Intranet for Accounting Information System

by

Ms. Chatsuda Prasankiatirat

A 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
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July, 1999

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Project Title	Intranet for Accounting Information System
Name	Ms. Chatsuda Prasankiatirat
Project Advisor	Dr. Wuttipong Pongsuwan
Academic Year	July 1999

The Graduate School of Assumption University has 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.

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July 1999

ABSTRACT

Nowadays, there is very high competition in the world and information is very important in order to support the decision maker in time. We realize the importance of the ways to provide the information to be updated, reliable and timely. We promote the employees to follow the new technology because it is one part of our company to be able to survive in the market. Thus we try to reduce the manual system in order to reduce the time, manpower, error, paper and cost and so on.

This system is developed to support the decision making for the high level managers. The scope of this project, Intranet for the accounting information, is mainly involved in providing the purchase volume, sales volume, efficiency product. This project aims at promoting the new technology to the high level managers to be aware of, get the benefit of the new technology, after that we promote the technology to all workers. Finally, this project is developed to improve the work efficiency and knowledge of all workers in the accounting department.

The new system proposed is developed in accordance with system analysis and system design techniques. The new system project discusses the user requirements, system design, hardware and software requirements, security and control, input design and output design. This system has been successfully tested and implemented on Microsoft Excel, Microsoft Access, and Active Server Page.

ACKNOWLEDGEMENTS

Several people have made contributions to this project. The writer is pleased to acknowledge their effort and think them for their help.

Dr. Wuttipong Pongsuwan, her advisor, is the first person that helped her with suggestion during the entire course of the project. He provide guidance in system design, system analysis and outline of the web pages.

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She would like to thank Mr. Kaipong Paitoon, Managing Director of Accounting in Bangkok Agriculture Feedmill Company Limited, for his timely assistance and provision of information in her project.

Finally, she would like to thank her boss and friends for giving her the chance to do this project in our company.

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I. INTRODUCTION

1.1 Background of the Project

Nowadays, information is very necessary for running the business. The Accounting Information System's department (AIS) is very important because it needs to provide the financial information and support for the decision making in time. To get the high efficiency, we use the intranet to AIS department. It provides the on-line information in order to retrieve, edit and update the information in the correct way. We promote the employees to know and use the intranet, so that they will have the skills in the information technology. Using intranet, our company can reduce more paperwork and many reports.

The major problems of the existing system are summarized as follows:

(1) Cannot provide the information to support the decision making in time.

(2) Create the redundancy jobs.

(3) Has no computer based on the information system for the intranet system.

(4) Employees lack computer skills.

(5) Provide incorrect and late reports.

(6) Create high competition of technology.

For the above reasons, we need to develop the intranet system in the AIS department. We expect to summarize the special information to the high level management, in order to support decision making, and to promote the technology to all workers.

1.2 Objectives of the Project

The objectives of the project on the AIS intranet system are as follows:

(1) Support decision making.

(2) Encourage the use of technology to the high level management.

(3) Promote the employees to have computer skills.

(4) Reduce the manual system and errors.

(5) Reduce the time and resources including paperwork.

(6) Reduce the redundant jobs.

(7) Provide on-line information.

1.3 Scope of the Project

The project will cover major parts of the AIS intranet system are as follows:

1.3.1 Analyze the Existing Problems

(1) Analyze the problems which occur in the AIS department.

(2) Study the way to reduce the redundant jobs.

(3) Find the reasons that provide late reports.

(4) Study the user requirement.

(5) Study the essential information to support decision making.

(6) Study the way to convert the existing data to use the intranet system.

1.3.2 Design a New System

(1) The Logical Design

(a) Design the input.

(b) Design the output.

(c) Design the file and database format.

(d) Design the outline of web pages.

(e) Design the user interface.

(f) Design the way to test the software and accuracy reports.

(2) The Physical Design

(a) Design the hardware configuration.

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(b) Design the hard copy reports.

(c) Determine contents of data dictionary.

(d) Compare of cost and benefit of the proposed system.

The system will cover major parts of the intranet's AIS system as:

(1) Daily sales system.

(2) Monthly sales system.

(3) Efficiency for feeding animal system.

(4) Price list system.

(5) Price raw material system.

1.4 Project Plan

The project plans on the AIS intranet system are as follows:

1.4.1 Report on Daily Sales

(1) By Product

(a) Calculate sales by quantity, amount, per unit.

(b) Calculate sales by weight, amount, per unit.

(c) Calculate sales by amount only.

(2) By Branch

(a) Calculate sales for all products in the specific branch.

1.4.2 Report on Monthly Sales

(1) Calculate sales grouped by customer.

(2) Calculate sales grouped by customer divided by region.

(3) Calculate sales grouped by customer divided by area.

(4) Calculate sales grouped by customer divided by sector.

(5) Calculate sales grouped by product code.

(6) Calculate sales grouped by product code divided by region.

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(7) Calculate sales grouped by product code divided by area.

(8) Calculate sales grouped by product code divided by sector.

(9) Calculate sales grouped by product group.

(10) Calculate sales grouped by product group divided by region.

(11) Calculate sales grouped by product group divided by area.

(12) Calculate sales grouped by product group divided by sector.

(13) Calculate the top ten of sales grouped by customer.

(14) Calculate the top ten sales grouped by customer divided by region.

(15) Calculate the top ten sales grouped by customer divided by area.

(16) Calculate the top ten sales grouped by customer divided by sector.

(17) Calculate the top ten sales grouped by product code.

(18) Calculate the top ten sales grouped by product code divided by region.

(19) Calculate the top ten sales grouped by product code divided by area.

(20) Calculate the top ten sales grouped by product code divided by sector.

(21) Calculate the top ten sales grouped by product group.

(22) Calculate the top ten sales grouped by product group divided by region.

(23) Calculate the top ten sales grouped by product group divided by area.

(24) Calculate the top ten sales grouped by product group divided by sector.

1.4.3 Report on Efficiency

(1) Calculate monthly efficiency hen divided by region.

(2) Calculate monthly efficiency pig divided by region.

(3) Calculate monthly efficiency GP 'S swine divided by region.

(4) Calculate monthly efficiency PS 'S swine divided by region.

(5) Calculate accumulate efficiency hen divided by region.

(6) Calculate accumulate efficiency pig divided by region.

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(7) Calculate accumulate efficiency GP 'S swine divided by region.

(8) Calculate accumulate efficiency PS 'S swine divided by region.

1.4.4 Report on Price List

(1) Report price list for animal.

(2) Update Price list information to the price list database.

1.4.5 Report on Price Raw Material.

(1) Report price raw material for animal.

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II. THE EXISTING SYSTEM

2.1 Background of the Organization

Bangkok Agriculture Feedmill Company limited is one of Charen Pokapan branches which run the agriculture fields. It combines with four companies.

(1) Bangkok Agriculture Co., Ltd.

(2) Rachaburi Agriculture Co., Ltd.

(3) B.P. Agriculture Co., Ltd.

(4) Rumchok Agriculture Co., Ltd.

Our main products are hen, pig, swine, boiler, egg and animal food. Our group has sites in the middle and east region. We have head office and branches. We set the accounting information team which provides the financial and accounting information to the high management level.

2.2 Existing Business Functions

The functions occurring in the existing business use computerized and manual processes together. The functions are as follows: (Using Cobol' s Program)

(1) General Ledger (G/L) System.

(2) Order Receiving (O/R) System.

(3) Tax System.

(4) Selling System.

(5) Price List System.

(6) Price Raw System.

(7) Efficiency System.

2.2.1 The advantages and disadvantages of the existing business functions are:

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(1) Advantages

(a) The existing system is almost stable.

(b) The existing system uses low resources.

(c) Staff are able to use the systems and understand all the functions.

(2) Disadvantages

(a) Some functions provide redundant jobs.

(b) Create a lot of paper works.

(c) Create late reports.

(d) Does not provide a good user interface.

(e) Lack security.

(f) Does not provide online information.

For the existing functions, we need to adjust some functions so that we can support the management level. The managers request to have the intranet for our team. For this reason, we adapt the following functions:

(1) Daily Sales Function.

(2) Monthly Sales Function.

(3) Efficiency Function.

(4) Price List Function.

(5) Price Raw Function.

2.3 The Existing Hardware and Software

2.3.1 The software for the existing system consists of:

(1) Operating System

(a) Ms-Dos

(b) Window 98

(c) Unix

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(2) Software Packages

(a) Ms-office

(b) Lotus

(c) Cobol

(3) Application Supported Using Cobol Language:

(a) Payroll System.

(b) Tax System.

(c) General Ledger System.

(d) Order Receiving System.

(e) Costing System.

(f) Aging System.

2.3.2 The hardware for the existing system consists of:

(1)	CPU Pentium 166 MHz	20	sets
(2)	Tin Client (286sx)	30	sets
(3)	Power Supply	20	sets
(4)	Modem	20	sets

2.3.3 The advantages and disadvantages of using the existing computerized system are:

(1) Advantages

(a) Provides fast processes.

(b) Uses low resources.

(2) Disadvantages

(a) Dose not provide a good user interface.

(b) Has many steps to work.

(c) Lacks concept database.

(d) Does not provide online information.

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(e) Creates redundancy of data and job.

We need to change some systems of the computerized system, and adapt the data store in the good database.

2.4 Peopleware

The people ware in the Accounting department consists of:

(1)	Vice President	1	person
(2)	Assistant Vice President	1	person
(3)	Managing Director	5	persons
(4)	Chief Accountant	5	persons
(5)	Head Accountant	14	persons
(6)	Accountant	14	persons
(7)	AIS Staffs	8	persons

Total Accounting Staffs 48 persons

The people ware in AIS Staffs consists of:

(1)	Managing Director	1	person
(2)	Chief Accountant	1	person
(3)	Head Accountant	2	persons
(4)	Accountant	4	persons

Total AIS Staffs 8 persons

The AIS Staffs do the accounting information jobs and develop the new jobs. They have the workload jobs, so they use the computerized system to apply to the existing system.

2.5 Existing System Cost

They estimate the Accounting Staffs' cost as follows:

(1) Salary Cost 1,070,000 baht

(2) Operation Cost 500,000 baht

They estimate the AIS Staffs' cost to be as follows:

(1) Salary Cost 170,000 baht

(2) Operation Cost 150,000 baht

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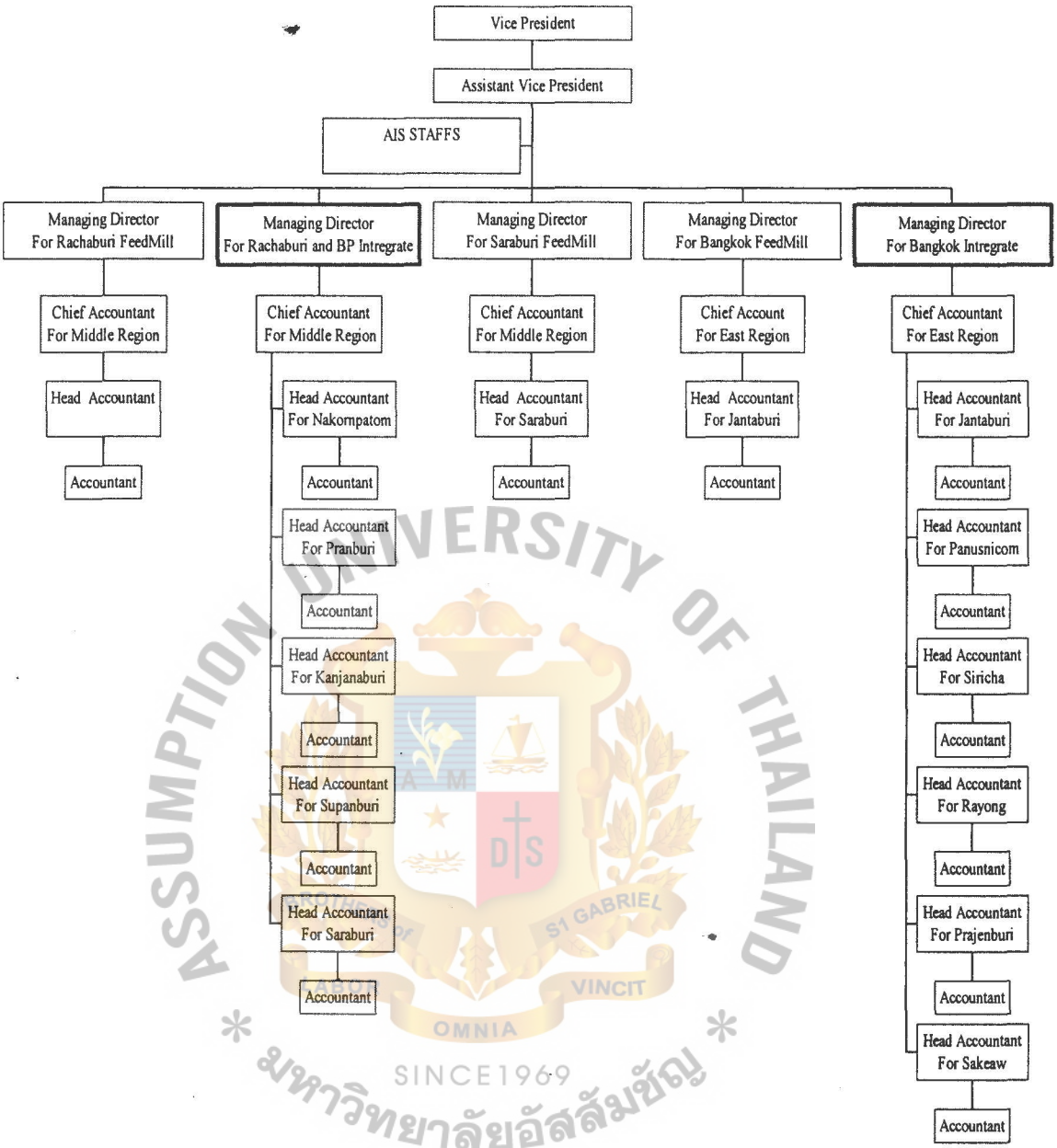

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Figure 2.1. Organization Chart.

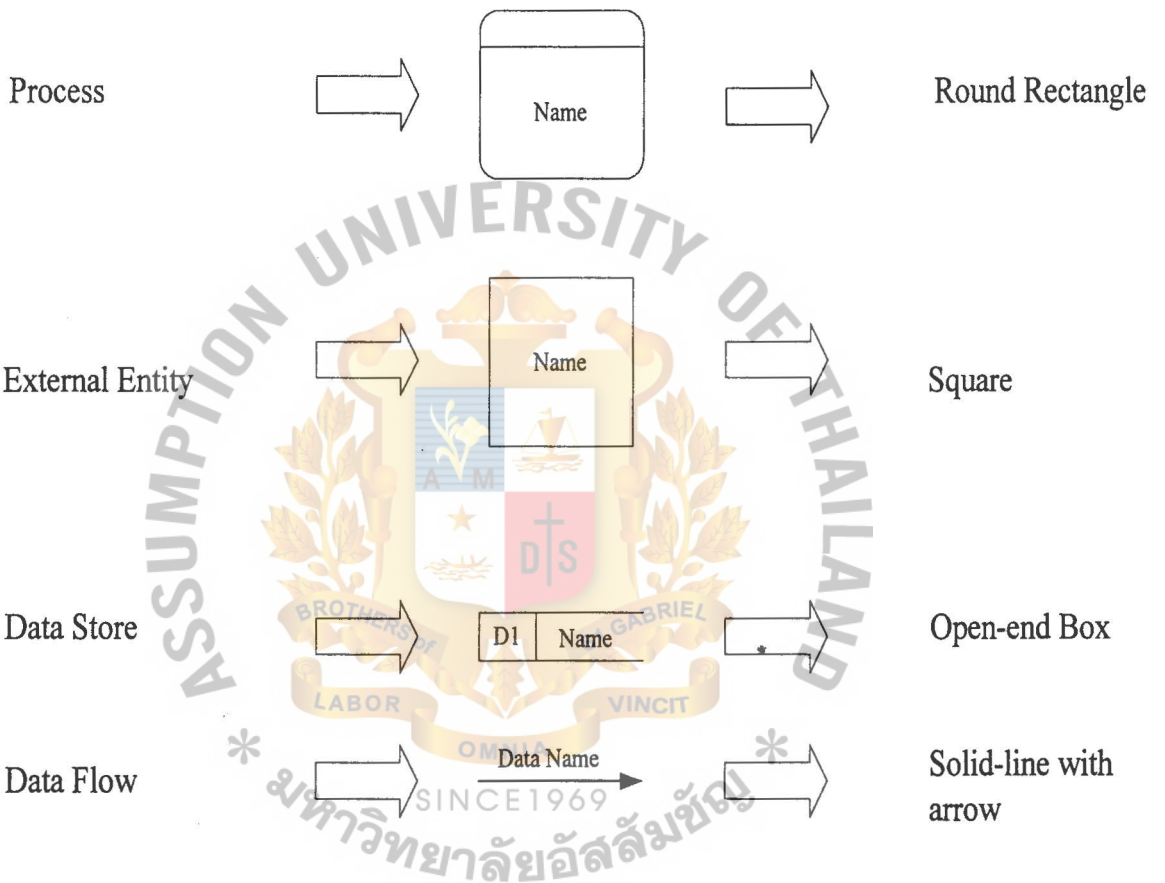

Figure 2.2. Elements of Data Flow Diagram (Use Gane and Sarson Symbol).

