Practical Development of Information System in Business Context: Payroll System for Computer Peripheral and Suppliers Co., Ltd.

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Submitted in Partial Fulfillment
of the Course BC 4500 280 Hour Training Program
Bachelor's Degree of Business Administration
in Business Information Systems Program
Assumption University

November 2003

Project Name:	[Payroll System, Computer Peripherals and Supplies Co.,Ltd]
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Advisor:	A. Yoothapong Chotiwan
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The Department of Business Information Systems, ABAC School of Management has approved the aforementioned project, which includes complete Project Write-up and System submitted in fulfillment of the 3-credit course BIS 4995 Information System Development towards the requirements for the Bachelor's Degree of Business Administration in Business Information Systems

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(November 2003)

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Advisor: A. Yootthapong Chotiwan

PROJECT WRITE-UP

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The project report will be not the kindness of staff who work in CDG Group Co.,Ltd. As they gave their time and information and consultation for this project whenever I needed, I remain deeply thankful to them.

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CDG GROUP has a full spectrum of services: IT planning, information system consulting, design, development, integration, implementation, system management, security management, database management, and backup and recovery management. CDG also provides training so those customers can obtain the most value from their investments.

For over 3 decades of professional service, CDG has focused not just on installation and service, but on transferring the necessary technology that enables the customer to use, modify, and support the products.

