+INV_COMP+SPACE(9)+;
        'Page: '
    H2 = 'Time : '+TIME()+SPACE(45)+TRIM(INV_ADD)+' '+';
        TRIM(INV_ZIP)
    H3 = 'Sorted by :'+repsort+space(35)+repname
    H4 = REPLI('-',130)
    H5 = 'Product      Product Description      Supplier      Price';
        '+' Measure Minimum Quantity Last Sale Last Pur ';
        +'Last Pur Average'
    H6 = ' Code                                     Code';
        ,                                     on hand Date';
        , Date Unit Cost'

    DO WHILE .NOT. EOF()
        IF LINE >= 46
            LINE = 7
            PAGE = PAGE+1
            IF PAGE > 1
                ? h4
                ? SPACE(120)+'Continue..'
            *
            EJECT
        ENDIF
        ? H1+STR(PAGE,4,0)
        ? H2

```

```

? H3
? H4
? H5
? H6
? H4
ENDIF
column1 = space(50)
column2 = space(60)
select 1
column1 = PCODE+' '+'
SUBSTR((DESCRIPT+SPACE(THLEN(DESCRIPT))+SPACE(10)),1,30);
+' '+SCODE+' '
column2 = tran(minimum,'EZ 99,999')+ ' '+'
tran(ohunit,'EZ 999,999.99')+ ' '+dtoc(lodate)+ ' '
+dtoc(lupdate)+ ' '+tran(lpunit,'EZ 999,999.99')+ ' '
+tran(avgcost,'EZ 99,999.99')
apcode = pcode
asprice = 0
asmeasure=space(2)
select 2
seek apcode
if found()
asprice = sprice
asmeasure = smeasure
Else
asprice = 0
asmeasure = space(2)
Endif
? column1
line = line+1
Do while .not. eof() .and. Apcode = Pcode
?? ' '+tran(sprice,'99,999.99')+ ' '+smeasure+' '
+column2
column1 = space(51)
column2 = space(60)
skip
line = line+1

```

```

        if apcode = pcode
            ? column1
            line = line+1
        endif
    Enddo
    NO    = NO+1
    Select 1
    SKIP
    IF EOF()

        ? H4
        ? space(125)+'End'
    *      EJECT
    ENDIF
ENDDO
set print off
set device to screen
CLOSE DATABASE
Return[]

```



```

Function prslist
set color to
MMENU('T','Price Listing',10,41,20,72,.F.,'8')
Set color to
select 1
use product index prodcode,prodname
SELECT 2
USE PPRICE INDEX PPCODE
SELECT 1
SET DEVICE TO SCREEN
cn = space(1)
ps = space(1)
@ 15,47 say 'Sorted by Code/Name'
Set color to &pcolor5
@ 15,57 say 'C'
@ 15,62 say 'N'
Set color to
@ 15,67 get cn
read
report = space(19)
DO CASE
    CASE CN $ 'cC'
        set order to 1
        report = 'Product Code'
    OTHERWISE
        set order to 2
        report = 'Product Description'
ENDCASE
IF LASTKEY() = 27
    RETURN[]
ENDIF
CHKPRN4()

Select 1
GO TOP
PAGE = 0
LINE = 60

```



```

NO      = 1
H1      = 'Date : '+DTC( DATE())+SPACE(10)+INV_COMP+SPACE(5)+;
        'Page: '
H2      = 'Time : '+TIME()+SPACE(9)+TRIM(INV_ADD)+' '+';
        TRIM(INV_ZIP)
H3      = 'Sorted by :'+repsort+space(5)+'PRODUCT PRICE LISTING'
H4      = REPLI('-',79)
H5      = 'Product          Product          ';
        '+Purchase          Sell'
H6      = ' Code          Description          Date Meas Unit';
        ' Price Meas Price T'

DO WHILE .NOT. EOF()
    IF LINE >= 40
        LINE = 7
        PAGE = PAGE+1
        IF PAGE > 1
            EJECT
        ENDIF
        ? H1+STR(PAGE,4,0)
        ? H2
        ? H3
        ? H4
        ? H5
        ? H6
        ? H4
    ENDIF

    column1 = space(66)
    select 1
    column1 = PCODE+' '+';
    SUBSTR((DESCRIPT+SPACE(THLEN(DESCRIPT))+SPACE(10)),1,27)+' '+';
    dtoc(lpdate)+' '+PMeasure+' '+tran(lpunit,'999999.99')+' '+';
    tran(lpprice,'99999.99')
    * ? PCODE+' '+';
    SUBSTR((DESCRIPT+SPACE(THLEN(DESCRIPT))+SPACE(10)),1,27)+' '+';
    dtoc(lpdate)+' '+PMeasure+' '+tran(lpunit,'999999.99')+' '+';
    tran(lpprice,'99999.99')

```