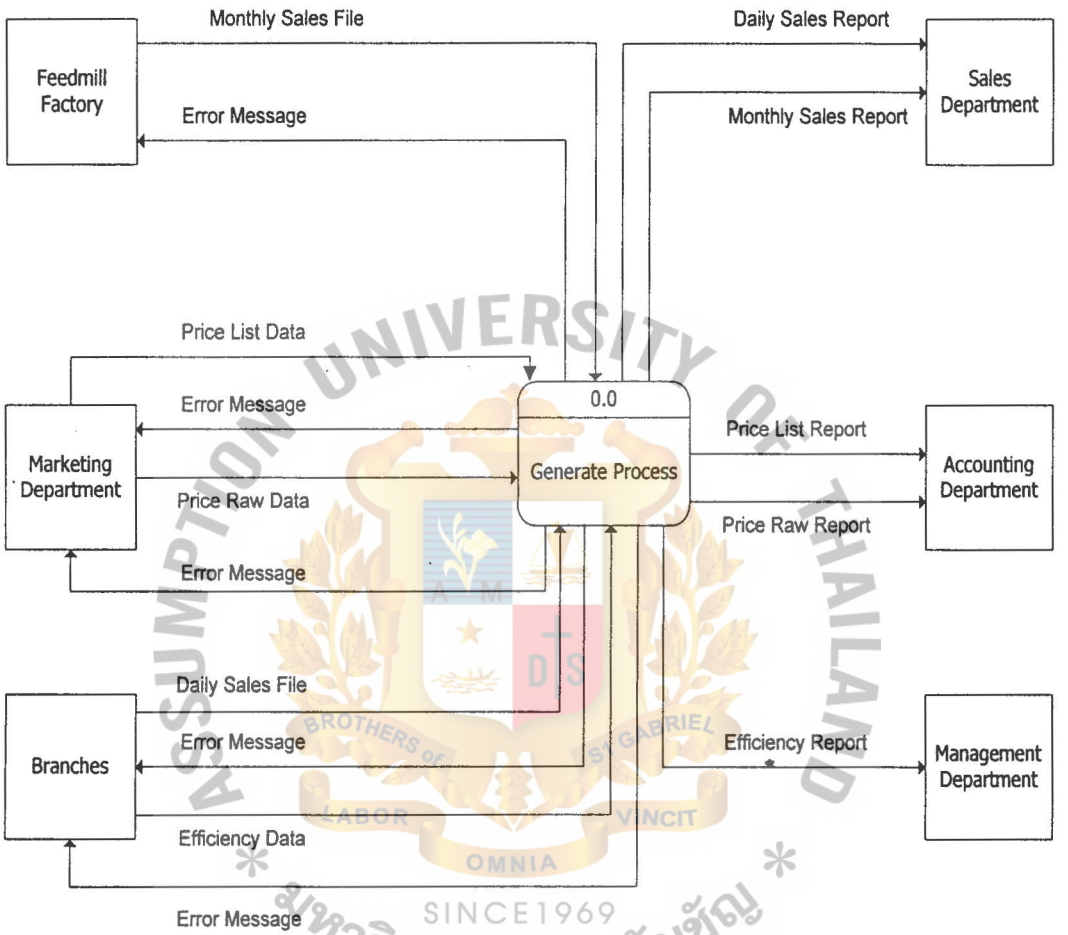

Figure 2.3. Context Diagram for Accounting Information System.

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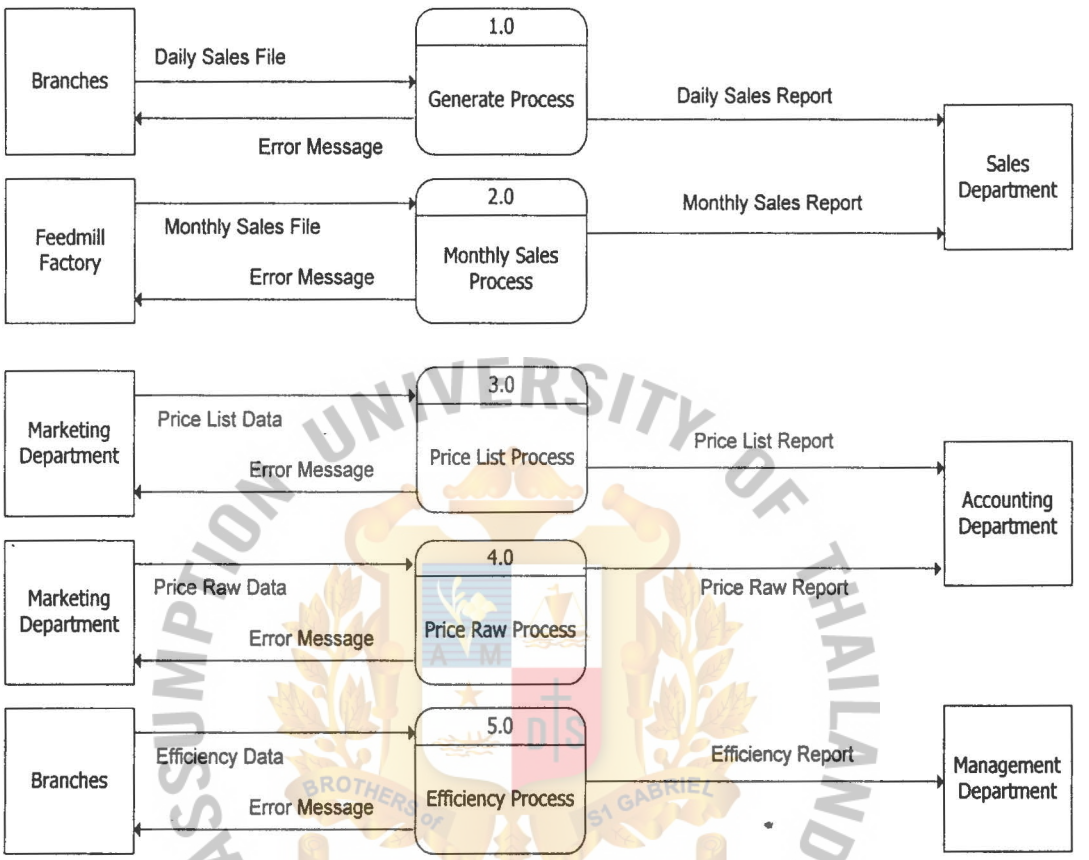

Figure 2.4. Data Flow Diagram Level-0 for Accounting Information System.

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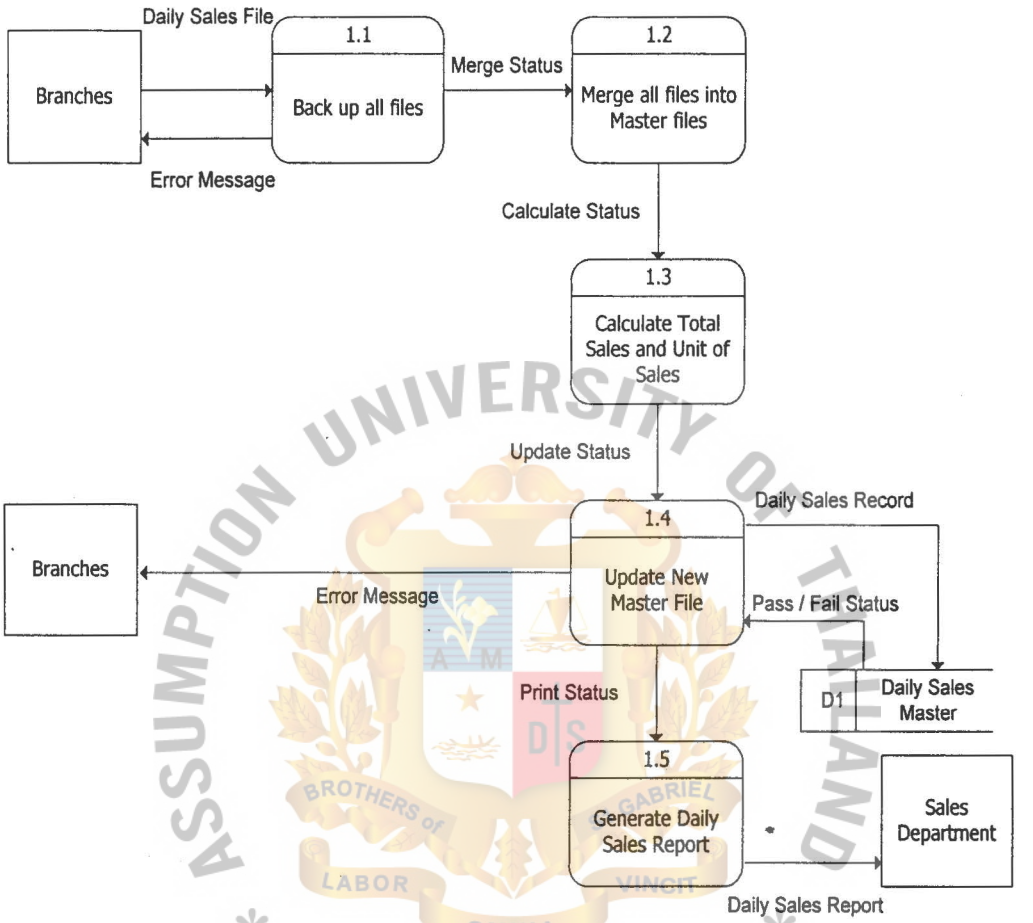

Figure 2.5. Data Flow Diagram Level-1 for Accounting Information System.

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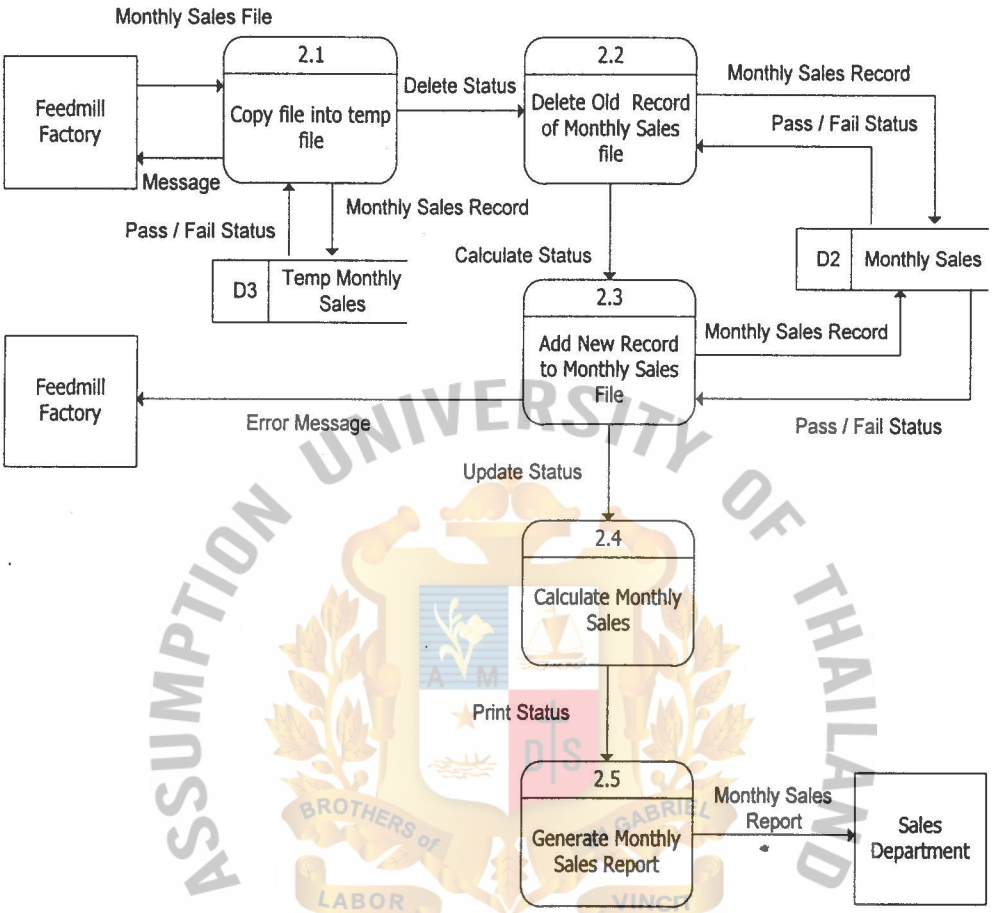

Figure 2.6. Data Flow Diagram Level-1 for Accounting Information System.

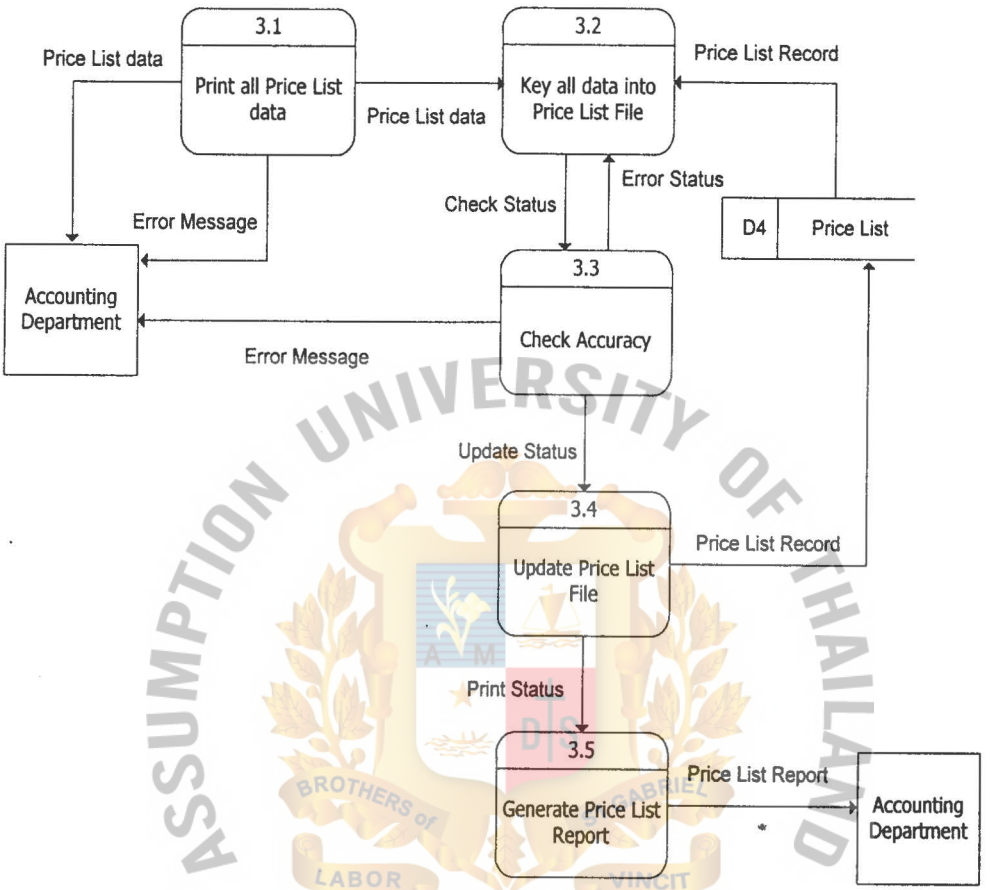

Figure 2.7. Data Flow Diagram Level-1 for Accounting Information System.

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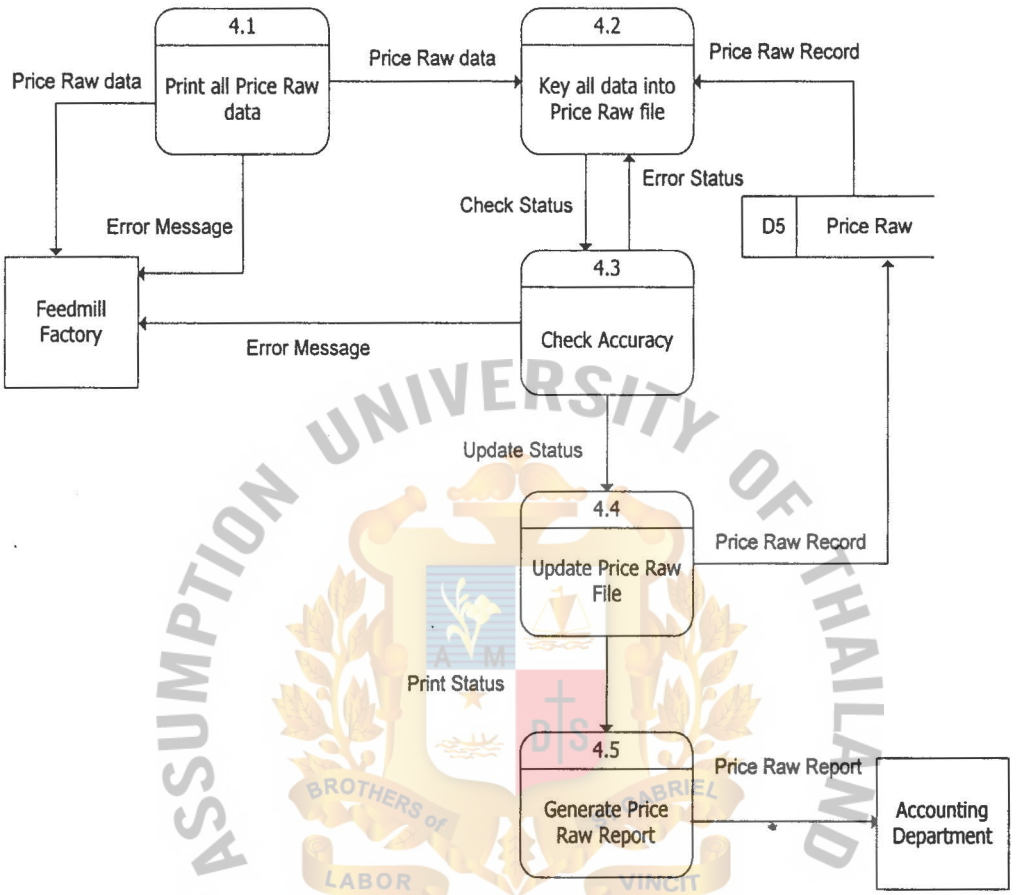

Figure 2.8. Data Flow Diagram Level-1 for Accounting Information System.