1.2 Organization Structure Chart

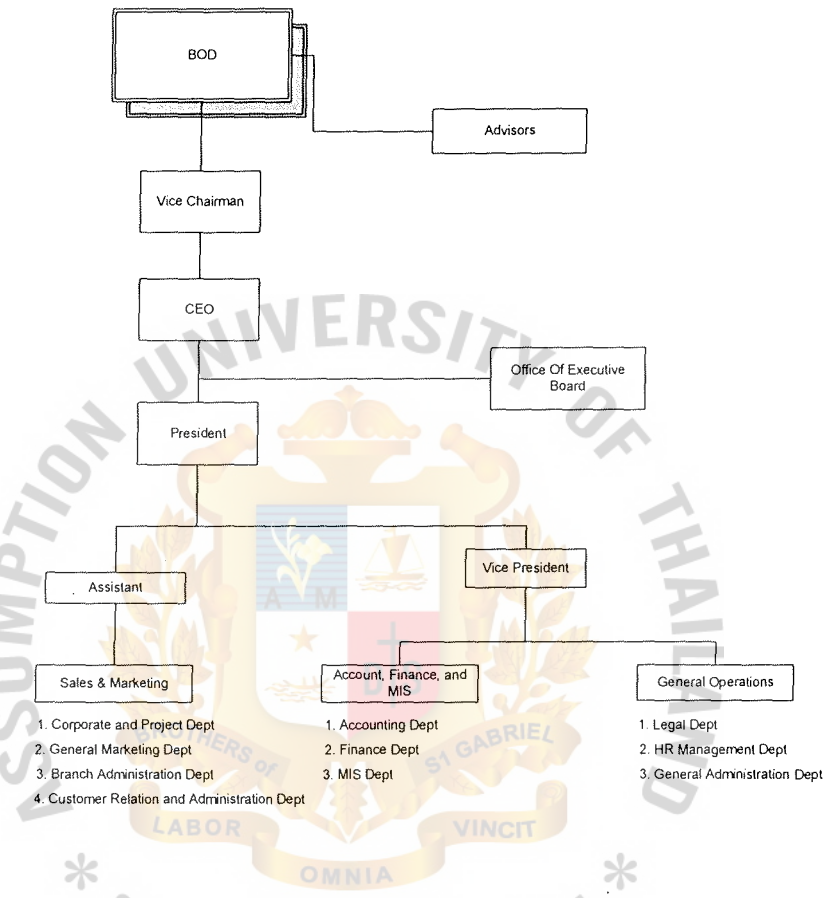

Figure 1-1 Organization Chart of Computer Peripheral and Supplies Co., Ltd

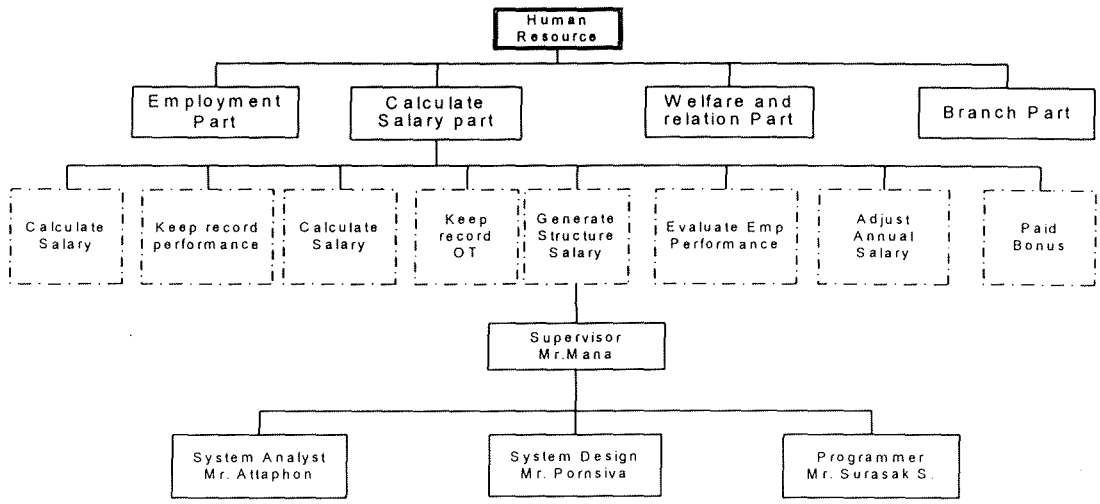

Figure1- 2 Department Charts of Human Resource

1.3 Project Plan

The tentative plan for this project: Payroll system of Computer Peripheral and Supplies Co., Ltd. is established in Figure 4.

No.	Task Name	September				October				November				December				January			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	I. Analysis of the Existing System																				
1.	Study the Existing System																				
2.	Identify the Existing Problems																				
3.	Existing Context Diagram																				
4.	Existing Data Flow Diagram																				
	II. Preliminary Investigation																				
5.	Define the objectives and scope																				
6.	Hardware Requirements																				
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8.	Entity-Relationship Diagram																				
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10.	Data Flow Diagram																				
11.	Functional Description																				
12.	Interface Design																				
13.	Report Design																				
	IV. Implementation of the Proposed System																				
14.	Coding																				
15.	Testing																				
16.	Documentation																				