```

apcode = pcode
? column1
select 2
seek apcode
Do while Apcode = Pcode
    ?? ' '+smeasure' '+tran(sprice,'99999.99')+ ' '+type
    column1 = space(65)
    line = line + 1
    skip
    if apcode = Pcode
        ? column1
    endif
Enddo
* LINE = LINE+1
NO = NO+1
Select 1
SKIP
IF EOF()
    ? H4
    ? space(66)+'End of Report'
    EJECT
ENDIF
IF .NOT. EOF() .AND. LINE >= 40
    ? H4
    ? SPACE(69)+'Continue..'
ENDIF
ENDDO
set print off
set device to screen
CLOSE DATABASE
Return[]

Function mplist
Return[]

Function cplist
Return[]

```

```

*-----*
* Program      :   Inv_cus.PRG
* Written      :   08/11/1990
* Note         :   Inquiry customer code or supplier
* Update       :   08/11/1990
* Written      :   Miss. Suwanna
*      Key     :   End 6      Home 1
*               Pgup 18     Pgdn 3
*-----*

```

```

Parameter i_type      &&
SET EXACT ON
SET EXCLUSIVE OFF
If i_type = 1
    C_u_s_t_o_m_e_r = [C u s t o m e r]
Else
    C_u_s_t_o_m_e_r = [S u p p l i e r]
Endif
Scroll(0,0,24,79,-25)
aa = Screen41(C_u_s_t_o_m_e_r)

Set Key 28 to  Help41
Set Key -6  to  Pquit      && Function key 7
Set Key -4  to  Pquit      && Function key 5
Set Key -3  To  Pquit      && Function key 4

* Set function
Lisa = .T.

```

```

Scrn41 = Savescreen(7,0,23,79)

```

```

Select 1
Set order to 2          && Customer file

```

```

DO WHILE .T.
    mname = SPACE(55)
    @ 24,01 SAY "Enter name/partial name to find customer "+
        'code ,or ENTER key to exit"

```

```

@ 03,14 GET mname
READ
@ 24,1 Say Space(75)
mname = Alltrim(mname)

* exit condition
IF mname = SPACE(55)
    Exit
ENDIF

Line = 7
mnam = Alltrim(mname)
aa = LEN(mnam)
SEEK mnam
IF FOUND()
    DO WHILE mnam $ Alltrim(Cname) .OR. (mnam $ Cname)
        @ Line, 03 SAY Ccode
        @ Line, 14 SAY ;
        Substr(TRIM(Cname)+'(' +trim(Contact)+'')',1,41)
        @ Line, 56 Say Substr(Phone1,1,15)
        @ Line, 75 Say acctype
        Line = Line + 1
        IF Line = 23
            STORE ' ' TO wait_subst
            @ 23, 03 SAY "Next.." GET wait_subst
            READ
            IF wait_subst $ 'xX'
                EXIT
            ENDIF
            Scroll(7, 0,22,79 ,15)
            Restscreen(7,0,23,79,Scrn41)
            Line = 7
        ENDIF
        SELECT 1
        SKIP
    ENDDO
ELSE

```



```

Endtext
Set color to &Pcolor2
@ 01,02 Say '[&M_datel] @ Inquiry Customer '+';
' Code @ [&M_timel]'
* | Code | Customer Name | '+';
' Tel. | Mk.;
Set color to &Pcolor5
@ 05,02 Say [ Code ]
@ 05,12 Say [ Customer Name ]
@ 05,56 Say [ Tel. ]
@ 05,74 Say [ Ac.]
Set color to &Pcolor1
Return .T.

```

Procedure S_Color

IF ISCOLOR() && CHECK COLOR CARD.

Pcolor1 = "W+/B,W+/R,B,,BG/B" && normal
Pcolor2 = "BG/R" && item highlight
Pcolor3 = "N/GR*" && error or high intensity
Pcolor4 = "W+/BG,,,,W+/BG" && achoice/list array
Pcolor5 = "B+/BG,,,,BG/BG" && achoice/sysmenu..true,
&& unselected

Pcolor6 = "RG+/BG"
Pcolor7 = "B+/BG,B+/BG"
Pcolor8 = "RB+/B,GR/BG"
Pcolor9 = "W+/BG,GR+/BG"
Pcolor10 = "WG+/B,,,,GR/BG"

ELSE

* monochrome

Pcolor1 = "W"
Pcolor2 = "I"
Pcolor3 = "*W+"
Pcolor4 = "W,,,,W"
Pcolor5 = "W+,,,,W"
Pcolor6 = "+W*"
Pcolor7 = "W"
Pcolor8 = "W,,,,W"
Pcolor9 = "W+"
Pcolor10= "W"

Endif

Return

: End function Set color -

```

Function moveto
Parameter t,l,b,r,a,b
winbuff = savescreen(t,l,b+1,r+3)
For i = 1 To L-a
    Restscreen(t,l-i,b+1,r+3-i,winbuff)
Next
Return .T.

```

```

Function movego
Parameter t,l,b,r,a,b
winbuff = savescreen(t,l,b,r)
For i = 1 To L-a
    Restscreen(t,l+i,b,r+i,winbuff)
Next
Return .T.

```