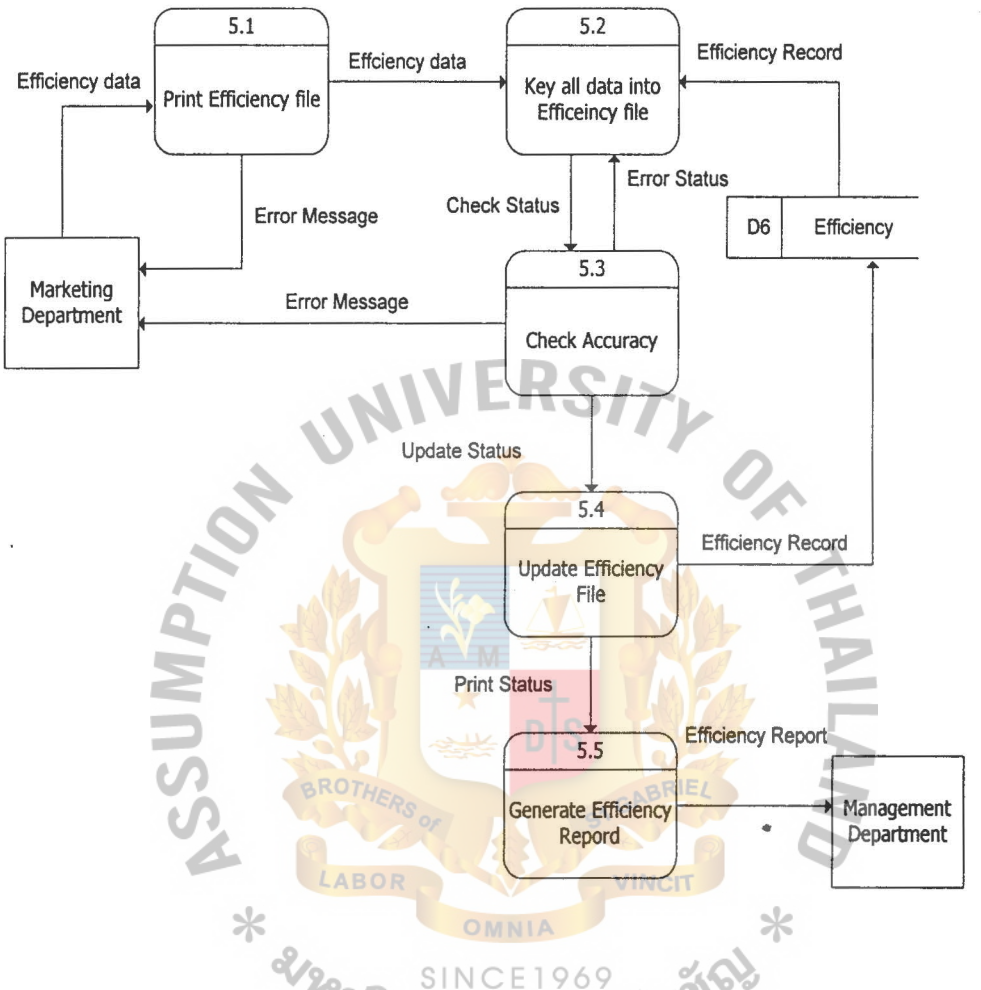

Figure 2.9. Data Flow Diagram Level-1 for Accounting Information System.

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III. THE PROPOSED SYSTEM

3.1 User Requirement

3.1.1 Staff Requirements

(1) Easy to use and understand.

(2) Provides good user interface.

(3) Provides fast speed for processing.

(4) Provides accurate reports.

3.1.2 Management Requirements

(1) Provides daily sales report for hen, pig, boiler, egg and so on.

(2) Expands or limits the capacity to produce the animals in time.

(3) Provides monthly sales report for food animals.

(4) Provides the best selling for each food animal.

(5) Provides monthly efficiency reports for feed animals.

(6) Provides weekly animal selling price.

(7) Provides weekly animal food selling price.

After we find the requirement, we need to adapt the existing system for some systems as daily sales, efficiency. On the other hand, we need to build the new systems as monthly sales, price list of animal and animal food.

3.2 System Design

The system design can be categorized into the following parts:

(1) Design of input and output screens.

(2) Design of files.

(3) Design of database interaction.

(4) Design of procedure.

(5) Design of Program specification.

3.2.1 Design of Input and Output Screens

The concept for the design is concerned with the screen of computer to be used for inputting and outputting the data. The screens will display the imported data, maintained data, and generated reports. The input screen will be designed based on the information design. The output screen will be based on specific layout, characteristics or format of the information to be used.

3.2.2 Design of Files

The design of the files includes the nature, content files, and relation of the database. Some systems have the existing files, so we convert from text files to store in the database and add some fields to make it more useful. On the other hand, some systems do not exist, we create the new design files and the new data type of each file and relation.

3.2.3 Design of Database Interaction

The database design is extremely important to the system and the interaction with database. If design database is correct, there are no problems occurring after implementation. The good database will cover the requirements and reduce problems.

3.2.4 Design of Procedures

The procedure design will specify the tasks that must be prepared in using the system. The important procedures are as follows:

(1) Data entry procedure

(2) Run time procedure

(3) Error handling procedure

(4) Security procedure

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3.2.5 Design of Program Specifications

The program specifications describe the design process of input data, retrieve data, and update data through web browser. In designing the computer software, it is important to ensure that:

(1) The actual program must perform all tasks and in the manner intended for the application.

(2) The structure of software is divided into modules for testing and validation to make sure that it follows with the procedures.

3.3 Hardware and Software Requirements

3.3.1 Hardware Requirement

(1) Server Computer

(2) Power Supply

(3) Modem

3.3.2 Software Requirement

(1) Server Side

(a) Window NT Server 4.0 Thai

(b) Microsoft Internet Information Server 4.0

(c) Microsoft Internet Explorer 4.01 for NT

(d) Microsoft Visual Interdev

(e) Microsoft Access

(2) Client Side

(a) Microsoft Internet Explorer

3.4 Cost Analysis and Comparision

3.4.1 Cost Analysis

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We compare the costs of the existing and the new systems. We analyze the investment cost, operation cost and implement cost. We summarize the costs as follows:

(1) Investment Cost occurring in the new system.

Table 3.1. Cost of Hardware and Software, Baht.

Cost Items	Unit Price	Quantity	Total
Hardware Cost:			
Server Computer	400,000	1	400,000
Modem For Server Computer	8,000	1	8,000
Modem	3,000	10	30,000
Power Supply (UPS 700VA)	40,000	1	40,000
Total Hardware Cost			478,000
Software Cost:	31,700		31,700
Windows NT Server	12,700		12,700
MS Virtual Interdev	21,000		21,000
Internet Explorer	6,000		6,000
Total Software Cost			71,400
Net Total			549,900

Total investment for the first year is 549,900 baht and the additional investment for the second year is 100,000 baht.

(2) Annual Operation Cost occurs in the existing and the new systems. These are the recurring costs which operate the fix cost such as office supply expense.

(2) Implement and Maintenance Cost occurring in the new system. The cost is to repair or update hardware and software in the future.

3.4.2 Benefits Analysis

(1) Tangible Benefits: The benefits are shown in terms of reducing cost by Month.(The calculation is based on the assumption that in one day, there are 6 tasks concerned in order processing by one worker)

(a) Reducing time in processing data 8,000 /month

By using the manual system, 1 job's processing time = 60 min.

By using the computerized system, 1 job's processing time = 25 min.

So we reduce the time by 35 min. in one job

In one day we have 6 jobs, we reduce the time = 45 * 6 = 210 min.

In one year, we reduce the time = 210 * 22 * 12= 924 hr.

(b) Reduce the paperwork

Total estimate to reduce the paperwork = 80,000 baht / year

(2) Intangible Benefits:

(a) Improve efficiency of operations.

(b) Better provides various kinds of reports and accurate reports.

(c) Provides the on line information.

(d) Supports decision making on time.

(e) Increases the employee performances and computer skills.

(f) Reduces the time to provide the tasks.

3.4.3 Cost / Benefit Economic Comparison

Thc Cost and benefit analysis are decision making tools to compare that of the existing system and that of new system. We conclude that it is better to continue the new system and the payback period is 1 year 2 months.

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Table 3.2. Cost Comparison between the Existing System and Proposed System, Baht.

Cost Items	Years				
	1	2	3	4	5
Existing System:					
Staff(8 Staffs)	800,000	836,000	873,620	912,933	954,015
(increase 4.5 % per year)					
Office Supplies Cost	50,000	53,000	56,180	59,551	63,124
(increase 6 % per year)					
Office Equipment Cost	8,000	8,000	8,000	8,000	8,000
Utility Cost	30,000	31,800	33,708	35,730	37,874
(increase 6 % per year)					
Total Cost	888,000	928,800	971,508	1,016,214	1,063,013
Cumulative Cost	888,000	1,816,800	2,788,308	3,804,522	4,867,535
Proposed System:					
Hardware Cost with UPS	97,400	97,400	97,400	97,400	97,400
Software Cost	143,800	143,800	143,800	143,800	143,800
Installation Cost					
Development Cost	18,000				
Office Equipment Cost	12,000	12,000	12,000	12,000	12,000
Staff(5 Staffs)	800,000	500,000	522,500	546,013	570,583
(increase 4.5 % per year)					
Maintenance Cost	10,000	10,500	11,025	11,576	12,155
(increase 5 % per year)					
Training Cost	20,000	5,000	5,000	5,000	5,000
Utility Cost	3,000	3,120	3,245	3,375	3,510
(increase 4 % per year)					
Total Cost	1,104,200	771,820	794,970	819,163	844,448
Cumulative Cost	1,104,200	1,876,020	2,670,990	3,490,153	4,334,601

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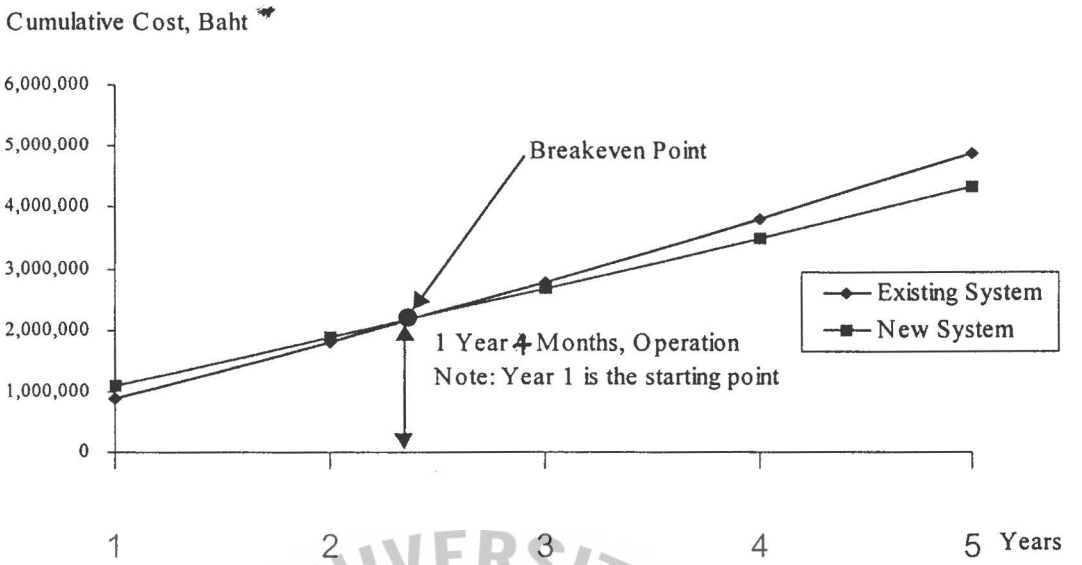

Figure 3.1. The Existing System and The Proposed System Cost.

3.5 Security and Control

Security is very important for the intranet system, so the major securities of the intranet system are data and system securities.

3.5.1 Data Security

(1) Checks data validation for each field.

(2) Provides only the right authority to access the data.

(3) Provides the prompt or warning to change the user.

3.5.2 System Security

(1) Provides login and password to access the system.

(2) Each password has the right to access with the deferent levels.

(3) Provides the commit and rollback, before the system fail.

IV. PROJECT IMPLEMENTATION

4.1 Overview of Project Implementation

The implementation plan for the Intranet of the Accounting department begins after the top management agreed with the outline of the proposal of the new system and analyzed the cost and benefit. The steps of implementation are as follows (see in the Appendix H):

(1) Requirement Specification

(2) System Analysis

(3) Conceptual Design

(4) Implementation and Installation

The implementation and Installation are the most difficult parts that concern with the problems occurring in the design and the software development. The adjustment occurs during the development in the real situation. Testing of the software is very important because it provides a reliable software.

4.1.1 Software Project Implementation Recommendations

(1) Design the software to satisfy the user requirement.

(2) Design the software to be as user friendly as possible.

(3) Software should be modular corresponding to sub function.

Testing phase from the sub function to the integrate function.(Using bottom up approach)

(1) Test to send the parameters to sub functions.

(2) Conversion will be parallel to ensure that the staff can adapt to the new system.

(3) Provides training course.

4.2.2 The Implementation Steps

(1) Study all documents concerned with intranet processing.

(2) Verify all the processes.

(3) Verify the ordering processing from input, process and output.

(4) The statistics for reporting functions will be implemented into the process to test.

(5) Verify the accuracy storage and display the results.

(6) Verify the reliable and stable system.

(7) Review all the steps.

(8) Periodic system review is necessary so that it may find some problems in the future.

4.2 Testing Plan and Results

4.2.1 Coding

Microsoft Access and Microsoft Excel are used to build up the important data's function for the intranet system. They completely provide the functions necessary to develop the system. Microsoft Access is used to be the database storage. For processing data through the web, Microsoft Active Server Page is used to process all results on the web browser. The programming language is visual basic. The program structure is not complicated to develop. The line of code used in the program is less than the other programming language. The screen design provides user friendly and interactive online help. According to the system code, the retrieval program provides fast speed and easy search for information. All users can use the program without the knowledge of visual basic language.

4.2.2 Testing

(1) To test the software program to satisfy the user requirement.

(2) To test all sub programs

(3) To test all parameters to send among sub programs.

(4) To test all integrated sub programs.

(5) To test the accuracy results.

(6) To verify the sufficiency file size and speed of processing.

(7) To test the reliability and stability of the system.

4.3 Conversion

Conversion includes the creation of all required master files, transaction files, backup files and converting tested program to the operation status. Data conversion must be carefully planned and accurate. We let the staffs be familiar with the intranet system and train them. We parallel run the systems (the new system and the existing system). We can test the conversion or completeness of the results, and we compare the reports of the new system with the reports of the old one.

Parallel system is safe and ensure the work will not fail. It uses more time and resources and it provides duplicate jobs and redundant reports during the conversion phase.

4.4 Training

Training session will introduce the staffs and managers to using the intranet system and, the web server and the web browser's function. We provide training courses on how they can use the web browser. Training can be divided into two sections for the system operators and end users.

(1) System Operator Training

Training involves the staffs who are responsible for keeping the equipment running, provide the necessary support service, or introduce the application to end users. Training covers the handling of all routine operations about the intranet system. Training includes how to run the

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system ,backup files and import files. System Operators know the general function of the system. They solve or prevent the malfunction problems, before the system is down.

(2) End User Training

Training involves the general concept of the web server and web browser and internet concept. We provide the steps of how to use the web browser and to use the intranet. We explain the first page to enter the intranet, the hyperlink of pages and how to use all menus.

It is necessary for the project developer to gain feedback from the trainees of the system. The project developer should make sure that they can work the system completely by themselves.

Project developer evaluates the effectiveness of the training, and provides some testing to users for the important tasks to make sure that users understand all steps.

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V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The intranet of the Accounting Information System is a computerized system which is developed to replace the existing non-system. The intranet is developed base on the structured methodology and the prototype approaches. The intranet is developed based on the client / the server applications. On the part of the client, the users send the command to the server side. After the server has already processed the information, the server sends the results to the client. The intranet provides the on line information and the users can make inquiry and manipulate the information. The intranet provides the Graphic User Interface and Interactive Command and uses the Structure Query Language (SQL) to manipulate the data into the relational database. We analyze results and the achievement of the intranet project as follows.

The Intranet project:

(1) Provides the accurate reports.

(2) Is able to support decision making in time.

(3) Provide incentive to all users to pay attention to the new technology.

(4) Reduces the redundant jobs.

(5) Reduces overhead costs and time.

(4) Is easy to manipulate the data and does not provide redundant update.

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Table 5.1. The Degree of Achievement of the Proposed System.