Figure1- 3 Project Plan for Computer Peripheral and Supplies Payroll system

II. THE EXISTING SYSTEM

2.1 Background of Existing System

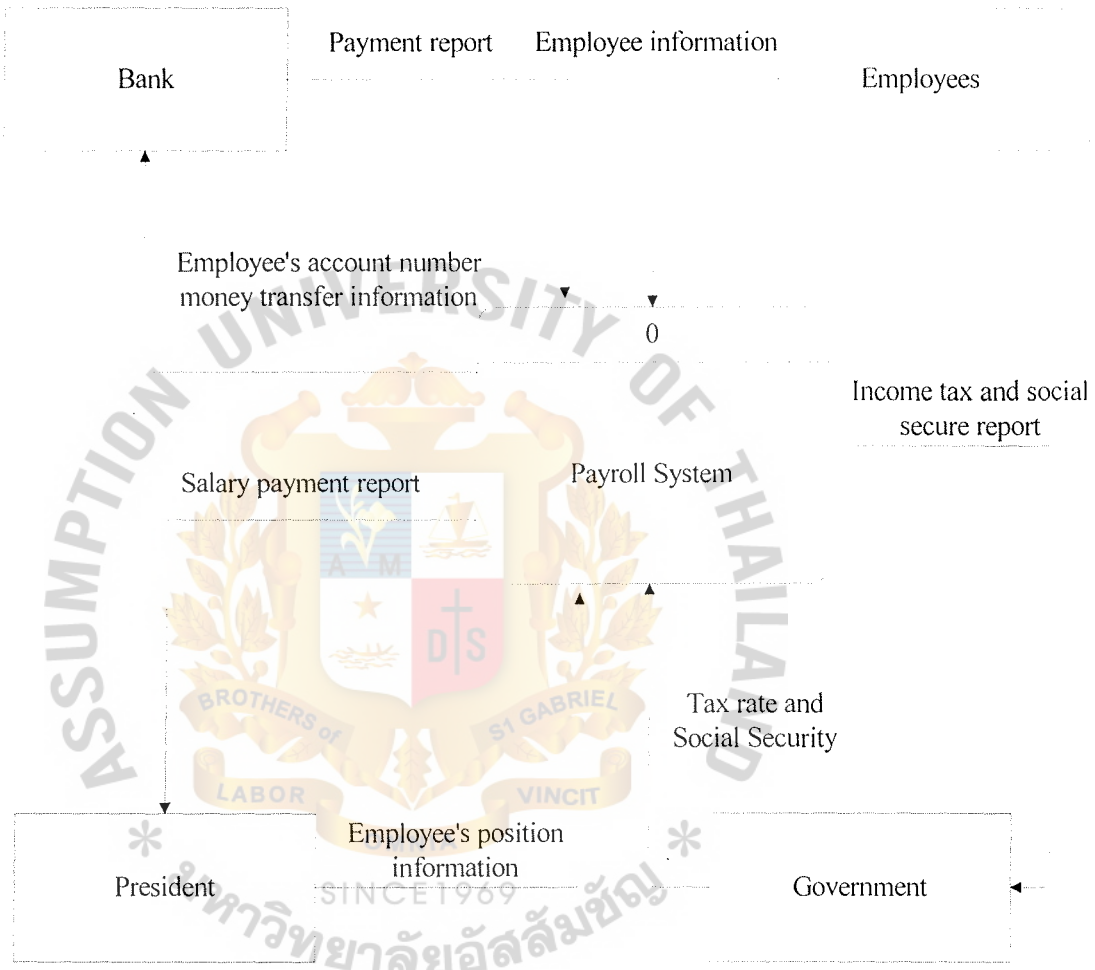

Figure 2-1 Context Diagram of Existing System

2.2 Problem Definition

(1) Inconsistency of punching card machine

According to old punching card machine is lead to the time checking problem. Due to the very old clock system are not exactly run stable, it will cause in error of time Checking.

(2) Time consuming in collecting employee information

The existing clock machine using for a long time to collect the data of all employee.

(3) Time consuming in salary calculation.

Using manual operation will cause too much of time in calculating salary.

(4) Problem in store and retrieve data

Mostly the data concerning employees are recorded on paper. The large volume of the data. The company waste space in keeping those papers. The work may be loaded at department in a process

III. THE PROPOSED SYSTEM

3.1 Feasibility Study

(1) Objectives of the System

1. To improve efficiency of the payroll system by reduce the involvement of human which easily to make the mistake.

2. To develop efficiency application that can calculate salary, payment, and printed out report to involvement department and government correctly.

3. To provide convenient, fast, and easy of system to user by using GUI interface to user which will can easily to learn and use program

(2) Scope of the System

1. To calculate salary, tax income, and social secure of each employee and printed out report for manager, government, bank which each of them will want the different type of report printed. The payroll system will provide the report printed to each of them correctly.

2. To keep employees' information, salary, tax, social secure, and the salary paid. And these data can be retrieved when ever the user wants.

3. To keep in the system can be update or edit by only authorized user who have password for operate the program.

(3) Hardware Requirements

Table 3-1 Hardware Requirements

HAREWARE	SPECIFICATION
CPU	Pentium 4 1.6 Mhz
RAM	SD RAM 128
Hard disk	10 GB

Because of in the present, Pentium 4 is most popular in computer market. And It will be fast and comfortable to testing and running program. And hard disk 10GB is basic of space in hard disk and can buy it easily. Ram 128 is basic and easily to buy.

Software Requirements

Table 3-2 Software Requirements

SOFTWARE	SPECIFICATION
Operating System	Window XP
Application	Visual basic6 Microsoft office XP Access

This program use WindowXP because it was a new version of window. And Visual Basic6 is new Application in Vb. For Visual basic and Microsoft office XP Access is easily to use and compatible to make the program.

(4) Cost Analysis

Cost analysis focuses on the cost of the system derived from non-operating and operating costs.