```

Procedure Setup
Set key 27 to
A_setup = Savescreen(10,20,22,65)
MMENU('E',' Set up parameter ',10,20,21,60,.F.,'5')
store ' ' to wait_subst
Set color to W
@ 13,21 clear to 20,59
@ 14,23 say "Company name : "
@ 15,23 get Inv_comp picture '!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!'
@ 16,23 say "Address : "
@ 17,23 get Inv_add picture 'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
@ 18,23 Say "Zip Code : " get inv_zip picture 'XXXXX'
@ 19,23 Say "Data Directory : " get inv_driv picture 'X:'
Read
set default to &inv_driv
restscreen(10,20,22,65,A_setup)
Set color to &Pcolor1
save to inv all like inv_*
Return

```



```

Function MMenu
Para th,title1,y1,x1,y2,x2,Flag,color
Public box1,box2,box3,b1,b2,b3
Set scor off
If Thai                                && Thai character
* Box1 = chr(152)+chr(150)+chr(153)+chr(149)+chr(155)+chr(150);
        +chr(154)+chr(149) &&chr(160)
* Box2 = chr(152)+chr(150)+chr(153)+chr(149)+chr(158)+chr(150);
        +chr(156)+chr(149) &&chr(160)
* Box3 = chr(152)+chr(150)+chr(158)+chr(149)+chr(158)+chr(150);
        +chr(156)+chr(149) &&chr(160)
    B1 = chr(160)
    B2 = chr(160)
    B3 = chr(160)
Else
* Box1 = chr(201)+chr(205)+chr(187)+chr(186)+chr(188)+chr(205);
        +chr(200)+chr(186) &&chr(176)
* Box2 = chr(201)+chr(205)+chr(187)+chr(186)+chr(185)+chr(205);
        +chr(204)+chr(186) &&chr(177)
* Box3 = chr(201)+chr(205)+chr(203)+chr(186)+chr(202)+chr(205);
        +chr(200)+chr(186) &&chr(178)
    B1 = chr(176)
    B2 = chr(177)
    B3 = chr(178)
Endif
Pc = pcolor&color

If flag
    scroll(0,0,24,79,25)
    Fo = 'F1 Help   F2           F3           F4           F5           F6'+;
        '           F7           F10 Exit '
    set color to &Pc
    @ y1,x1,y1+3,x2 box box1
    @ y1+1,x1+1 clear to y1+2,x2-1
    *set color to &Pcolor1
    @ y1+1,x1+2 say 'Inventory System of crude drugs supplies '+;
        'V.1.0'

```

```

@ y1+2,x1+2 say 'By S. Pongprueksa'
a1 = cday(date())+' '+cmonth(date())+' '+str(day(date()),2)+'
      ','+str(year(date()),4)
@ y1+1,x2-len(a1)-1 say a1
@ y1+2,x2-9 say time()
@ y1+2,x1+(x2-x1)/2-len(title1)/2 say title1
name = '['+GetE("NAME")+']'
* @ y1+1,x2-len(name) say name
  *@ 23,0 say fo
  set color to &Pcolor1
  @ y1+4,x1,y2,x2 box box1+b1
else
  @ y1,x1 clear to y2,x2+1
  set color to &Pc
  @ y1,x1,y2,x2 box box1
  @ y1,x1,y1+2,x2 box box2
  @ y1+1,x1+1 clear to y1-1,x2-1
  all = space((x2-x1)/2-len(title1)/2)+title1+
        space((x2-x1-2)/2-len(title1)/2)
  @ y1+1,x1+1 say all
* @ y1+1,x1+(x2-x1)/2-len(title1)/2 say title1
  Set color to W
  @ y1+1,x2+1,y2+1,x2+2 Box ' '
  @ y2+1,x1+1,y2+1,x2+2 Box ' '
  set color to &Pcolor1
Endif
return .T.

```

function britdate

parameter cd

```

dd = right('00'+ltrim(str(day(cd),2)),2)+'/'+
      +right('00'+ltrim(str(month(cd),2)),2)+'/'+
      +right(str(year(cd),4),2)
return (dd)

```

```

*-----*
* Program : Inv_box.prg *
* Note.....: Select screen display *
*-----*

```

```

procedure Inv_box
save screen to sl
declare fr[10]
MMENU('E',' Setup screen ',7,27,20,58,.F.,'2')
af = 'Press any key to exit '
m1 = 'Select Border'