Process	Existing System	Proposed System
Daily Sales Process	3 hrs.	45 mins.
Monthly Sales Process	4 hrs.	1 hr.
Price List Process	30 mins.	10 mins.
Price Raw Material Process	1 hr.	30 mins.
Efficiency Process	3 hrs.	1 hr. 30 mins.
Total	11 hrs. 30 mins.	3 hrs. 45 mins.

Table 5.1 shows the time performance on each process of the proposed system compare with the existing system. It shows that each process of the proposed system performs less time than each process of the existing system. So, it can be concluded that the proposed system is more efficient and effective than the existing system. Daily Sales Process reduces the redundant data entry. Monthly Sales Process reduces the manual system and errors. Price List Process reduces the many steps to work. Price Raw Material Process reduces the redundant jobs. Efficiency Process reduces then incorrect and late reports.

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5.2 Recommendations

(1) The Intranet should be developed further to the larger scale and be connected to the remote access in a more efficient way.

(2) The other related systems should be converted or adapted to the intranet system.

(3) We expand the intranet to all departments.

APPENDIX A

DATA FLOW DIAGRAM

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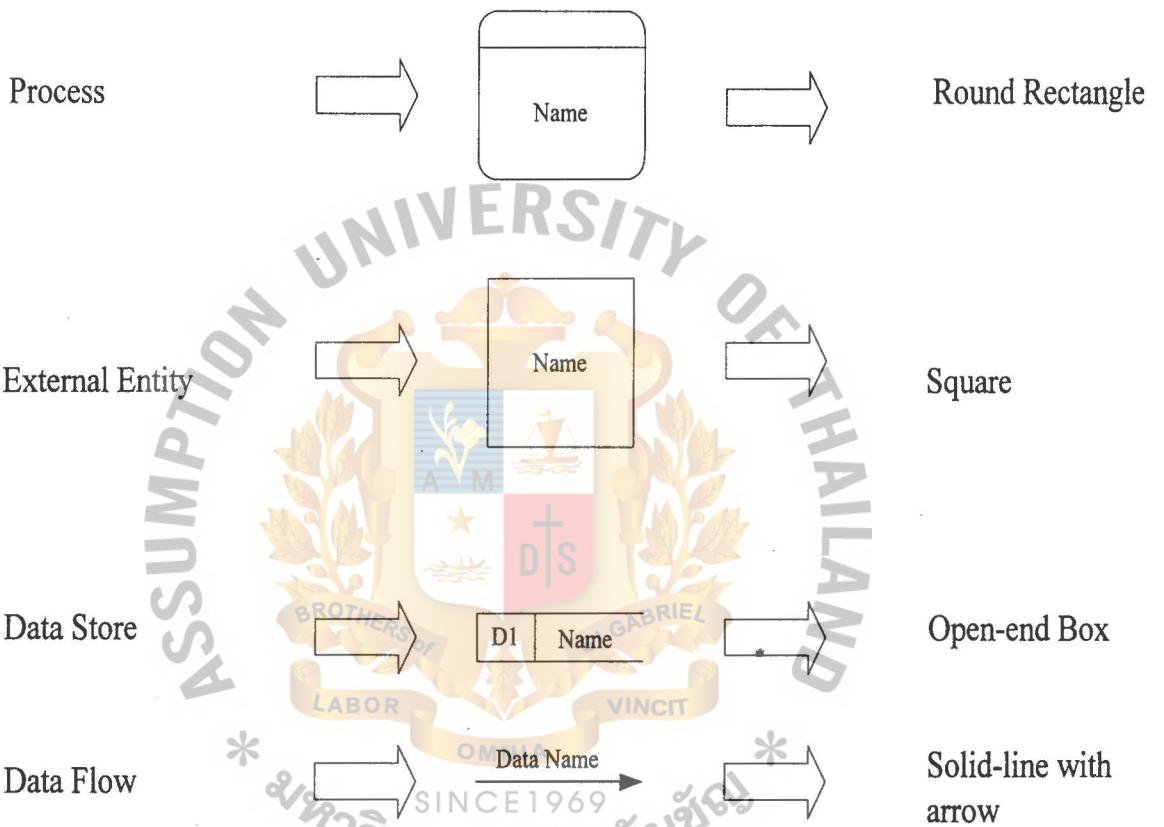

Figure A.1. Elements of Data Flow Diagram (Use Gane and Sarson Symbol).

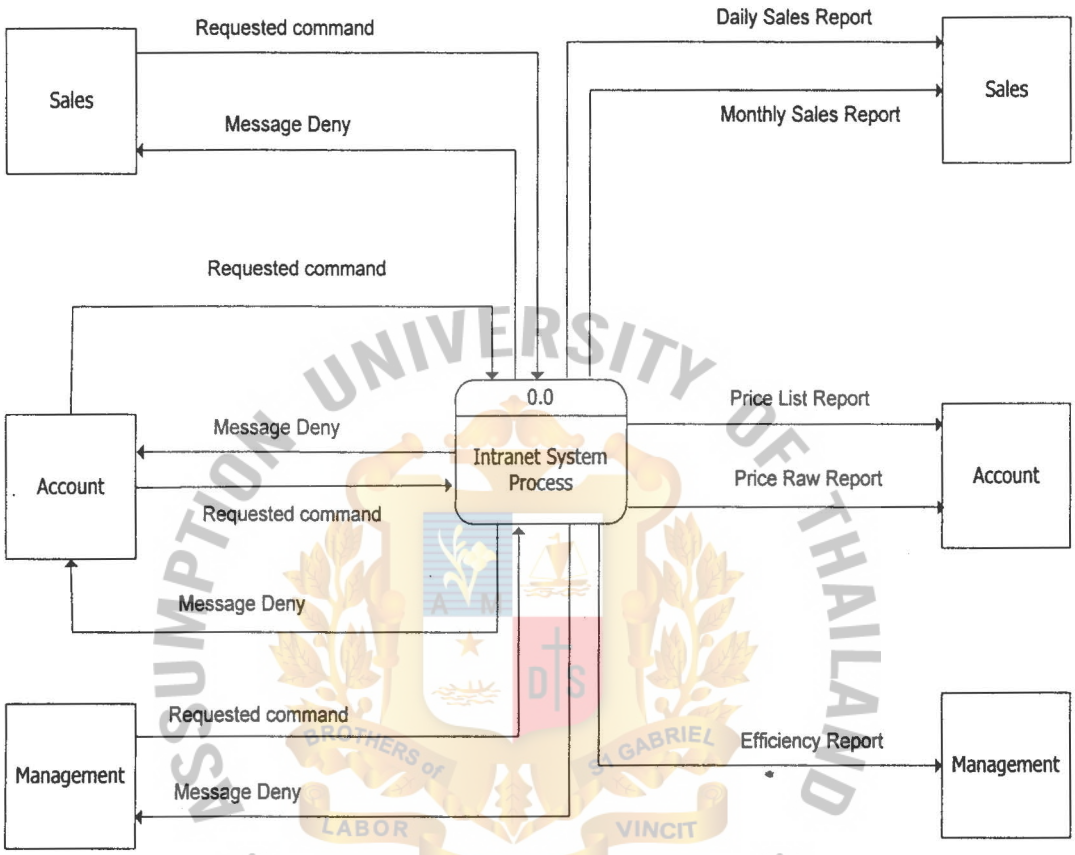

Figure A.2. Context Diagram [The Proposed System].

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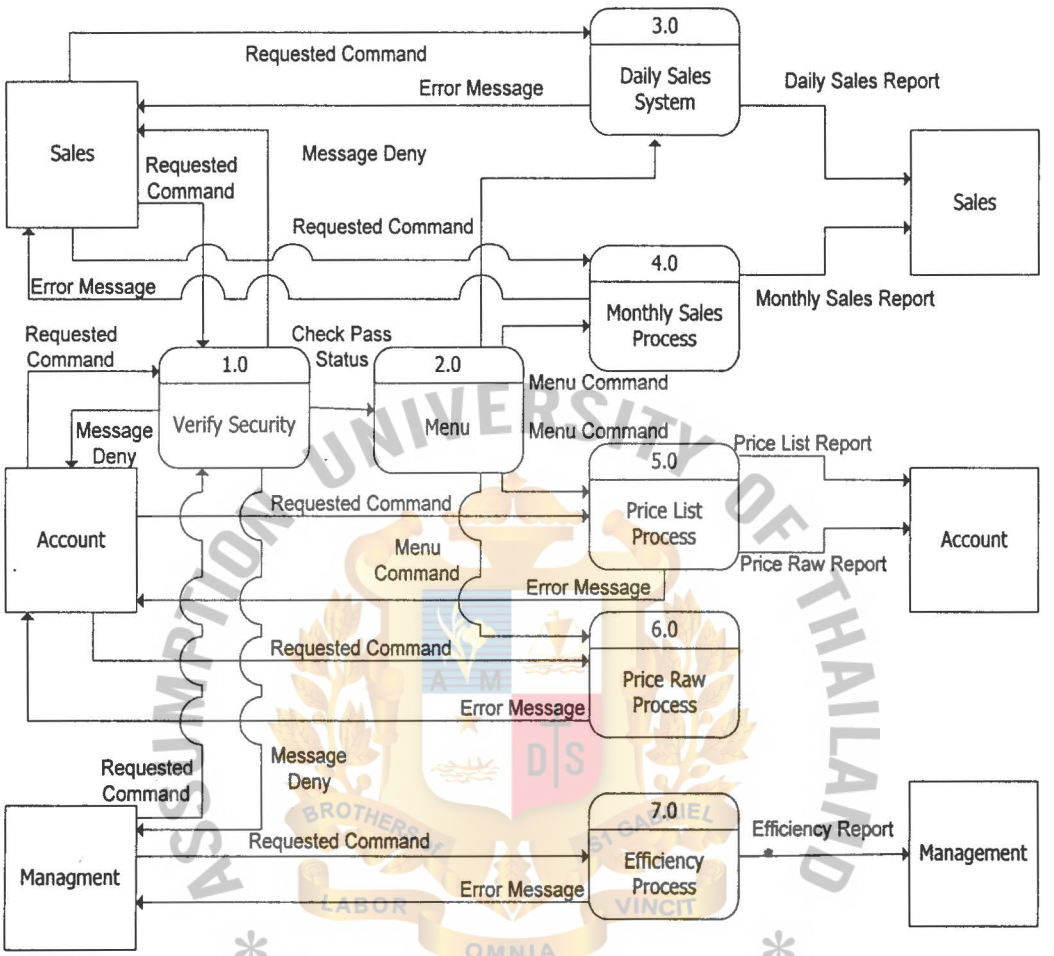

Figure A.3. Data Flow Diagram Level-0 [The Proposed System].

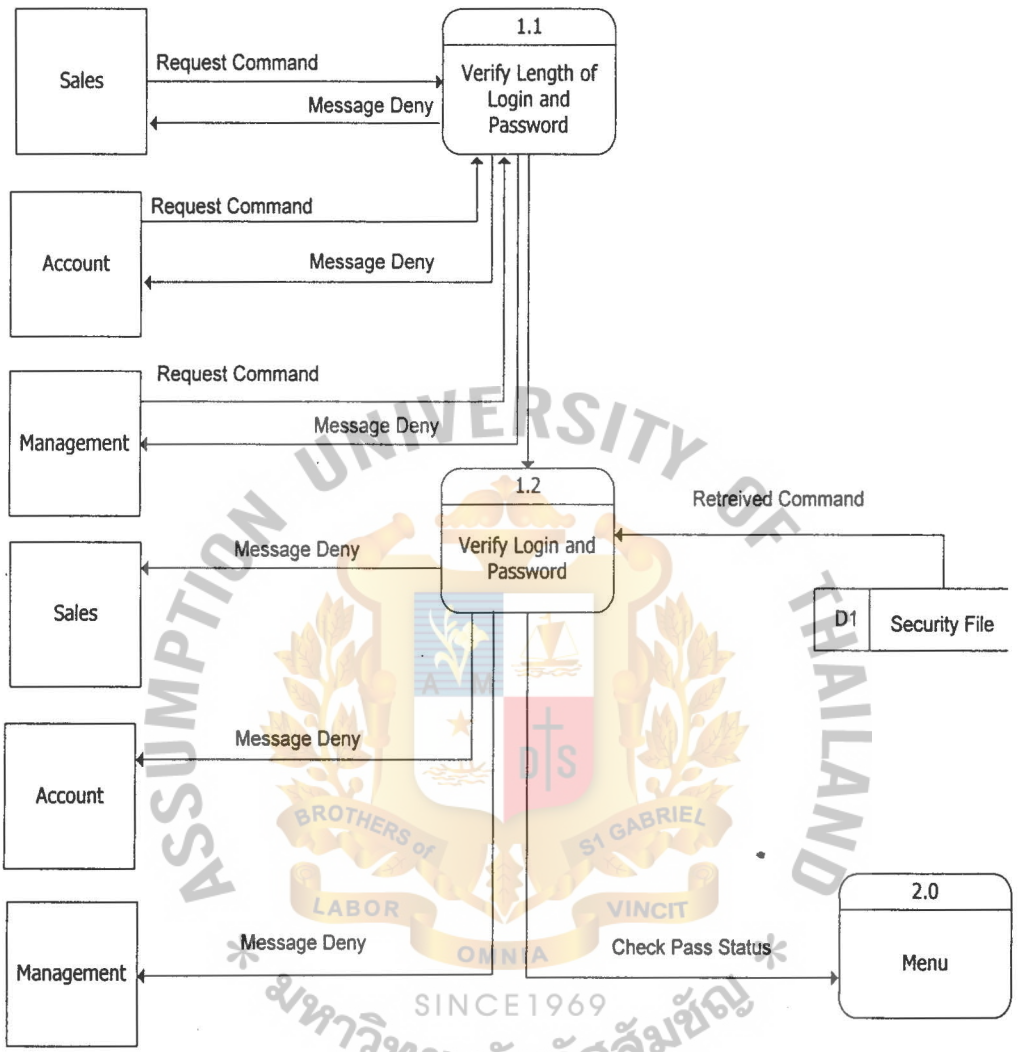

Figure A.4. Data Flow Diagram Level 1: Verify Security.

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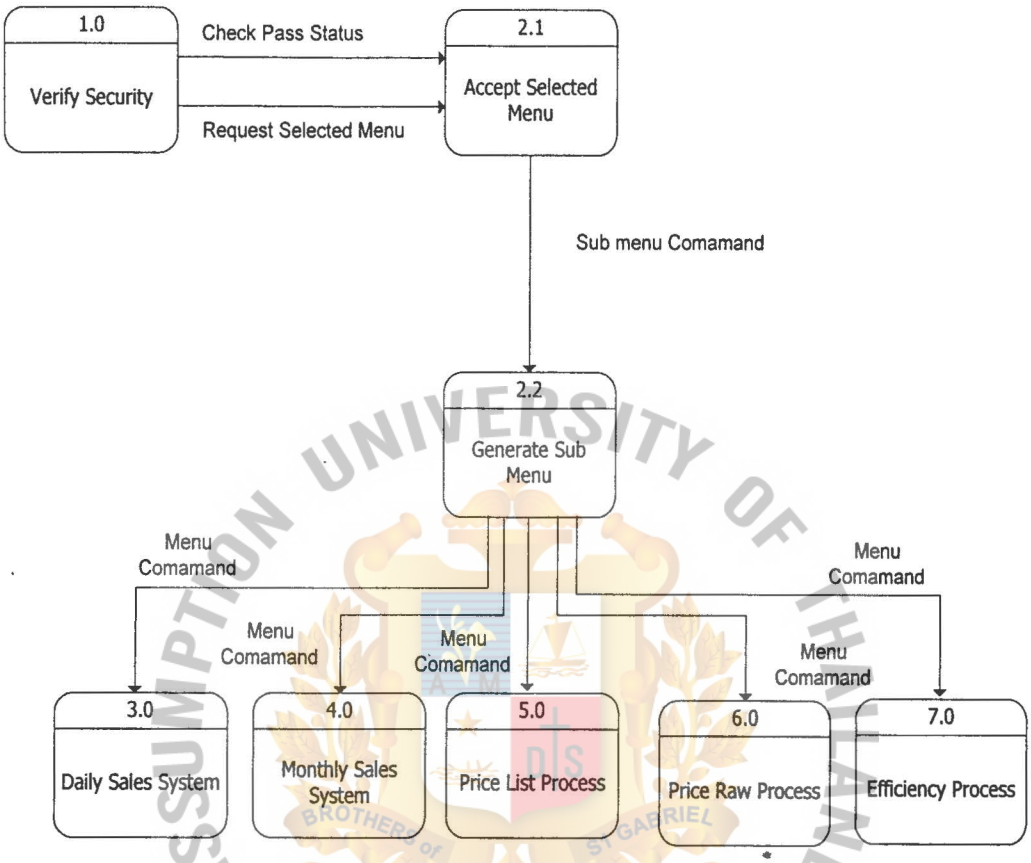

Figure A.5. Data Flow Diagram Level 1: Menu.