(a) System Costs of Existing System

Table 3-3 Cost of Existing System, Baht

Cost	Years				
	1	2	3	4	5
Fixed Costs:					
Hardware					
Workstation					
Pentium III 800 MHz	3,267.00	3,267.00	3,267.00	3,267.00	3,267.00
Monitor Mag 15"	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
Printer Laser HP	5,992.00	5,992.00	5,992.00	5,992.00	5,992.00
Software					
Windows 98	640.00	640.00	640.00	640.00	640.00
MS-Excel 97	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Implementation Cost					
Training Cost (10 Hrs x 200)	2,000.00	-	-	-	-
Maintenance Costs	-	-	-	5,000.00	4,000.00
Total Fixed Costs	15,999.00	13,999.00	13,999.00	18,999.00	17,999.00
Operating Costs:					
Staff					
Manager @ 15,000/month	180,000.00	192,000.00	204,000.00	216,000.00	228,000.00
Finance Officer @ 8,700/month	104,400.00	110,400.00	116,400.00	122,400.00	128,400.00
OHRM Officers 2 @ 8,700/month	208,800.00	220,800.00	232,800.00	244,800.00	256,800.00
Accounting Officer @ 8,700/month	104,400.00	110,400.00	116,400.00	122,400.00	128,400.00
Paper	3,600.00	3,960.00	4,356.00	4,791.60	5,270.76
Utility	6,000.00	6,600.00	7,260.00	7,986.00	8,784.60
Opportunities Cost	60,000.00	66,000.00	72,600.00	79,860.00	87,846.00
Other expenses	2,400.00	2,640.00	2,904.00	3,194.40	3,513.84
Total Operating Costs	669,600.00	712,800.00	756,720.00	801,432.00	847,015.20
Total Cost of Existing System	685,599.00	726,799.00	770,719.00	820,431.00	865,014.20

(a) System Costs of Proposed System

Table 3-4 Cost of Proposed System, Baht

Cost	Year				
	1	2	3	4	5
Fixed Costs:					
Hardware					
1 Server Computer					
Pentium IV 2 GHz	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
Monitor Mag 17"	1,960.00	1,960.00	1,960.00	1,960.00	1,960.00
3 Client Computers					
Pentium II 500 MHz	14,091.00	14,091.00	14,091.00	14,091.00	14,091.00
Monitor Mag 15"	5,880.00	5,880.00	5,880.00	5,880.00	5,880.00
Hub	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00
Printer Laser HP	5,992.00	5,992.00	5,992.00	5,992.00	5,992.00
Software					
Windows NT	8,000.00	8,000.00	8,000.00	8,000.00	8,000.00
MS-Access 97	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Visual Basic 6.0	20,400.00	20,400.00	20,400.00	20,400.00	20,400.00
Crystal Report 7.01	14,100.00	14,100.00	14,100.00	14,100.00	14,100.00
Windows 98	1,920.00	1,920.00	1,920.00	1,920.00	1,920.00
Implementation Cost					
Development Cost (400 Hrs@500)	200,000.00	-	-	-	-
Training Cost (10 Hrs@5000)	3,500.00	-	-	-	-
Maintenance Costs	-	-	-	6,000.00	5,000.00
Total Fixed Costs	304,843.00	101,343.00	101,343.00	107,343.00	106,343.00
Operating Costs:					
Staff					
Manager @ 15,000/month	180,000.00	192,000.00	204,000.00	216,000.00	228,000.00
OHRM Officer @ 8,700/month	104,400.00	110,400.00	116,400.00	122,400.00	128,400.00
Accounting Officer @ 8,700/month	104,400.00	110,400.00	116,400.00	122,400.00	128,400.00
Paper	1,200.00	1,320.00	1,980.00	2,970.00	4,455.00
Utility	12,000.00	13,200.00	19,800.00	29,700.00	44,550.00
Opportunities Cost	36,000.00	36,000.00	36,000.00	36,000.00	36,000.00
Other expenses	4,800.00	5,280.00	5,808.00	6,388.80	7,027.68
Total Operating Costs	442,800.00	468,600.00	500,388.00	535,858.80	576,832.68
Total Cost of Proposed System	747,643.00	569,943.00	601,731.00	643,201.80	683,175.68

(b) The Comparison of Accumulated System Costs between Existin

Table 3-5. Accumulated System Costs of Existing System for 5 Years, Baht.