fr[1] = chr(218)+chr(196)+chr(191)+chr(179)+chr(217)+chr(196);
      +chr(192)+chr(179)
fr[2] = chr(152)+chr(150)+chr(153)+chr(149)+chr(155)+chr(150);
      +chr(154)+chr(149)
fr[3] = repli(chr(198),4)
fr[4] = repli(chr(8),4)
fr[5] = chr(43)+chr(45)+chr(43)+chr(124)+chr(43)+chr(45)+chr(43);
      +chr(124)
fr[6] = chr(201)+chr(205)+chr(187)+chr(186)+chr(188)+chr(205);
      +chr(200)+chr(186)
fr[7] = repli(chr(177),4)
fr[8] = repli(chr(178),4)
fr[9] = repli(chr(176),4)
fr[10] = repli(chr(0),4)
@ 11,42-len(m1)/2 say m1
@ 13,29 say '1. ' + fr[1]
@ 14,29 say '2. ' + fr[2]
@ 15,29 say '3. ' + repli(chr(198),4)
@ 16,29 say '4. ' + repli(chr(8),4)
@ 13,45 say '5. ' + fr[5]
@ 14,45 say '6. ' + fr[6]
@ 15,45 say '7. ' + fr[7]
@ 16,45 say '8. ' + fr[8]
wa = 1
@ 18,30 say 'Select.: ' get wa picture '9'

```

```

read
wa = iif(wa = 0,10,wa)
inv_box1 = fr[wa]
inv_box2 = fr[wa]
inv_box3 = fr[wa]
box1 = fr[wa]
box2 = fr[wa]
box3 = fr[wa]
save to inv all like inv_*
restore screen from s1
return

```




```

*:-----*:
*: Program.: Inv_tran.prg *:
*: Written.: Ms. Suwanna Pongprueksa *:
*: Date....: April 18,1991 *:
*: Note....: Inventory System of Crude Drugs Supplies *:
*: : Support LAN and Multiuser *:
*: : Compiled by Clipper Summer 88 or more *:
*: : *:
*: : Inv_rec.prg : Receive product from supplier *:
*: : Inv_dei.prg : Sell product to customer *:
*: : Inv_upd.prg : Update/Edit Product *:
*: : Inv_tra.prg : Transfer product to another store *:
*: : Inv_spr.prg : Input sell price *:
*:-----*:

```

Save screen to 'Inv_tran

If .not. open_file() && Cannot open file

Return

Endif

Set color to &Pcolor1

MMENU('E',' Daily transaction ',8,27,18,58,.F.,'2')

Tt1 = '1. Receive from supplier'

Tt2 = '2. Sell to customer'

Tt3 = '3. Update/Edit product'

Tt4 = '4. Transfer store'

Tt5 = '5. Input sell price'

Tt6 = '6. Inquiry customer code'

Tt7 = '7. Inquiry supplier code'

Save screen to Invmenu4

Do while .T.

Set key 27 to

&& Initial ESC key

Restore screen from Invmenu4

Set console on

```

set message to 24 center
Set color to &Pcolor8
@ 24,00 clear to 24,79
@ 11,30 Prompt Tt1 message Tt1
@ 12,30 Prompt Tt2 message Tt2
@ 13,30 Prompt Tt3 message Tt3
@ 14,30 Prompt Tt4 message Tt4
@ 15,30 Prompt Tt5 message Tt5
@ 16,30 Prompt Tt6 message Tt6
@ 17,30 Prompt Tt7 message Tt7
menu to dl
set color to &Pcolor1
aa = Moveto(7,27,20,66, 5,-1)    && Move to column 5
Do Case
    Case dl = 1                && Receive product from supplier
        Do Inv_rec
    Case dl = 2                && Sell product
        Do Inv_sel
    Case dl = 6                && Inquiry customer code
        Do inv_cus with 1
    Case dl = 7
        Do inv_cus with 2
    Case Lastkey() = 27 && Exit
        Exit
Endcase
Enddo
Rest screen from inv_tran
Return

```

```

*-----*
* Receive product from supplier *
* Input : Description Invoice from keyboard *
*      And save data in transection file *
*      and update product file *
*      update supplier file *
*-----*

Procedure Inv_rec
Max_row = 100
Declare Mpcode[Max_row]
Declare Munit[Max_row]
Declare Mpmeasure[Max_row]
Declare Mbprice[Max_row]
Declare Mrec[Max_row]      && Record no. in product
Set color to &Pcolor1
@ 05,01 Clear to 22,78

&& Clear screen
M_header = [Input receive product from supplier]
Set color to &Pcolor4
@ 05,40-len(M_header)/2 Say M_header      && Header
*-----*
* Screen *
*-----*
Set color to &Pcolor1
@ 06,03 Say [Date ]
@ 06,60 Say [Invoice no.]
@ 07,03 Say [Supplier code ]
@ 08,03 Say 'Account type [ ]      1. Cash      2. Margin'+;
' [ ] Day '
@ 9,1,22,78 Box Box1      && Draw box
Set color to &Pcolor4
Ha=[ P_Code|      Description      |Unit |Mea|'+;
   ' Price|      Amount  ]
@ 10,02 Say Ha
Set color to &Pcolor1
@ 11,09,21,09 Box box1

```

```

@ 11,41,21,41 Box box1
@ 11,49,21,49 Box box1
@ 11,53,21,53 Box box1
@ 11,63,21,63 Box box1
@ 24,00
Save screen to sc_4
Set key 18 to kclear
Do while .T.
    Rest screen from sc_4
    Set color to &Pcolor1
    Mrefer_no = Space(6)
    Mb_date   = Date()
    Mscore    = Space(6)
    Maccount  = 1
    @ 24,2 Say [Input invoice number and ENTER ]
    @ 6,72 Get Mrefer_no
    Read
    If Mrefer_no = Space(6)
        Exit
    Endif