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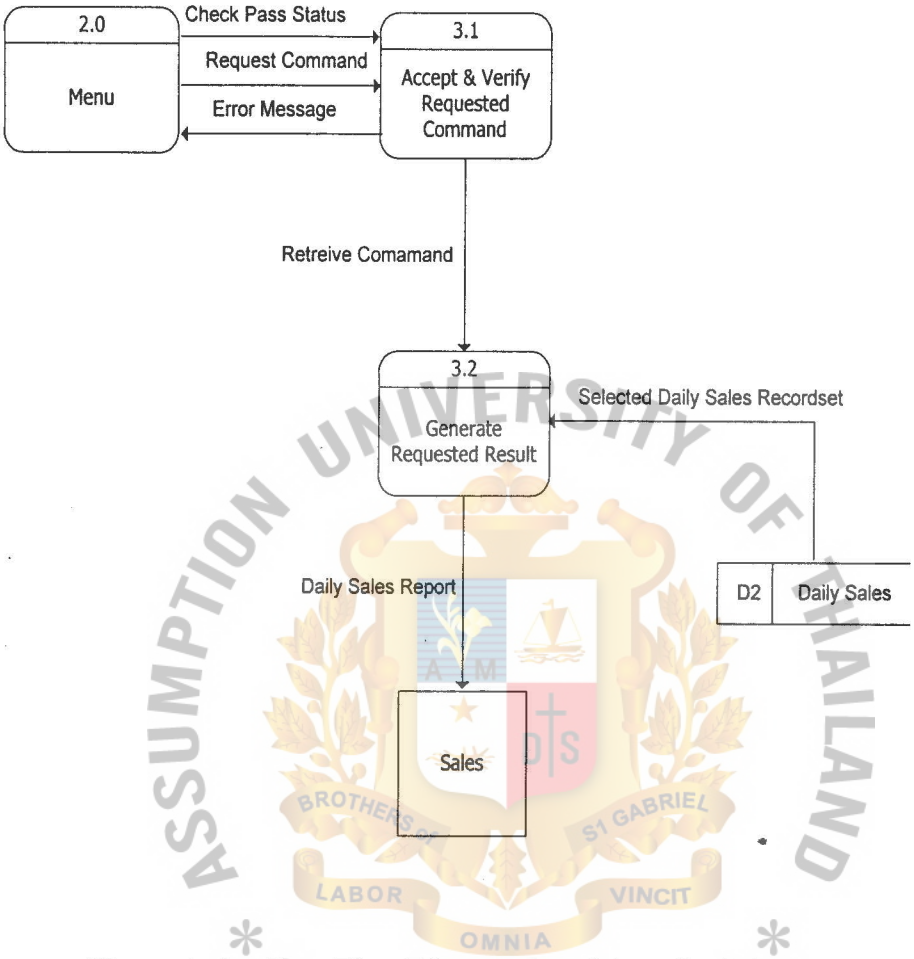

Figure A.6. Data Flow Diagram Level 1: Daily Sales System.

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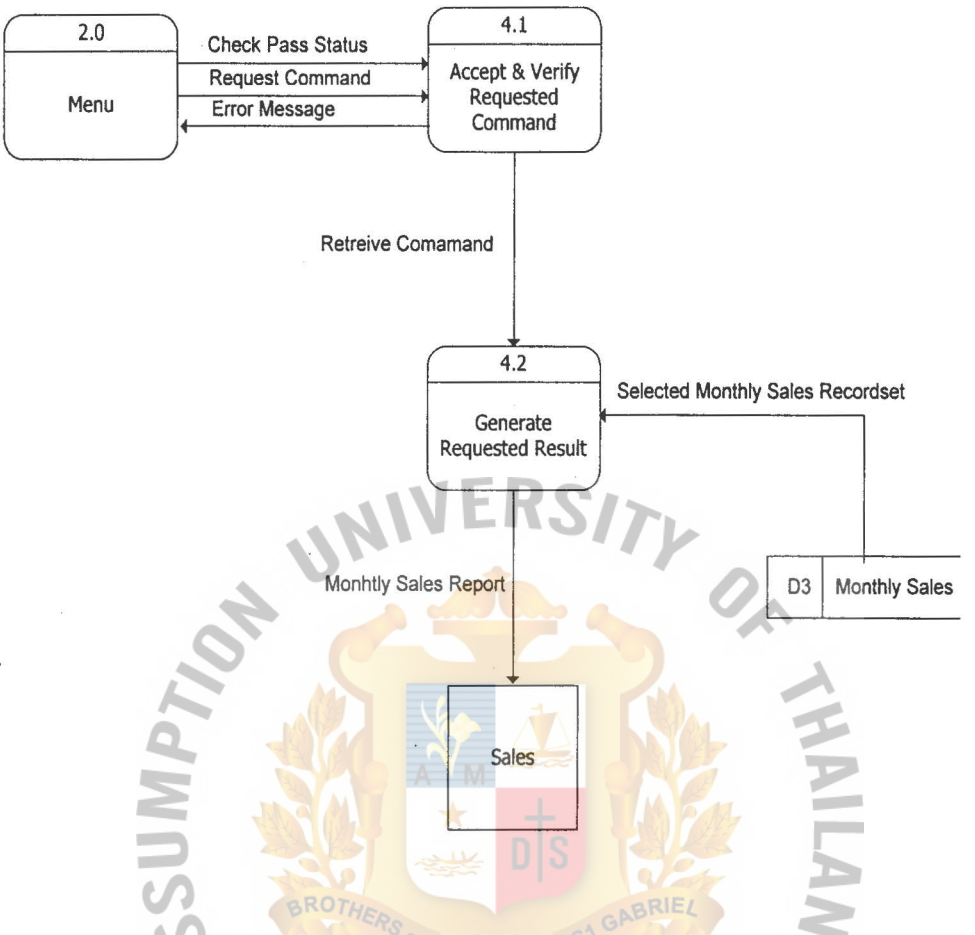

Figure A.7. Data Flow Diagram-Level 1: Monthly Sales System.

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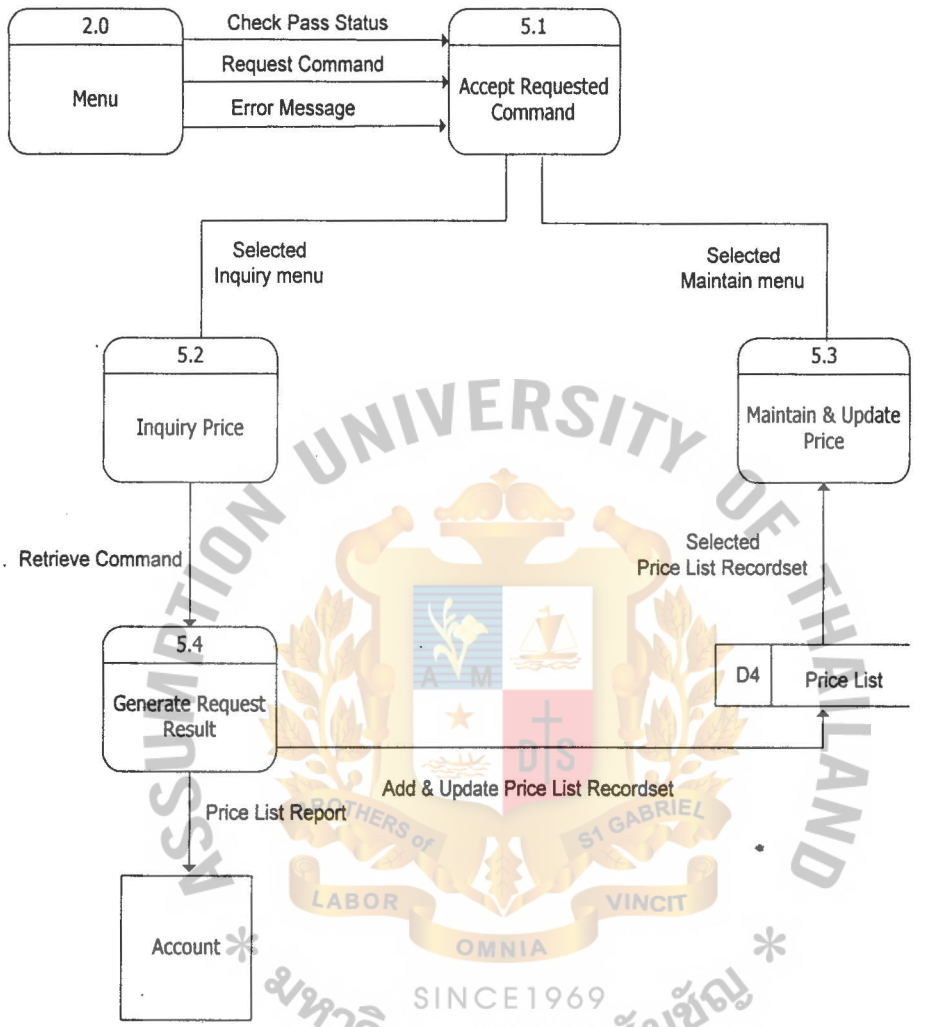

Figure A.8. Data Flow Diagram Level 1: Price List System.

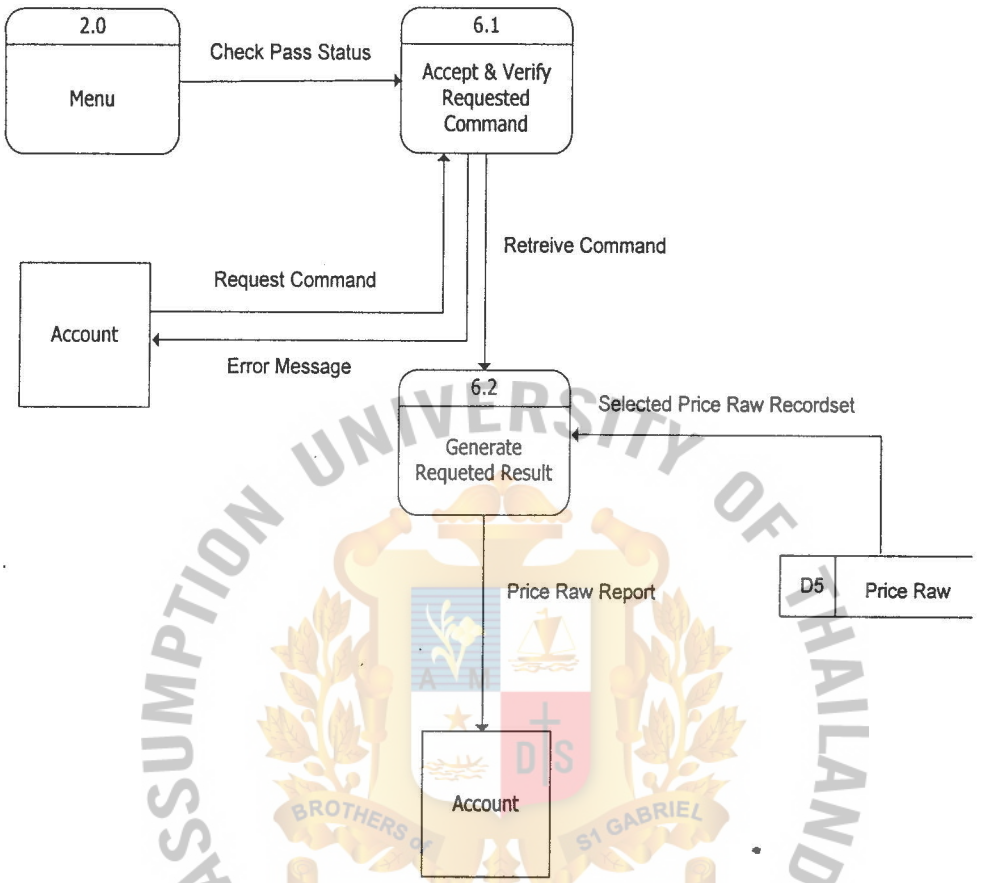

Figure A.9. Data Flow Diagram Level 1: Price Raw System.

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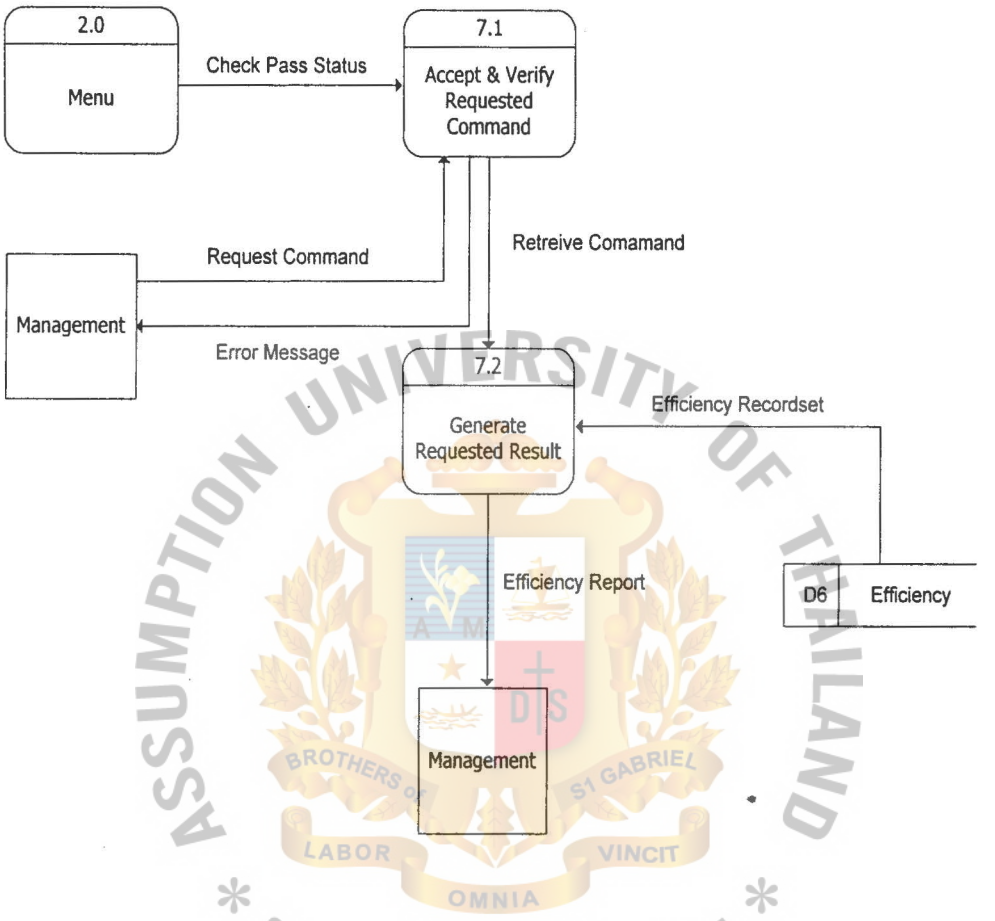

Figure A.10. Data Flow Diagram Level 1: Efficiency System.

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APPENDIX B

DATA DICTIONARY

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Accept_login	=*Accept the name of login* {Text-character}
Accept_password	=*Accept the name of password* {Text-character and numeric}
Verify_login_password	=*Verify the correctness of login and password* [match/mismatch]
Change_password	=*Change the new password* [success/fail]
Login	=*The login of entering into the program* {Text}
Password	=*The security of entering into the program* {Text}
Selected_menu	=*Accept selected menu* {Accept selected_menu}
Class_selected_menu	=*Classify selected_menu and call sub menu* [success/fail]
Requested_command	=*Accept requested_command* {Set of commands for interface menu}
Verify_requested_command	=*Verify_requested_command* [prompt message/error message]
Dsal_no	=*Invoice sale running* {counter}
Date	=*Date of daily sale*

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{date}

Quantity =*Quantity of daily sale*

{numeric:integer}

Weight =*Weight of daily sale*

{numeric:double}

Amount =*Amount of daily sale*

{numeric:double}

Per_unit =*Price per unit*

[{amount/weight}|{amount/quantity}]

Br_code =*Branch code*

{text:2 characters}

Br_name =*Branch name*

{text}

Rg_code =*Region code*

{text:2 characters}

Rg_name =*Region name*

{text}

Pc_code =*product code*

{text:2 characters}

Pc_name =*product name*

{text}

Pg_code =*product group code*

{text:2 characters}

Pg_name =*product group name*

{text}

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Zo_code =*Zone code*

{text:2 characters}

Zo_name =*Zone name*

{text}

Se_code =*Sector code*

{text:2 characters}

Se_name =*Sector name*

{text}

Pr_code =*Province code*

{text:2 characters}

Pr_name =*Province name*

{text}

Cv_code =*Customer code*

{text:2 characters}

Cv_name =*Customer name*

{text}

Msal_no =*Monthly sale running*

{counter}

Date =*Date of monthly sale *

{date}

Quantity =*Quantity of monthly sale*

{numeric:integer}

Weight =*Weight of monthly sale*

{numeric:double}

Amount =*Amount of monthly sale*

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{numeric:double}

Per_unit =*Price per unit of monthly sale*

[{amount/weight}|{amount/quantity}]

Prol_code =*Product list code*

{text:2 characters}

Prol_name =*Product list name*

{text}

Pl_no =*Price list running*

{counter}

Date =*Date of price list *

{date}

Quantity =*Quantity of price list*

{numeric:double}

Price =*Price list*

{numeric:currency}

Description =*Description of price list*

{text}

Pror_code =*Product raw code*

{text:2 characters}

Pror_name =*Product raw name*

{text}

Pr_no =*Product raw running*

{counter}

Date =*Date of raw material *

{date}

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Weight	=*Weight of raw material* {numeric:double}
Price	=*Price * {numeric:currency}
Description	=*Description of raw material* {text}
Heft	=*Running of hen efficiency* {counter}
Date	=*Date of hen efficiency * {date}
Age	=*Age of feeding hen* {Integer}
Hen_A	=*Quantity of big hen* {Integer}
Hen_a	=*Quantity of small hen* {Integer}
Qty_in	=*Quantity of hen in* {Hen_A+Hen_a}
Qty_out	=*Quantity of hen out* {Integer}
Wgh_in	=*Weight of hen in* {numeric:double}
Wgh_out	=*Weight of hen out* {numeric:double}
Hen_cost	=*Total cost of hen*

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{numeric:currency}

Food1 =*Cost of food in the first period of feeding*

{numeric:currency}

Food2 =*Cost of food in the second period of feeding*

{numeric:currency}

Food3 =*Cost of food in the third period of feeding*

{numeric:currency}

Food_cost =*Total cost of food *

{food1+ food2+ food3}

Medi_cost =*Total medicine of hen*

{numeric:currency}

Direct_cost =*Total direct cost of hen*

{Hen_cost+Food_cost+Medi cost}

Indirect_cost =*Total indirect cost of hen*

{numeric:currency}

Total_hen_cost =*Total cost of hen*

{direct_cost+indirect_cost}

Hen_cost_unit =*Hen cost per unit*

{total_hen_cost/wgh_out}

Peft =*Running of pig efficiency*

{counter}

Date =*Date of pig efficiency *

{date}

Age =*Age of feeding pig*

{Integer}

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Qty_in =*Quantity of pig in*

{Integer}

Qty_out =*Quantity of pig out*

{Integer}

Wgh_in =*Weight of pig in*

{numeric:double}

Wgh_out =*Weight of pig out*

{numeric:double}

Pig_cost =*Total cost of pig*

{numeric:currency}

Food1 =*Cost of food in the first period of feeding*

{numeric:currency}

Food2 =*Cost of food in the second period of feeding*

{numeric:currency}

Food3 =*Cost of food in the third period of feeding*

{numeric:currency}

Food_cost =*Total cost of food *

{food1+ food2+ food3}

Medi_cost =*Total medicine of pig*

{numeric:currency}

Direct_cost =*Total direct cost of pig*

{Pig_cost+Food_cost+Medi_cost}

Indirect_cost =*Total indirect cost of pig*

{numeric:currency}

Total_pig_cost =*Total cost of pig*

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{direct_cost+indirect_cost}

Pig_cost_unit =*Pig cost per unit*

{total_pig_cost/wgh_out-wgh_in}

APPENDIX C

PROCESS SPECIFICATION

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PROCESS SPECIFICATION

Process 1.1. Verify Length of Login and Password

Precondition

User keys login and password

Begin

Accept login and password

Check length of login and password

If length is correct then

Send login and password to Process 1.2.