Year	Total Annual Cost	Accumulated Cost
1	685,599.00	685,599.00
2	726,799.00	1,412,398.00
3	770,719.00	2,183,117.00
4	820,431.00	3,003,548.00
5	865,014.20	3,868,562.20

Table 3-6. Accumulated System Costs of Proposed System for 5 Years, Baht.

Year	Total Annual Cost	Accumulated Cost
1	747,643.00	747,643.00
2	569,943.00	1,317,586.00
3	601,731.00	1,919,317.00
4	643,201.80	2,562,518.80
5	683,175.68	3,245,694.48

Table 3-7. The Comparison of Accumulated System Costs, Baht.

Year	Accumulated Existing System Cost	Accumulated Proposed System Cost
1	685,599.00	747,643.00
2	1,412,398.00	1,317,586.00
3	2,183,117.00	1,919,317.00
4	3,003,548.00	2,562,518.80
5	3,868,562.20	3,245,694.48

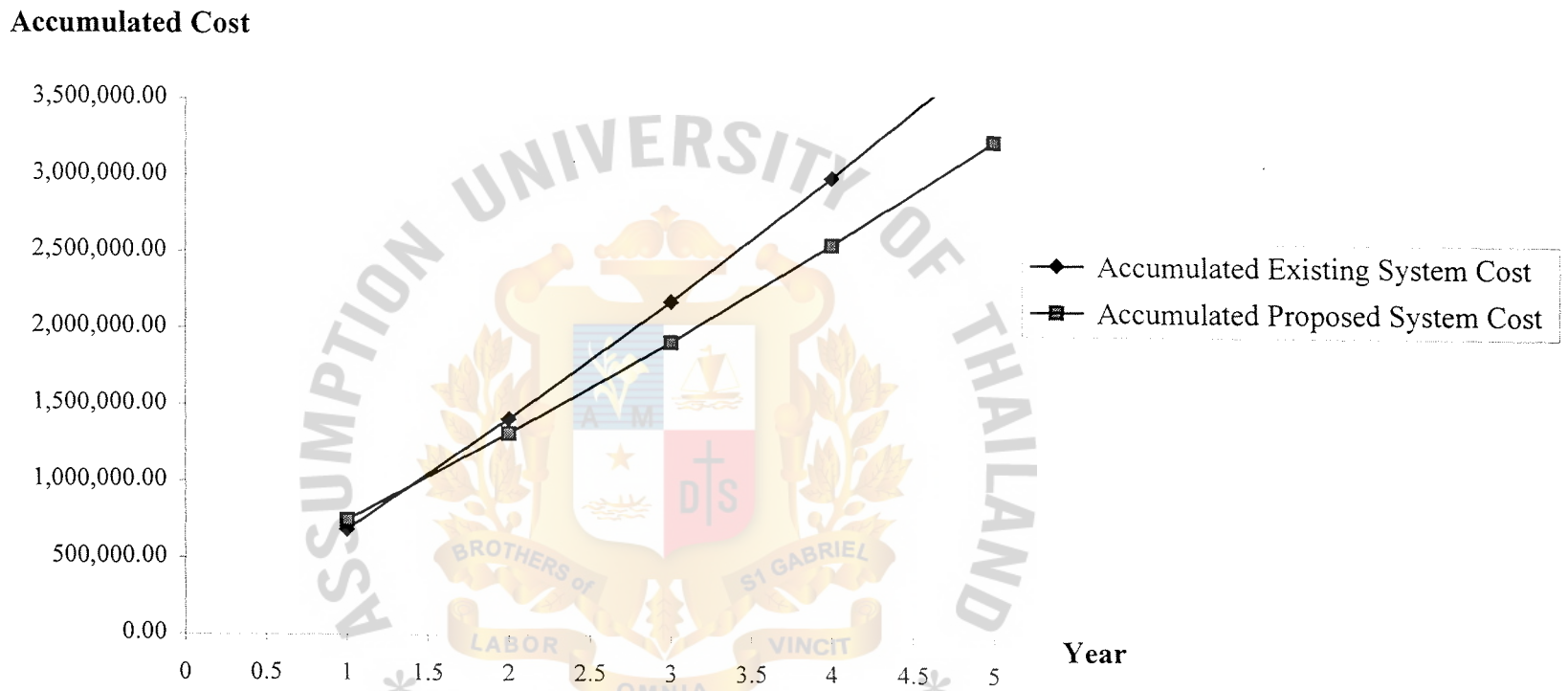

Figure 3-1 Break-even Analysis

3.2 System Design