    @ 24,2 Say [Input date and supplier code ]
    @ 6,8  Get Mb_date
    @ 7,17 Get Mscore
    Read

    Select Supplier
    Seek Mscore
    If .not.found()
        Msg_error([Seek supplier code error,try again])
        Loop
    Endif
    @ 07,25 Say sname
    Afill(Mpcode, Space(7))
    Afill(Munit,0)
    Afill(Mpmeasure,' ')
    Afill(MBprice,0)

```



```

Afill(Mrec,0)
@ 24,02 Say [Input account supplier , ENTER ]
@ 08,17 Get Maccount Picture '9' Range 1,2
Read
i = 1
Line = 11
Select 3                                && Product
Do while i <= Max_row
    @ 24,02 Say [Input product code and ENTER ]
    @ Line,02 Get Mpcode[i]
    Read
    If lastkey() = 27 && .or. Mpcode[i] = Space(7)
        Exit
    Endif
    Seek Mpcode[i]
    if .not.found()
        Msg_error([Product code error])
    Loop
    Endif
    mrec[i] = recno()                    && save record
    @ line,10 Say Descript
    @ 24,02 Say [Input quantity,measure , price ]
    @ Line,42 Get Munit[i] picture '999,999'
    @ line,50 Get Mpmeasure[i]
    @ Line,54 Get Mbprice[i] picture '99,999.99'
    Read
    @ Line,64 Say Munit[i] * Mbprice[i] picture ;
    '@Z 99,999,999.99'
    if lastkey() = 18 && Up cursor
        i = iif(i > 1,i - 1,i)
        if line = 11.and.i >= 1
            Scroll(11,2,22,78,1)
        else
            Line = Line - 1
        Endif
    Loop
Else

```

```

    If i < Max_row
        i = i + 1
        Line = Line + 1
        if line >= 22
            Scroll(11,2,22,77,1)
            Line = 22
        endif
    Endif
Endif
Enddo
ss = .T.
@ 24,0
@ 24,0 Say 'Is it correct ? (y/n)' Get ss picture 'Y'
Read
Amt = 0

If ss
    for j = 1 to i
        Amt = Amt + munit[j]*Mbprice[j]           && some amount
        if munit[j] > 0
            Select 4
            append blank
            If rlock()
                Replace refer_no with mrefer_no,b_date with mb_date
                Replace scode with mscode,pcode with mpcode[j]
                replace unit with munit[j],pmeasure with Mpmeasure[j]
                Replace bprice with mbprice[j],time with time()
                Replace remark with Str(Maccount,1)
            Unlock
        Else
            msg_error([Save data in intran.dbf error,please check])
        Endif
    Endif
Endif

* Update in product
Select 3
Goto Mrec[j]

```

```

if mbprice[j] > 0

    new = ohunit*avgcost + munit[j]*mbprice[j]
    newp = new / (Ohunit+munit[j])
Else
    Newp = avgcost
Endif
If rlock()
    Replace lupdate with Mb_date      && Last purchase date
    Replace lpunit with munit[j]      && Last unit purchase
    Replace ohunit with ohunit+munit[j] && onhand unit
    Replace avgcost with Newp         && Aveage price
    Replace lpprice with mbprice[j]   && last purchase price
    Unlock
Endif
Next
* Update in supplier file
Select 2
If rlock()
    Replace tperiod with Tperiod+Amt
    Replace Curbal with Tperiod-Amt
    Replace Paydate with Mb_date
    Replace puramt with amt
    Unlock
endif
Endif
Enddo
Return

Procedure kclear
Clear gets
Return

```

```

Function Open_file
Select 1
File10 = [Customer.dbf]           && Customer file
File11 = [cuscode.ntx]
File12 = [cusname.ntx]

File20 = [Supplier.dbf]          && Supplier
File21 = [Supcode.ntx]
File22 = [Supname.ntx]

File30 = [Product.dbf]           && Product
File31 = [Prodcode.ntx]
File32 = [Prodname.ntx]

File40 = [Intran.dbf]            && Intran
File41 = [inpcode.ntx]
File42 = [inrefer.ntx]
File43 = [Inscore.ntx]

File50 = [Pprice.dbf]            && price
File51 = [ppcode.ntx]

File70 = [Outtran.dbf]           && Outtran
File71 = [Outccode.ntx]
File72 = [Outrefer.ntx]
File73 = [Outpcode.ntx]

Close Data                       && Close all database
Select 1
Lisa = .T.
If Net_usel('&File10',.T.,30)
    Set index to &File11,&File12
Else
    Lisa = .F.
Endif

Select 2

```



```

If Net_usel('&File20',.T.,30)
    Set index to &File21,&File22
Else
    Lisa = .F.
Endif