Else

Warning message

Clear value of login and password

End if

End

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Process 1.2. Verify Login and Password

Precondition

Length of login and password is correct

Accept login and password from process 1.1.

Begin

Search login and password in security database

If login and password match then

Send the authorized level to server

Call Main menu

Else

Warning message

Clear value of login and password

End if

End

Precondition

Verify correctness of login and password and send the authorized level

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Process 2.1. Accept Selected Menu

Precondition

Login and password is correct

Receive the authorized level

Begin

Call sub menu command

Accept selected_menu

Send sub_menu_command to Process 2.2.

End

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Process 2.2. Generate Sub menu Command

Precondition

Receive sub_menu_command from process 2.1.

Begin

Verify sub menu command

Select Case

Case 1

Generate Daily Sales Menu

Case 2

Generate Monthly Sales Menu

Case 3

Generate Price List 's Menu

Case 4

Generate Price Raw 's Menu

Case 5

Generate Efficiency 's Menu

Case 99

Call End Program

End select

End

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Process 3.1. Accept & Verify Requested Command for Daily Sales System

Begin

Accept Requested_command

Verify Requested_command

If Requested_command is correct then

Send Requested_command to Process 3.2.

Else

Warning Message

Clear value Daily Sales menu

End if

End

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Process 3.2. Generated Requested Result for Daily Sales System

Precondition

Receive Requested_command to process 3.2.

Begin

Check Requested_command

Select case

Case 1

Call Quantity Concept

Send command_qty to Server 's Processing

Case 2

Call Weight Concept

Send command_wgh to Server 's Processing

Case 3

Call Amount Concept

Send command_amt to Server 's Processing

End select

Retrieve Daily Sales Database

Compute Daily Sale

Generate Result to Browser

End

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Process 4.1. Accept & Verify Requested Command for Monthly Sales System

Begin

Accept Requested_command

Verify Requested_command

If Requested_command is correct then

Send Requested_command to Process 4.2.

Else

Warning Message

Clear value Monthly Sales menu

End if

End

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Process 4.2. Generated Requested Result for Daily Sales System

Precondition

Receive Requested_command to process 4.2.