Select 3
If Net_usel('&File30',.T.,30)
    Set index to &File31,&File32
Else
    Lisa = .F.
Endif

Select 4
If Net_usel('&File40',.T.,30)
    Set index to &File41,&File42,&File43
Else
    Lisa = .F.
Endif

Select 5
If Net_usel('&File50',.T.,30)
    Set index to &File51
Else
    Lisa = .F.
Endif

Select 6
If Net_usel('&File70',.T.,30)
    Set index to &File71,&File72,&File73
Else
    Lisa = .F.
Endif

Return lisa

```

```
Function Msg_error  
Parameter msg  
aa = Savescreen(24,0,24,78)  
Set color to &Pcolor2  
dd = ' '  
@ 24,0 Say Msg Get dd  
Read  
Set color to &Pcolor1  
Restscreen(24,0,24,78,aa)  
Return [ ]
```



```

*:-----*:
*: Program.: Inv_upd.prg *:
*: Written.: Ms. Suwanna Pongprueksa *:
*: Date....: April 28,1991 *:
*: Note....: Inventory System of Crude Drugs Supplies *:
*:          : Support LAN and Multiuser *:
*:          : Compiled by Clipper Summer 88 or more *:
*:          : *:
*:          : Inv_up1.prg : Receive product from supplier:*
*:          : Inv_up2.prg : Sell product to customer *:
*:          : Inv_up3.prg : Update/Edit Product *:
*:          : Inv_up4.prg : Transfer store of product *:
*:-----*:

```

```
Private Tt1,Tt2,Tt3,Tt4,inv_Upd,invmenu3,d1
```

```
*-----*
```

```
Save screen to Inv_Upd
```

```
MMENU('E',' 3. Update Data ',8,27,18,58,.F.,'2')
```

```
Tt1 = '1. Daily Update '
```

```
Tt2 = '2. Monthly Update '
```

```
Tt3 = '3. Backup Data '
```

```
Tt4 = '4. Restore Data '
```

```
Save screen to Invmenu3
```

```
Do while .T.
```

```
Set key 27 to
```

```
&& Initial ESC key
```

```
Restore screen from Invmenu3
```

```
Set console on
```

```
set message to 24 center
```

```
Set color to &Pcolor8
```

```
@ 24,00 clear to 24,79
```

```
@ 12,30 Prompt Tt1 message Tt1
```

```
@ 13,30 Prompt Tt2 message Tt2
```

```
@ 14,30 Prompt Tt3 message Tt3
```

```
@ 15,30 Prompt Tt4 message Tt4
```

```

menu to d1
set color to &Pocolor1

aa = Moveto(7,27,20,66, 5,-1)    && Move to column 5

Do Case
    Case d1 = 1                    && Daily Update
*      Do Inv_Up1
    Case d1 = 2                    && Monthly Update
        Do Inv_Up2
    Case d1 = 3                    && Backup Data
        Do Inv_Up3
    Case d1 = 4                    && Restore Data
        Do Inv_Up4
    Case Lastkey() = 27            && Exit

```




```

*:-----*:
*: Program.: Inv_sel .prg *:
*: Written.: Ms. Suwanna Pongprueksa *:
*: Date....: April 18,1991 *:
*: Note....: Inventory System of Crude Drugs Supplies *:
*:          : Support LAN and Multiuser *:
*:          : Compiled by Clipper Summer 88 or more *:
*:          : *:
*:-----*:

```

```

*-----*
* Sell product to Customer *
* Input : Description Invoice from keyboard *
*       And save data in transaction file *
*       and update product file *
*       update Customer file *
*-----*

```

```

Max_row = 100
Declare Mpcode[Max_row]
Declare Munit[Max_row]
Declare Mpmeasure[Max_row]
Declare Mbpprice[Max_row]
Declare Mrec[Max_row]      && Record no. in product

```

```

@ 05,01 Clear to 22,78

```

```

&& Clear screen

```

```

M_header = [Input Sell product to customer ]

```

```

Set color to &Pcolor4

```

```

@ 05,40-len(M_header)/2 Say M_header    && Header

```

```

*-----*

```

```

* Screen *

```

```

*-----*

```

```

Set color to &Pcolor1

```

```

@ 06,03 Say [Date ]

```

```

@ 06,60 Say [Invoice no.]

```

```

@ 07,03 Say [Customer code ]
@ 08,03 Say 'Account type [ ] 1. Cash '+';
'2. Margin [ ] Day '
@ 09,01,22,78 Box Box1      && Draw box
Set color to &Pcolor2
Ha=[   P_code      Description      Unit      Meas]+;
[   Price      Amount   ]
@ 10,03 Say Ha
@ 21,13 Say [** Total **]
@ 24,00
Save screen to sc_5
Set key 18 to kclear
Do while .T.
    Rest screen from sc_5
    Mrefer_no = Space(6)
    Mb_date   = Date()
    Mscore    = Space(6)
    Maccount  = 1
    @ 06,72 Get Mrefer_no
    Read
    If Mrefer_no = Space(6)
        Exit
    Endif
    @ 06,08 Get Mb_date
    @ 07,17 Get Mscore
    Read
    Select 1
    Seek Mscore
    If .not.found()
        Msg_error([Seek supplier code error,try again])
        Loop
    Endif
    @ 07,25 Say Cname
    Afill(Mpcode, Space(7))
    Afill(Munit,0)
    Afill(Mpmeasure,' ')
    Afill(MBprice,0).

```

```

Afill(Mrec,0)
@ 08,17 Get Maccount Picture '9' Range 1,2
i = 1
Line = 11
Select 3                                     && Product
Do while i <= Max_row
    @ Line,02 Get Mpcode[i]
    Read
    If lastkey() = 27   && .or.Mpcode[i] = Space(7)
        Exit
    Endif
    Seek Mpcode[i]
    if .not.found()
        Msg_error([Product code error])
    Loop
    Endif
    mrec[i] = recno()                       && save record
    @ line,10 Say Descript
    @ line,42 Get Munit[i] picture '99,999'
    @ line,50 Get Mpmeasure[i]
    @ line,54 Get Mbprice[i] picture '99,999.99'
    Read
    @ Line,64 Say Munit[i] * Mbprice[i] picture ;
    '@Z 99,999,999.99'
    if lastkey() = 18   && Up cursor
        i = iif(i > 1,i - 1,i)
        if line = 11.and.i >= 1
            Scroll(11,2,22,78,1)
        else
            Line = Line - 1
        Endif
    Loop
Else
    if i < Max_row
        i = i + 1
        Line = Line + 1
        if line >= 22

```

```

        Scroll(11,2,22,77,1)
        Line = 22
    endif
Endif
Endif
Enddo
ss = .T.
@ 24,10 Say 'Save data ' Get ss picture 'Y'
Read
Amt = 0

if ss
    for j = 1 to i
        Amt = Amt + munit[j]*Mbprice[j]      && some amount
        if munit[j] > 0
            Select 6                          && Outtran
            append blank
            If rlock()
                Replace refer_no with mrefer_no,s_date with mb_date
                Replace ccode with mrcode,rcode with mrcode[j]
                Replace unit with munit[j],smeasure with Mpmeasure[j]
                Replace sprice with mbprice[j],time with time()
                * Replace remark with Str(Maccount,1)
            Unlock
            Else
                msg_error([Save data in Outtran.dbf error,please check])
            Endif
        Endif
    Endif

    * Update in product
    Select 3
    Goto Mrec[j]
    if mbprice[j] > 0
        new = ohunit*avgcost - munit[j]*mbprice[j]
        newp = new / (Ohunit-munit[j])
    Else
        Newp = avgcost
    Endif

```



```

Endif
If rlock()
    Replace lsdate with Mb_date      && Last purchase date

    Replace lsunit with munit[j]      && Last unit purchase
    Replace ohunit with ohunit-munit[j]  && onhand unit
    replace avgcost with Newp          && Aveage price
    * replace sprice with mbprice[j]  && last purchase price
    Unlock
Endif
Next
    * Update in customer file
    Select 1
    If rlock()
        Replace tperiod with Tperiod-Amt
        Replace Curbal with Tperiod+Amt
        Replace lsdate with Mb_date
        Replace lsamt with amt
        Unlock
    endif
    unlock all
Endif
Enddo
Return

```

```

Function pinquir
*set exact off
set talk off
set exclu off
set score off
set date british
max_row = 100
declare mcode[max_row],mdescrip[max_row],mbin[max_row]
declare mmeas[max_row]
declare munit[max_row],mprice[max_row],mcost[max_row]
Public pcolor1,pcolor2,pcolor3,pcolor4,pcolor5
Public pcolor6,pcolor7,pcolor8,pcolor9,pcolor10
Public box1,box2,box3,b1,b2,b3

DO S_color
Set color to &pcolor2
clear
set color to &pcolor1
*          1234567890123456789012345678901234567890
*          123456789012345678901234567890
@ 01,00 say '+'-----'+;
'-----'
@ 02,00 say '*          PRODUCT INQUIRY BY PRODUCT          '+;
'          '
@ 03,00 say '+'-----'+;
'-----'
@ 04,00 say '|Product|'+;
'|'
@ 05,00 say '+'-----'+;
'-----'
@ 06,00 say '| Code |      Product description      | Bin |Mea| Price |'+;
'| Cost |Unit OnHand|'
@ 07,00 say '+'-----'+;
'-----'
@ 08,00 say '|          |          |          |          |'+;
'|          |          |          |          |'
@ 09,00 say '|          |          |          |          |'+;
'|          |          |          |          |'

```



```

@ 06,44 say 'Mea'
@ 06,48 say ' Price '
@ 06,58 say ' Cost '
@ 06,68 say 'Unit OnHand'
Set color to &pcolor1
save screen to pinql