Begin

Check Requested_command

If Requested_command is top_ten then

Call Top_ten Menu

Accept Top_ten_cmd

Select Case

Case 1

Call monthly processing

Send top_ten_cmd1 to Server 's Processing

Retrieve Monthly Sales Database

Compute Monthly Sales for specific command

Sort top ten Result

Generate Result to Browser

Case 2

Call Quarter processing

Send top_ten_cmd2 to Server 's Processing

Retrieve Monthly Sales Database

Compute Monthly Sales for specific command

Accumulate Quarter

Sort top ten Result

Generate Result to Browser

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```
        Select case
    Else
        Call General Monthly Sales menu
        Accept general_cmd
        Select Case
            Case 1
                Call monthly processing
                Send general_cmd1 to Server 's Processing
                Retrieve Monthly Sales Database
                Compute Monthly Sales for specific command
                Generate Result to Browser
            Case 2
                Call Quarter processing
                Send general_cmd2 to Server 's Processing
                Retrieve Monthly Sales Database
                Compute Monthly Sales for specific command
                Accumulate Quarter
                Generate Result to Browser
        Select case
    End if
End
```

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Process 5.1. Accept Requested Command for Price List 's System

Begin

Accept Requested_command

Verify Requested_command

If Requested_command is correct then

Select Case

Case 1

Send Requested_command to Process 5.2.

Generate Inquiry Price List 's Menu

Case 2

Send Requested_command to Process 5.2.

Generate Maintain Price List 's Menu

End Select

Else

Warning Message

End if

End

Else

Warning Message

Clear value Monthly Sales menu

End if

End

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Process 5.2. Inquiry Price

Precondition

Receive Requested_command to process 5.1.

Begin

Check Requested_command

Accept Inquiry_command

If Inquiry_command is correct then

Send inquiry_command to Server 's Processing

Retrieve Price List 's Database

Send Result Set to Process 5.4.

Else

Warning Message

End if

End

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Process 5.3. Maintain & Update Price

Precondition

Receive Requested_command to process 5.1.

Begin

Check Requested_command

Accept Key_maintain_command

Send Key_maintain_command to Server 's Processing

Retrieve Price List 's Database

If Result Set is match then

Accept change_record

Confirm Message

Update change_record

Else

Accept new_record

Confirm Message

Add new_record

End if

End

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Process 5.4. Generate Requested Result

Precondition

Receive Result Set to process 5.2.

Begin

Calculate Result Set

Arrange and Format Result Set

Display Result Set to Browser

End

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Process 6.1. Accept & Verify Requested Command for Price Raw 's System

Begin

Accept Requested_command

Verify Requested_command

If Requested_command is correct then

Send Requested_command to Server 's Processing

Retrieve Price Raw 's Database

Send Result Set to Process 6.2.

Else

Warning Message

End if

End

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Process 6.2. Generate Requested Result For Price Raw 's System

Precondition

Receive Result Set to process 6.1.

Begin

Calculate Result Set

Arrange and Format Result Set

Display Result Set to Browser

End

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Process 7.1. Accept & Verify Requested Command for Efficiency 's System

Begin

Accept Requested_command

Verify Requested_command

If Requested_command is correct then

Select Case

Case 1

Call Hen Processing

Send Requested_command to Server 's Processing

Retrieve Efficiency 's Database

Send Result Set to Process 7.2.

Case 2

Call Pig Processing

Send Requested_command to Server 's Processing

Retrieve Efficiency 's Database

Send Result Set to Process 7.2.

Case 3

Call Pig GP Processing

Send Requested_command to Server 's Processing

Retrieve Efficiency 's Database

Send Result Set to Process 7.2.

Case 4

Call Pig PS Processing

Send Requested_command to Server 's Processing

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Retrieve Efficiency 's Database

Send Result Set to Process 7.2.

Else

Warning Message

End if

End

Process 7.2. Generate Requested Result for Efficiency System

Precondition

Receive Result Set to process 7.1. and Type_command

Begin

Classify Type_command

Select Case Type_command

Case 1

Calculate Hen

Arrange and Format Hen

Case 2

Calculate Pig Method

Arrange and Format Pig

Case 3

Calculate Pig PS Method

Arrange and Format Pig PS

Case 4

Calculate Pig GP Method

Arrange and Format Pig GP

End select

Display Result to Browser

End

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APPENDIX D

ENTITY RELATIONSHIP DIAGRAM

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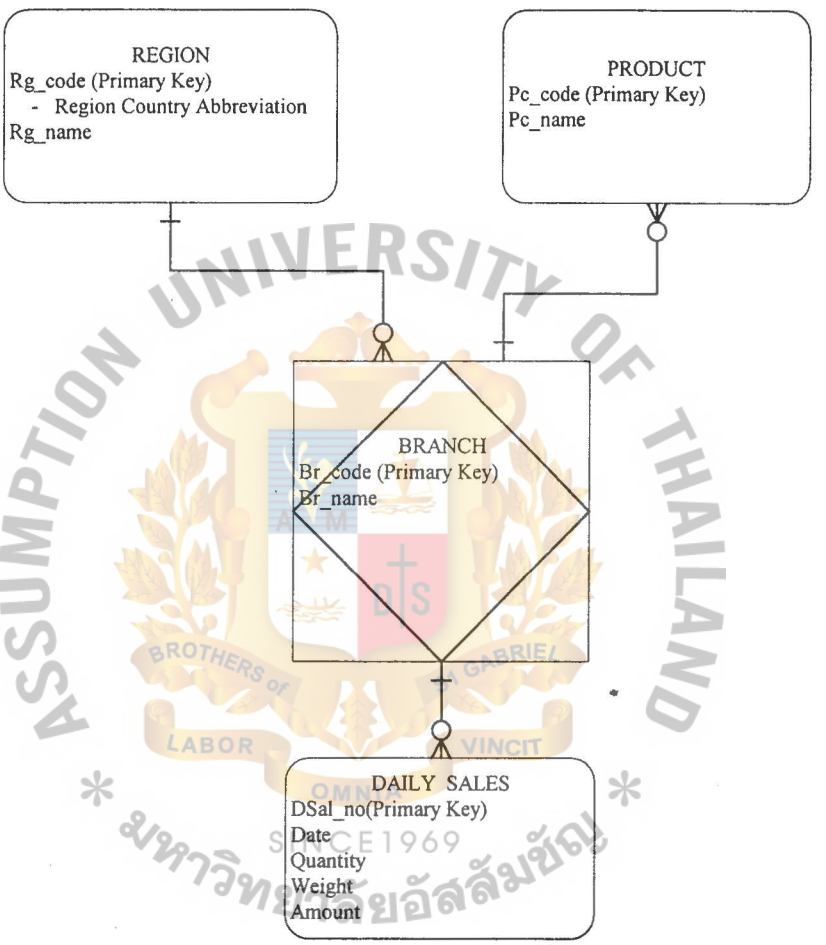

Figure D.1. Entity Relationship Diagram (Daily Sales System).

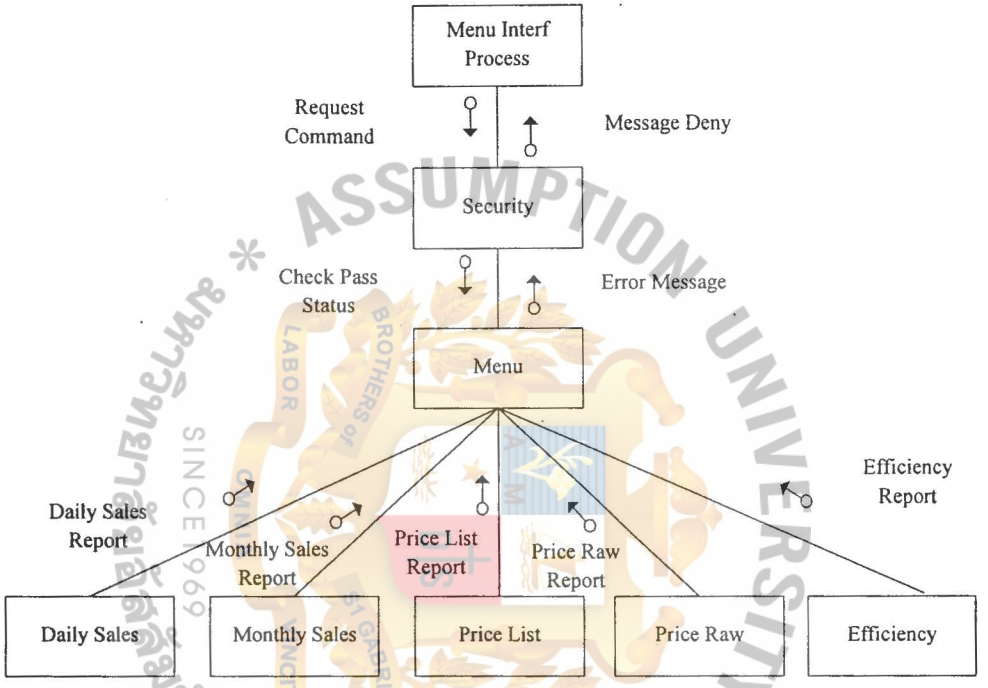

Figure D.2. Structure Chart of Intranet Process.

APPENDIX E

INPUT DESIGN

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Figure E.1. Daily Sales: Imported Data.

Figure E.2. Monthly Sales: Imported Data.

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Figure E.3. Efficiency: Imported Data.

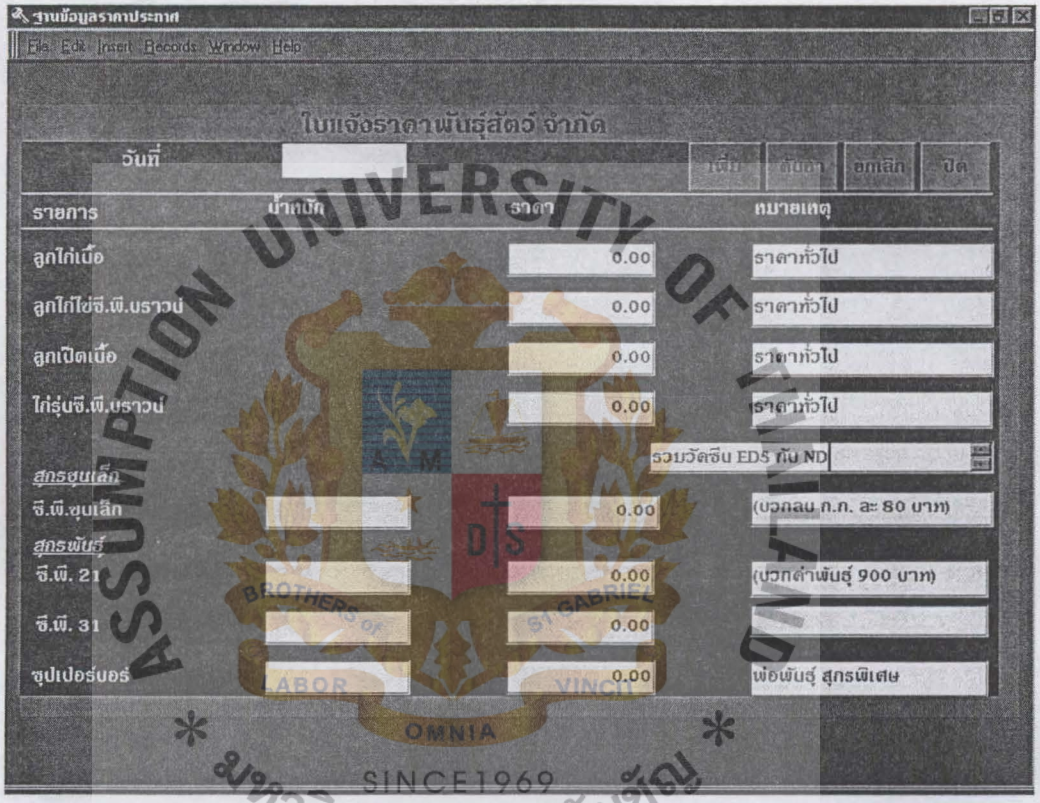

Figure E.4. Price List: Maintained Data.

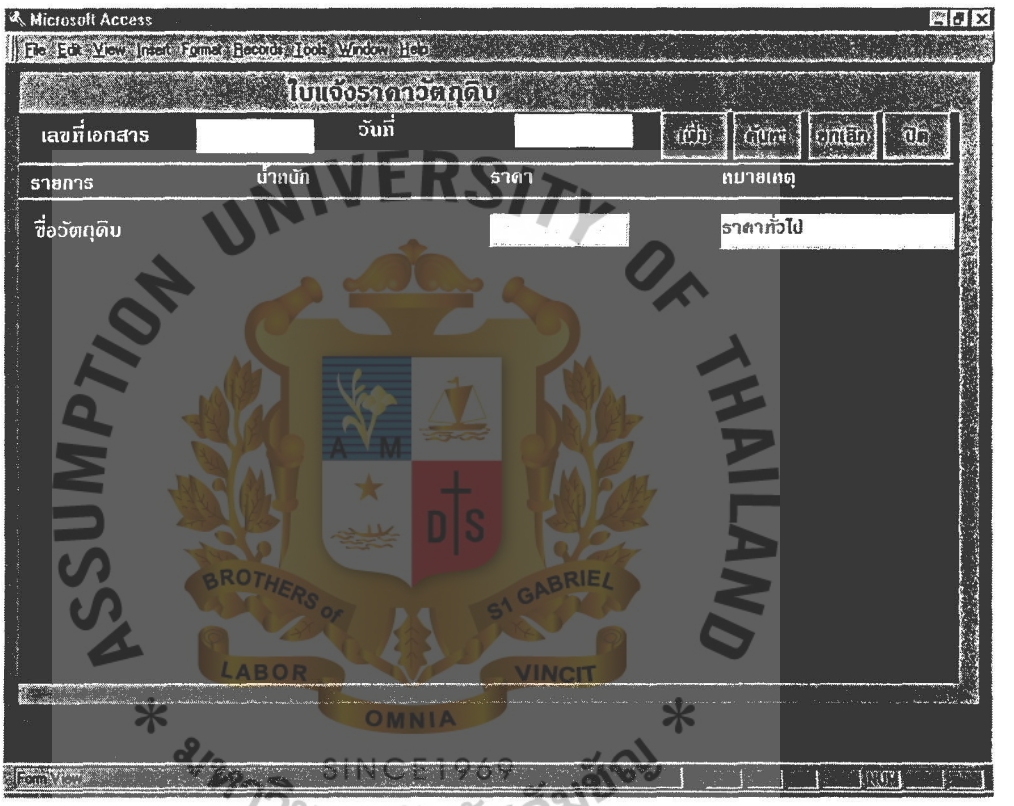

Figure E.5. Price Raw: Maintained Data.

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Figure E.6. Monthly Sales: Main Menu.

Figure E.7. Monthly Sales: Maintained Customer.

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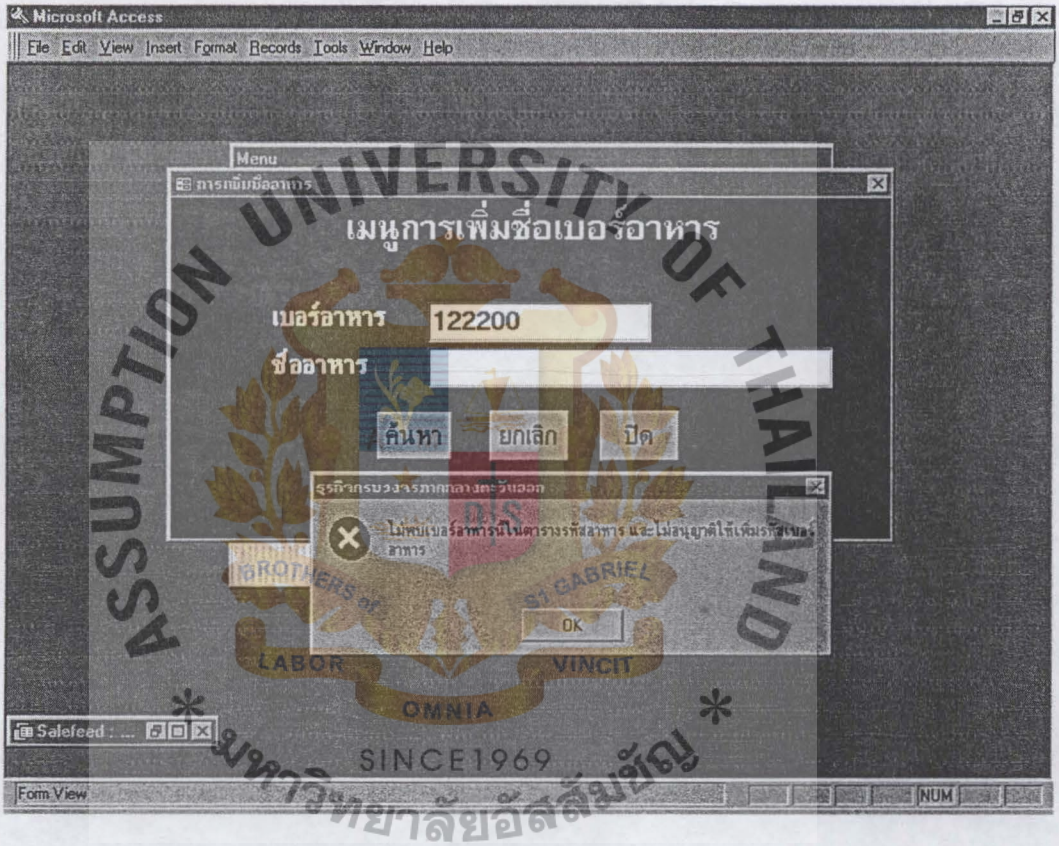

Figure E.8. Monthly Sales: Product Code.

APPENDIX F

OUTPUT DESIGN

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Figure F.1. Verify Login and Password Menu.

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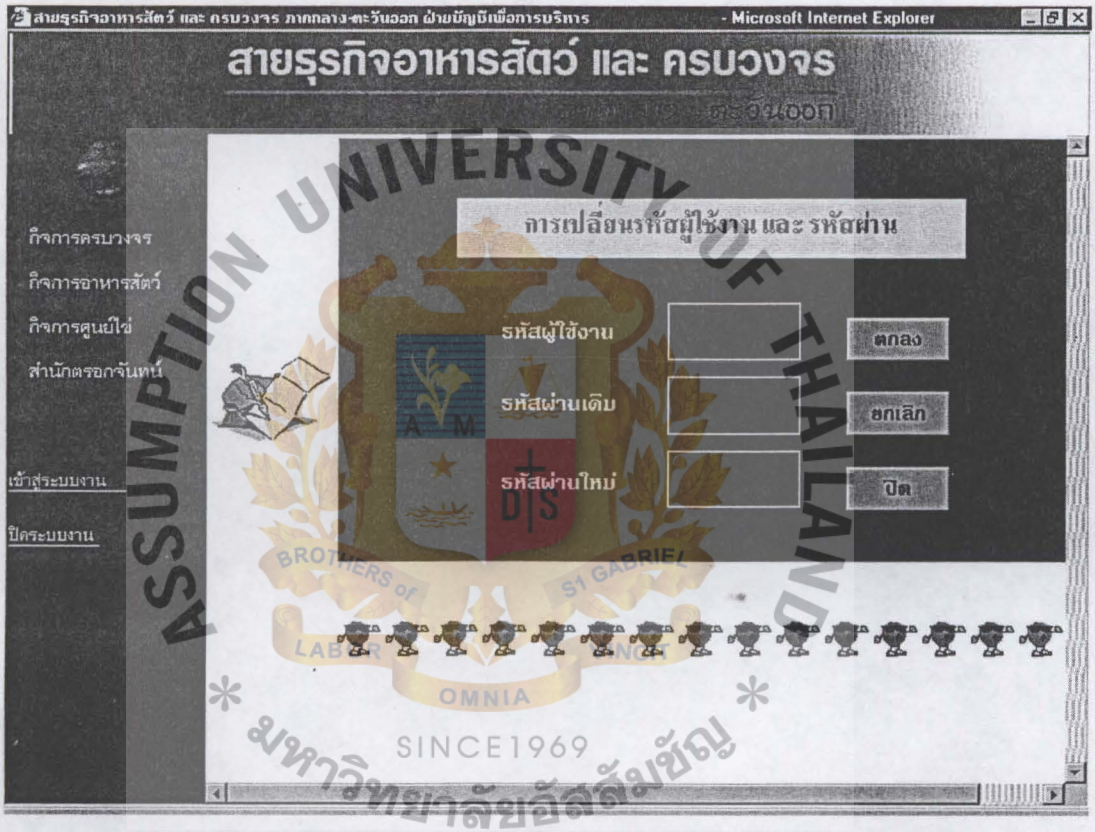

Figure F.2. Change Password Menu.

Figure F.3. Main Menu.

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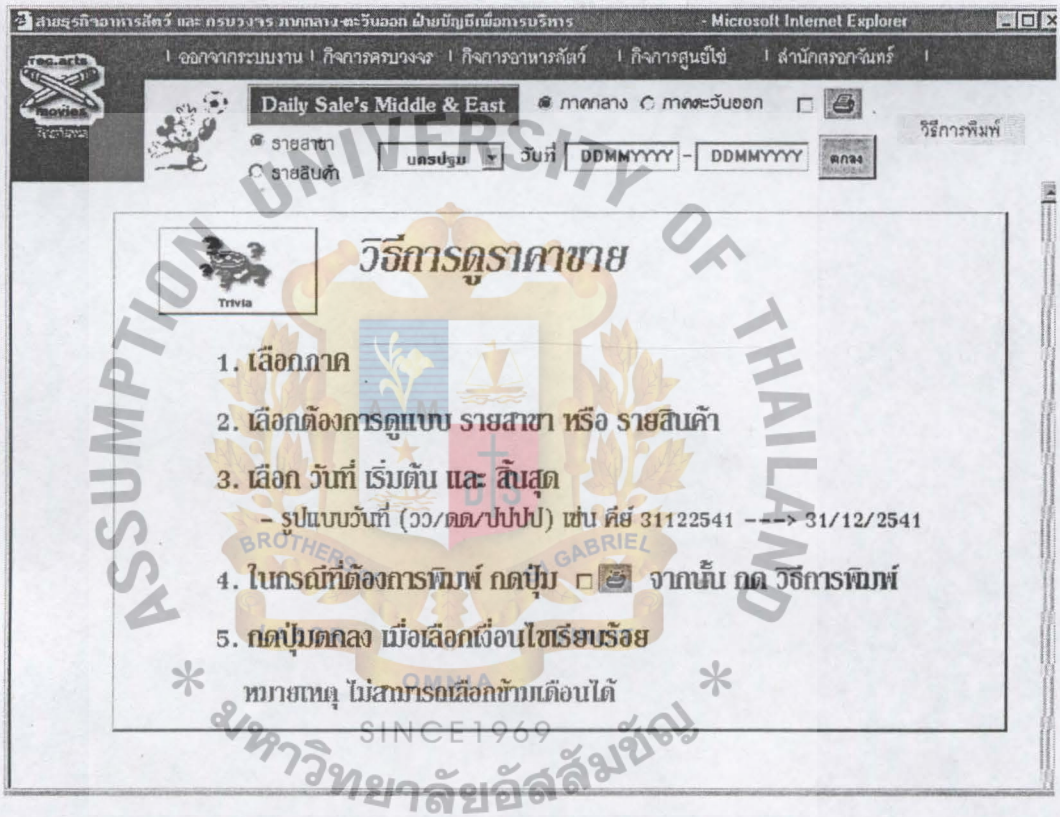

Figure F.4. Daily Sales: Maintained Data.

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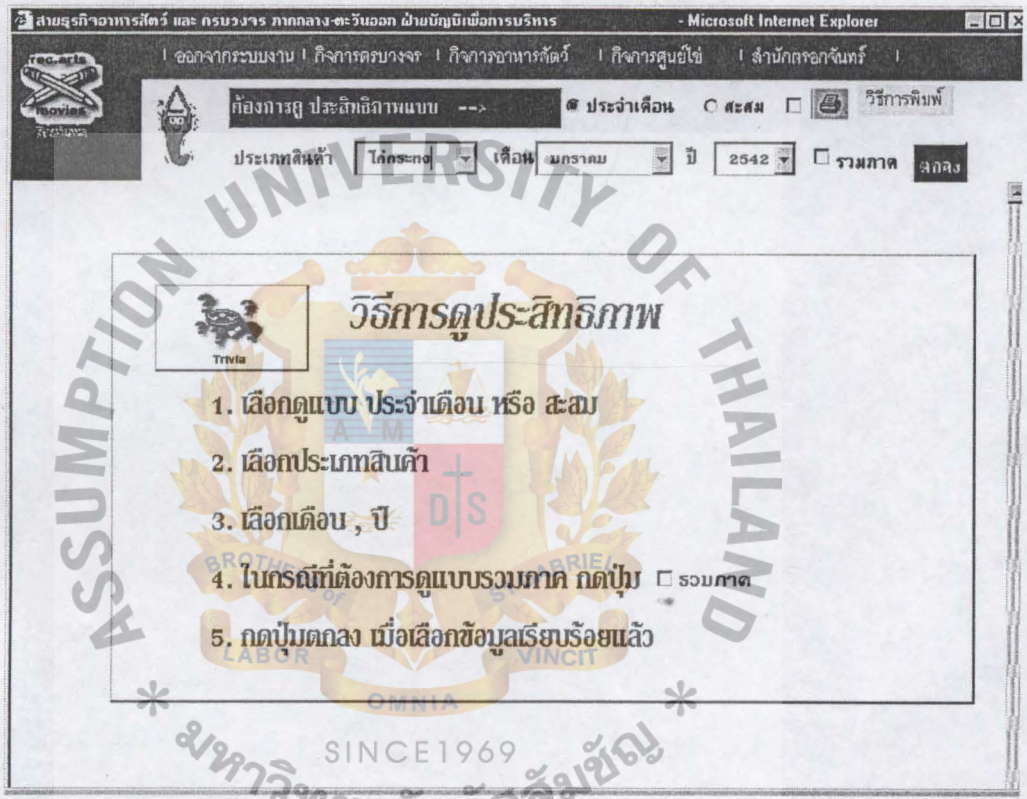

Figure F.5. Efficiency Menu.

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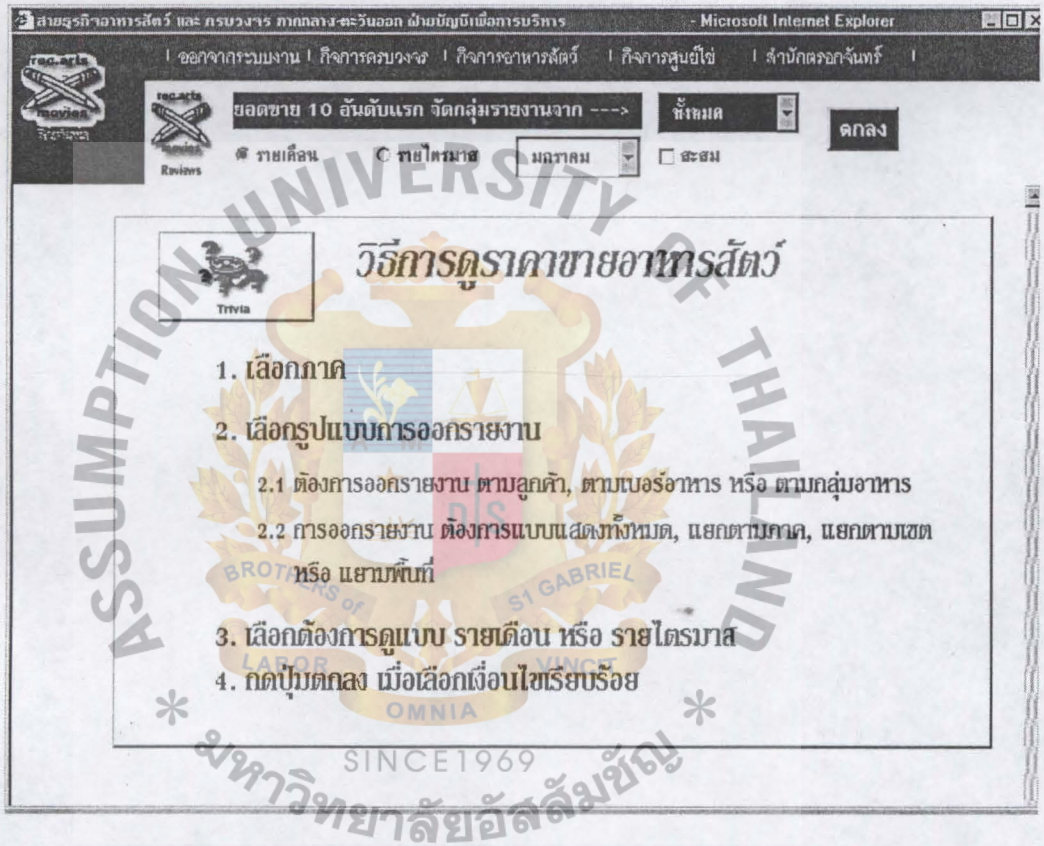

Figure F.6. Monthly Sales Menu.

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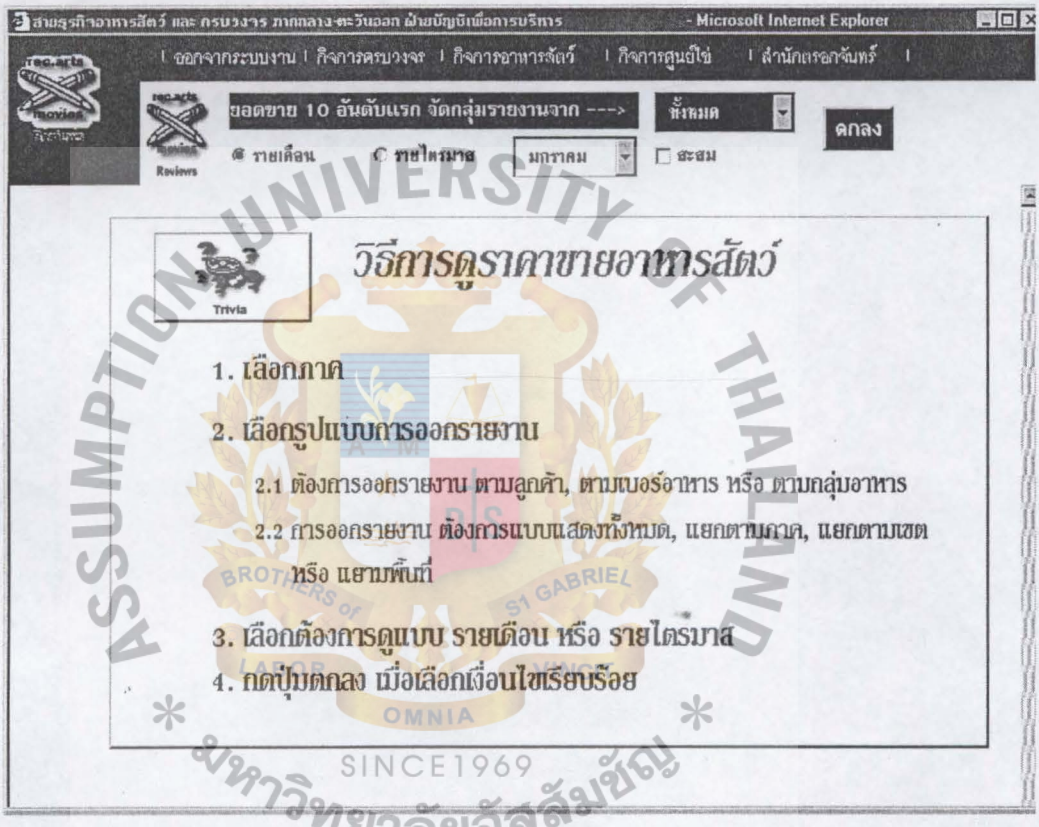

Figure F.7. Monthly Sales Menu for Top Ten.

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Figure F.8. Price List Menu.

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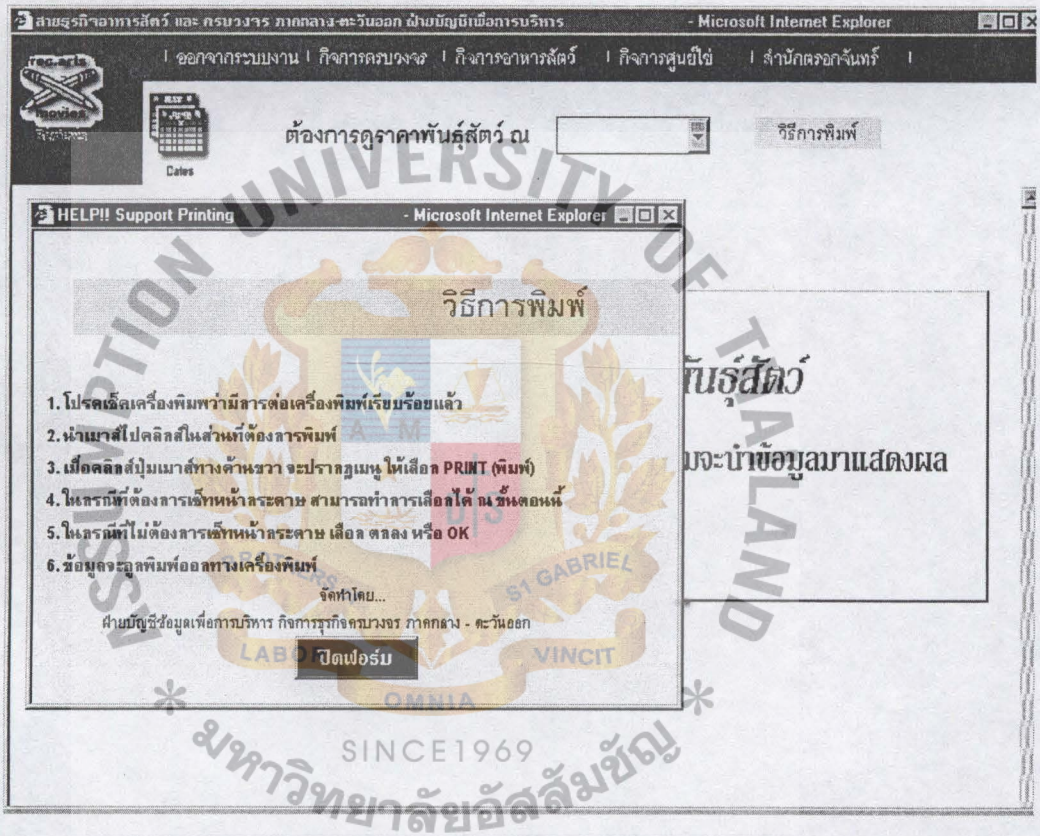

Figure F.9. Price Raw Material Menu.

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APPENDIX G

HARDWARE SEPCIFICATION

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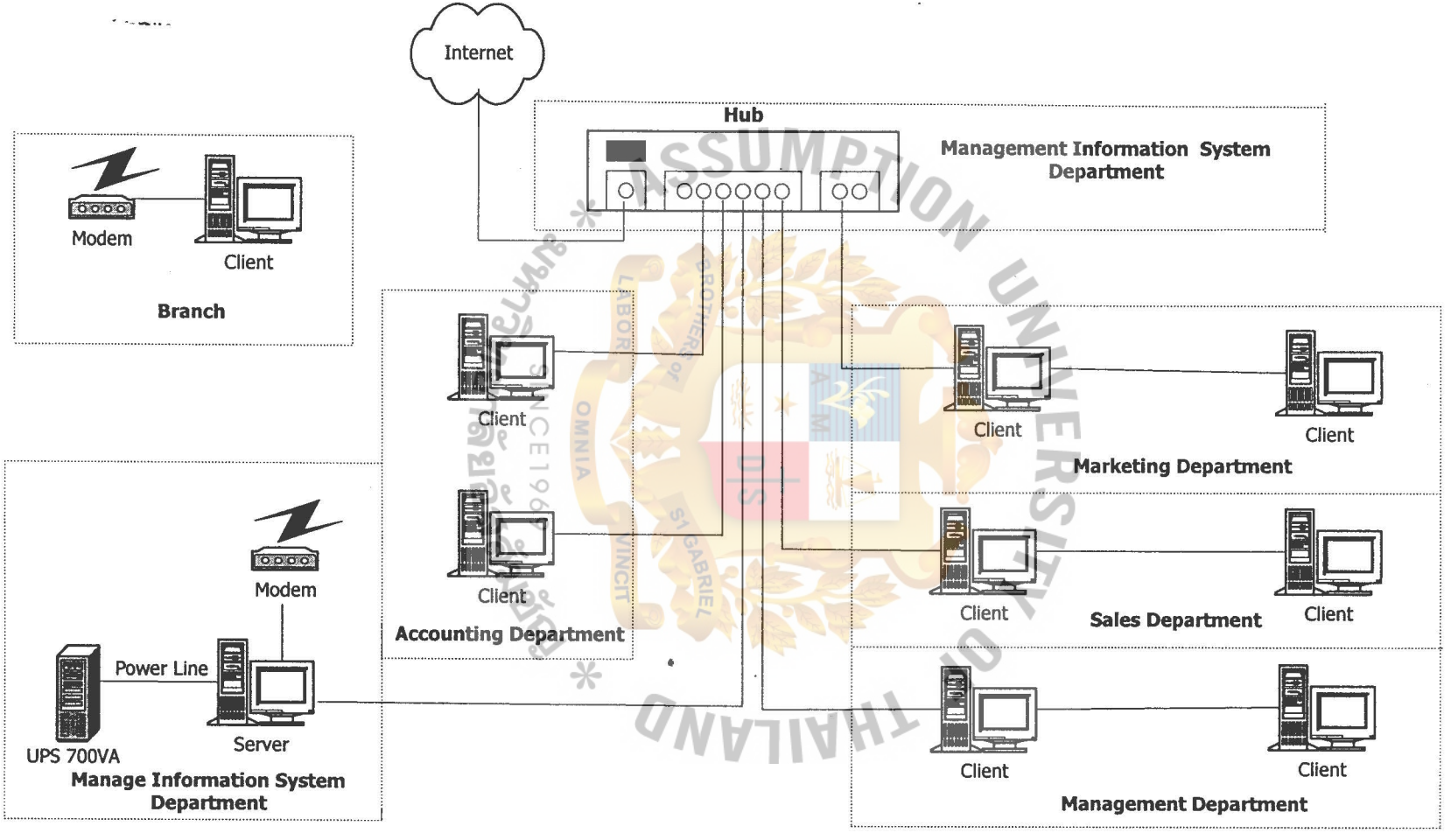

Figure G.1. The Hardware Configuration for Intranet System.

APPENDIX H

PAYBACK ANALYSIS

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Table H.1. Payback Analysis for the Proposed System, Baht.

Cost Items	Years				
	0	1	2	3	4
Development cost	-549,000.00	-	-	-	-
Operation & maintenance cost	0	-20,500.00	-20,500.00	-30,000.00	-40,000.00
Discount factors for 12%	1.000	0.893	0.797	0.712	0.636
Time-adjusted costs (adjusted to present value)	-549,000.00	-18,306.00	-16,338.00	-21,360.00	-25,440.00
Cumulative time-adjusted costs over lifetime	-549,000.00	-567,306.00	-583,645.00	-605,005.00	-630,005.00
Benefits derived from operation of new system	0	300,000.00	350,000.00	400,000.00	450,000.00
Discount factors for 12%	1.000	0.893	0.797	0.712	0.636
Time-adjusted costs (adjusted to present value)	0	267,900.00	278,950.00	284,800.00	286,800.00
Cumulative time-adjusted benefits over lifetime	0	267,900.00	546,850.00	831,650.00	1,117,850.00
Cumulative lifetime time-adjusted cost + benefit	-549,000.00	-299,406.00	-36,795.00	226,645.00	487,405.00

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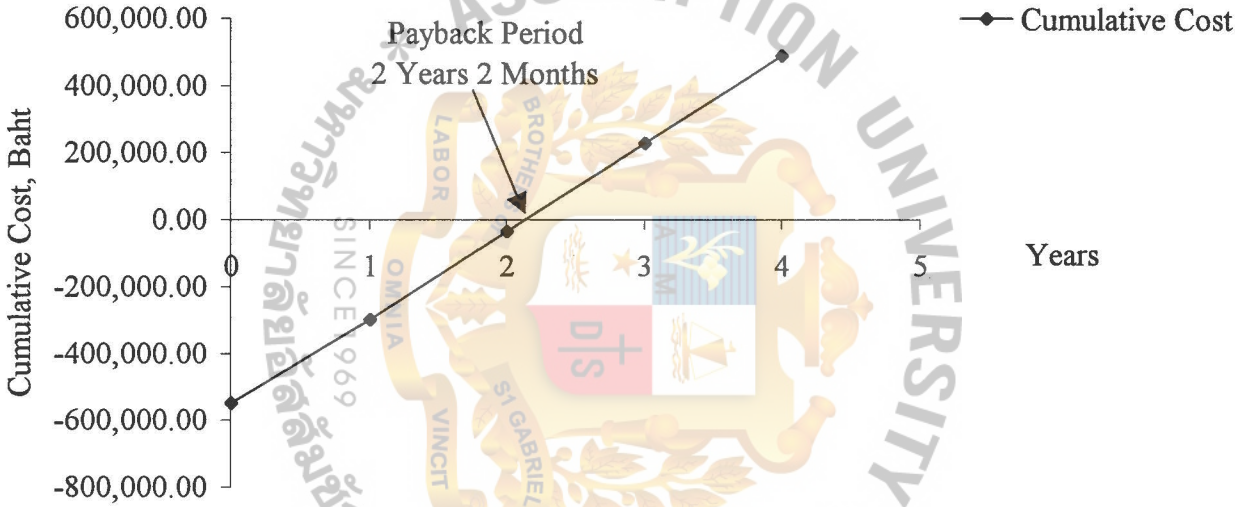

Figure H.1. Payback Analysis.

APPENDIX I

PROJECT PLAN

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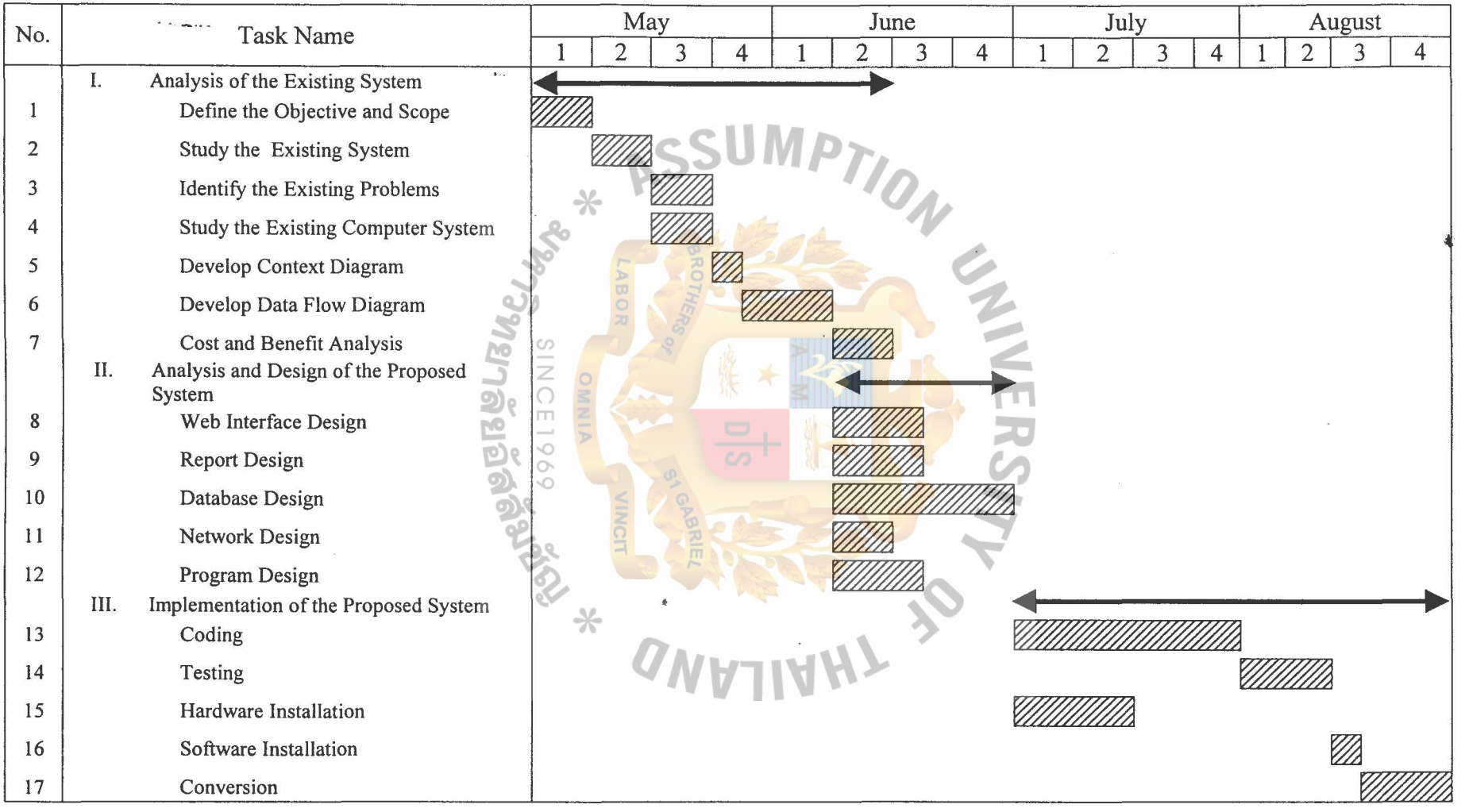

Figure I.1. Project Plan of Intranet System.

BIBLIOGRAPHY

English References

1. Boose, J. H. Expertise Transfer for Expert System Design. NY: Elsevier Science, 1986.

2. Howell, Nelson. Using Internet Information Server. NY: Que Corporation, 1998.

3. Johnson, Scot, Keith Ballinger, and Davis Chapman. Using Active Server Pages. NY: Que Corporation, 1999.

4. Moran, Michael E. ActiveX Development with Visual Basic 5. NY: Ventana Communications Group, 1998.

5. Page-Jones, Meilir. The Practical Guide to Structured System Design. NJ: Prentice-Hall International Company, 1988.

6. Senn, James A. Analysis & Design of Information Systems, 2nd Edition. NY: McGraw-Hill Publishing Company, 1989.

7. Spencer, Kenneth L., Kenneth C. Miller, and Lauren Lassesen. Introducing VB Scrip and ActiveX. NY: IDG Books Worldwide, Inc., 1999.

Thai References

1. กิตติ ภักดีวัฒนะกุล และ จำลองครูอุตสาหะ. ASP ฉบับโปรแกรมเมอร์. กรุงเทพฯ: บริษัท เคทีพี คอมพ์ แอนด์ คอนซัลท์ จำกัด, 2543.

2. กิตติ ภักดีวัฒนะกุล และ ไชยรัตน์ ปานปั้น. ASP ฉบับฐานข้อมูล. กรุงเทพฯ: บริษัท เคทีพี คอมพ์ แอนด์ คอนซัลท์ จำกัด, 2543.

3. จิตเกษม พัฒนาศิริ. เสริมแต่งโฮมเพจให้มีชีวิตชีวาด้วย Java Script. กรุงเทพฯ: บริษัท วิตตี้กรุ๊ป จำกัด, 2542.

4. วรัชญ์ กิจชระภูมิ. ปฏิบัติการ Dynamic HTML เทคโนโลยีเว็บสุดร้อน. กรุงเทพฯ: บริษัทศูนย์การศึกษาทางไกล (ประเทศไทย) จำกัด, 2543.

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