*if.not.(getpass('SUWANNA',3))
* Return
*endif

select 1
use product index prodname
select 2
use pprice index ppcode
select 1
do while .t.
    adescr = space(30)
    clear gets
    restore screen from pinql
    set color to &pcolor5
* @ 00,73 say 'F1 Help'
@ 24,01 say 'Input Product Description for Inquiry'
@ 24,63 say '[Esc]-Exit'
    afill(mcode,space(7))
    afill(mdescr,space(30))
    afill(mbin,space(5))
    afill(mmeas,space(2))
    afill(mcost,0)
    afill(mprice,0)
    afill(munit,0)
@ 04,09 get adescr
    read
    if lastkey() = 27 .or. adescr = space(30)
        exit
    endif
select 1

```



```

adescrip = alltrim(adescrip)
seek adescrip
if found()
    @ 04,09 say adescrip
else
    tone(1000,3)
    tone(500,2)
    loop
endif
i = 0
do while .not. eof() .and.+;
    adescrip = Substr(descript,1,Len(adescrip))+;
    .and. i < max_row
    i = i+1
    mcode[i] = pcode
    mdescrip[i] = descript
    mbin[i] = bin
    select 2
    seek mcode[i]
    if found()
        dd = mcode[i]
        Do while dd = pcode
            mmeas[i] = smeasure
            mprice[i] = sprice
            skip
            if dd = pcode
                i = i + 1
            endif
        Enddo
    else
        mmeas[i] = space(2)
        mprice[i] = 0
    endif
    select 1
    mcost[i] = avgcost
    munit[i] = ohunit
    skip

```

enddo

```
*      *if i = 15
*      *  Dsplay(i+7,i)
*      *endif
*      Skip
*      Enddo
*      Do while .t.
*      i = I + 1
*      Dsplay(7+i,i)
*      Read
*      If mdescrip[i] == Space(30).or.Lastkey() = 27
*      Exit
*      Endif
*      i = i+1
*      Enddo
*      restore screen from pinqu1
Set color to &pcolor2
@ 24,00 clear to 24,20
Set color to &pcolor5
@ 24,01 say '[PgUp]-Previous'
@ 24,17 say '[PgDown]-Next'
@ 24,31 say '[Home]-1st Page'
@ 24,47 say '[End]-Last Page'
ed = iif(i > 15,15,i)
SET COLOR TO &PCOLOR1
dwait = ' '
```

```
For j = 1 to ed
    Dsplay(j+7,j)
Next
```

```
R_total = i
@ 24,74 Say 1 picture '99'
@ 24,76 say '/'
@ 24,77 say ;
iif((r_total/15)-int(r_total/15)=0,r_total/15,;
```

```

int(r_total/15)+1) picture '99'
Set color to &Pcolor1
Do while .T.
    keystroke = 0
    Do while keystroke == 0      && Get key
        keystroke = inkey(0)
    Enddo
*   keystroke = Lastkey()

*-----*
* Test key Up Dn Pgup Pgdn Home
*-----*
If keystroke == 27.or.keystroke == -9.or. I <= 15
*   && 27=Esc,-9=F10
    Exit
Endif
Do Case
    Case keystroke == -9.or.keystroke = 27
*   && F10 for exit condition
        Exit
    Case keystroke == 28      && F1
*   Do Help41
    Case keystroke == 1      && Home
        Tone(150,2)
        Line = 22      && Update screen
        For J = 1 To 15
            Dsplay(J+7,j)
        Next
        J = 15
    Case keystroke == 18      && Page Up
        Tone(100,2)
        Tone(150,1)
        J = Iif( J-30 >= 0,J-15,15)
        For Ai = 14 To 0 Step -1
            Dsplay(Ai+8,J+Ai-14)
        Next
*   J = R_TOTAL

```

```

Case keystroke == 6      && End
    Tone(200,2)
    J = R_Total-15
    For Line = 1 to 15
        Dsplay(Line+7,J+Line)
    Next
    J = R_total
    Line = 22
Otherwise
    Tone(170,3)
    J = Iif( J+15 >= R_Total,R_Total-15,J)
    For Line = 1 to 15
        Dsplay(Line+7,J+Line)
    Next
    J = J+Line-1
Endcase
Set color to &Pcolor2
@ 24,74 Say iif((j/15)-int(j/15)=0,j/15,int(j/15)+1);
picture '99'
@ 24,76 say '/'
@ 24,77 say ;
iif((r_total/15)-int(r_total/15)=0,;
r_total/15,int(r_total/15)+1) picture '99'
Set color to &Pcolor1
Enddo
@ 24,79 get dwait
read
enddo
set exact on
return[]

```

```

Function Dsplay
Parameter line,con
* ? con
@ line,01 Say Mcode[con]
@ line,09 Say substr(Mdescrip[con],1,28)
@ line,38 Say Mbin[con]

```


@ line,44 Say Mmeas[con]
@ line,48 Say Mprice[con] picture '99,999.99'
@ line,58 Say Mcost[con] picture '@Z 99,999.99'
@ line,69 Say Munit[con] picture '@Z 999,999.99'
Return []

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