(1) Data Flow Diagram

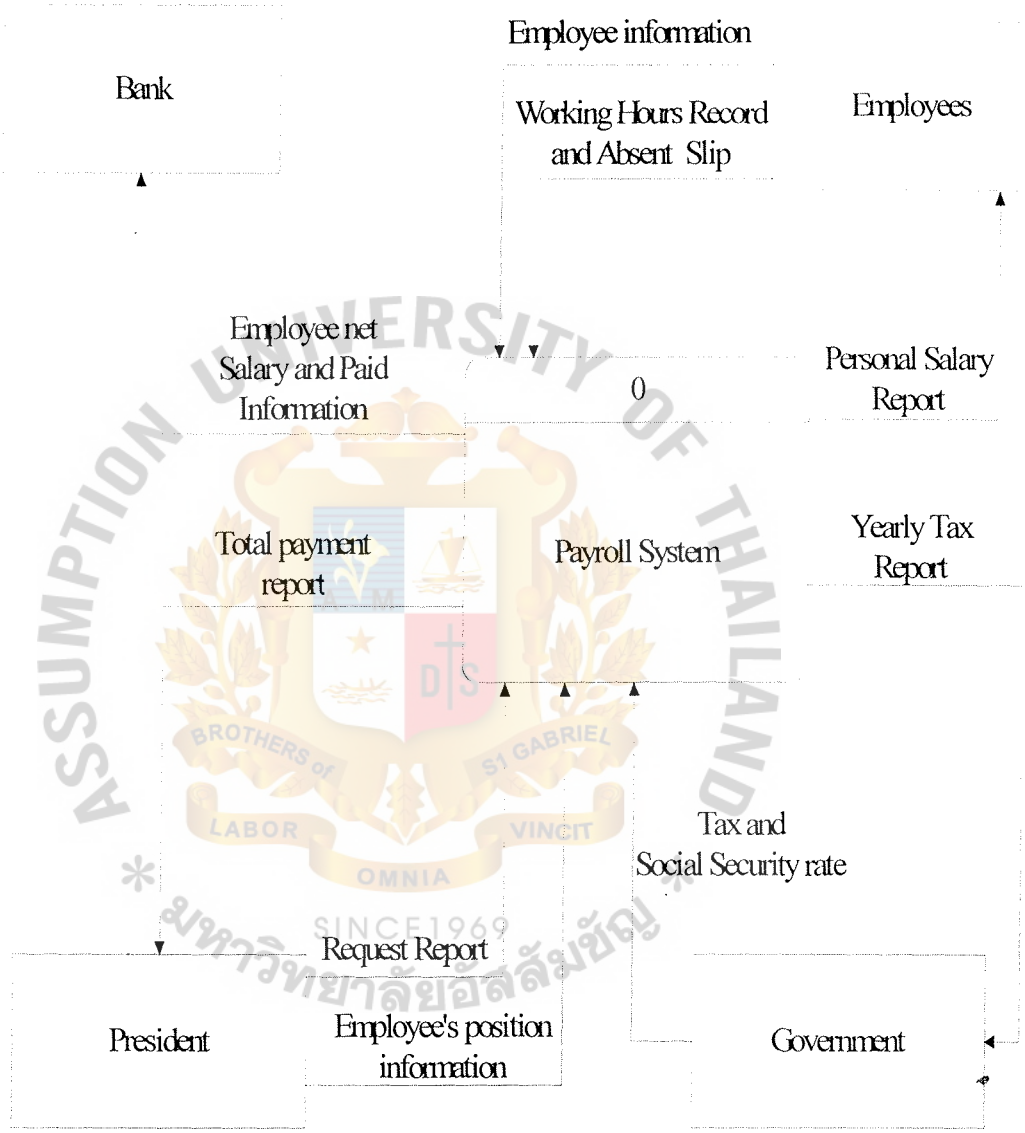

Figure 3-2 Context Diagram

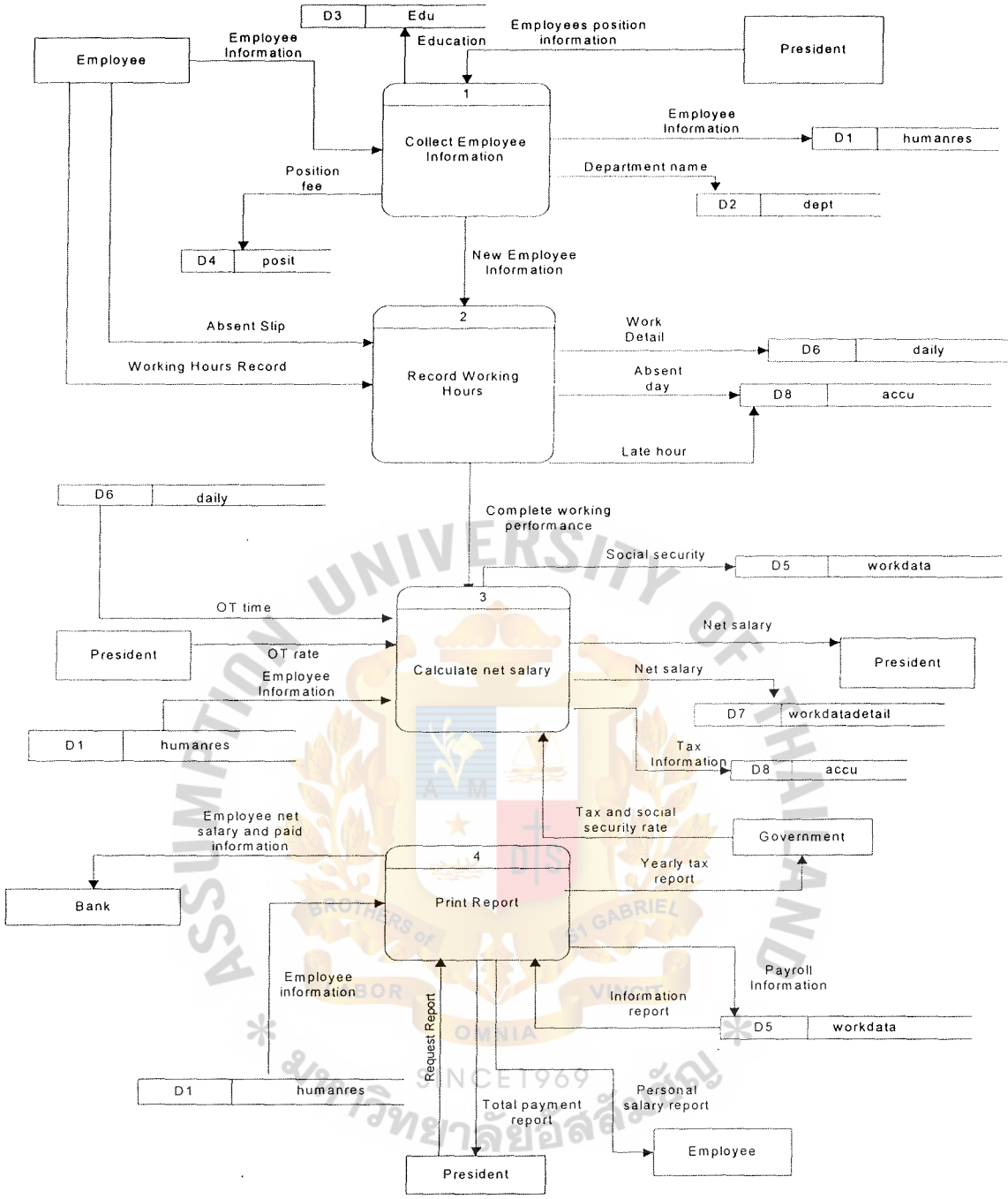

Figure 3-3 Data Flow Diagram – Level 0

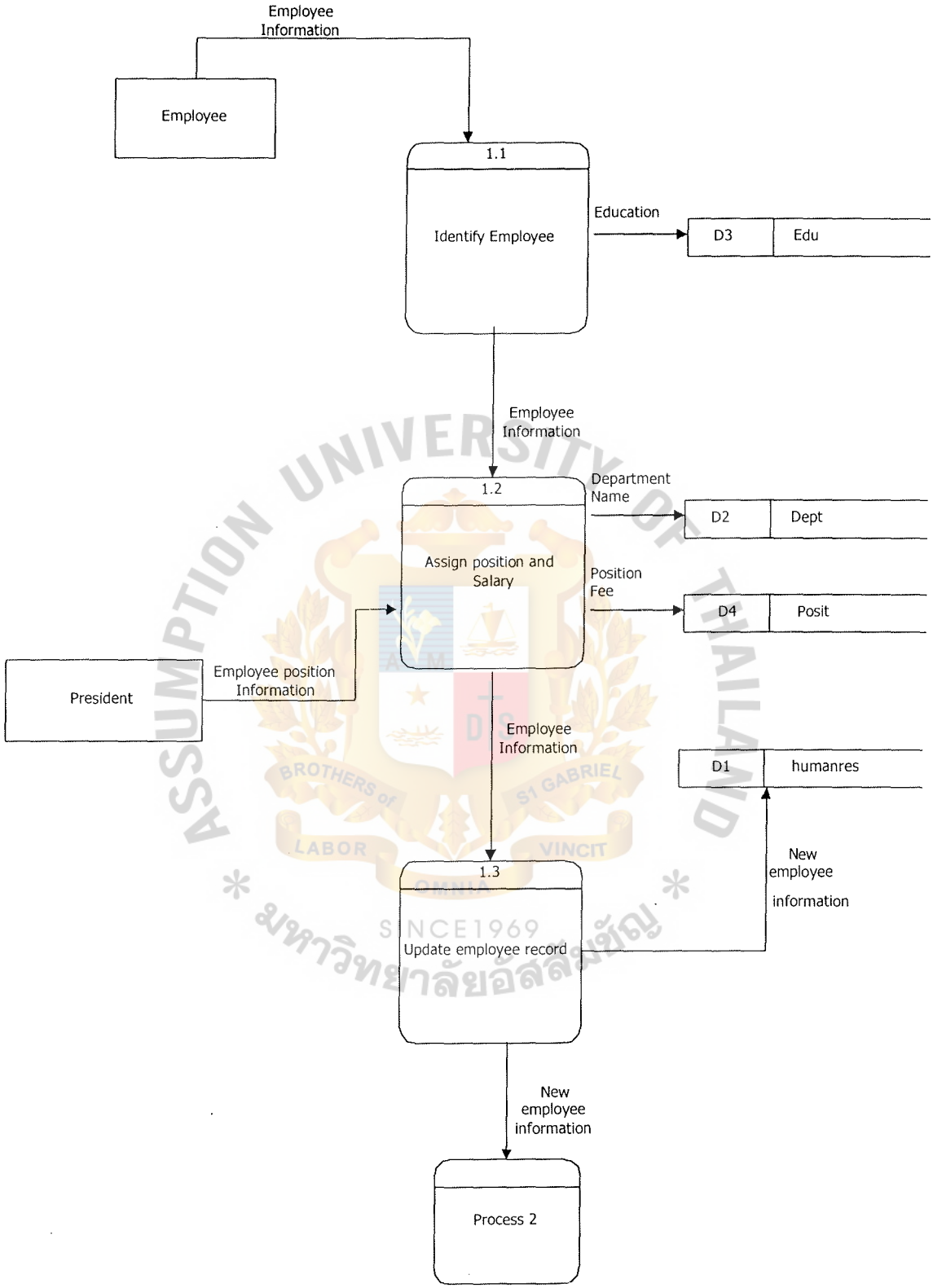

Figure 3-4 Data Flow Diagram – Level 1 for Process 1

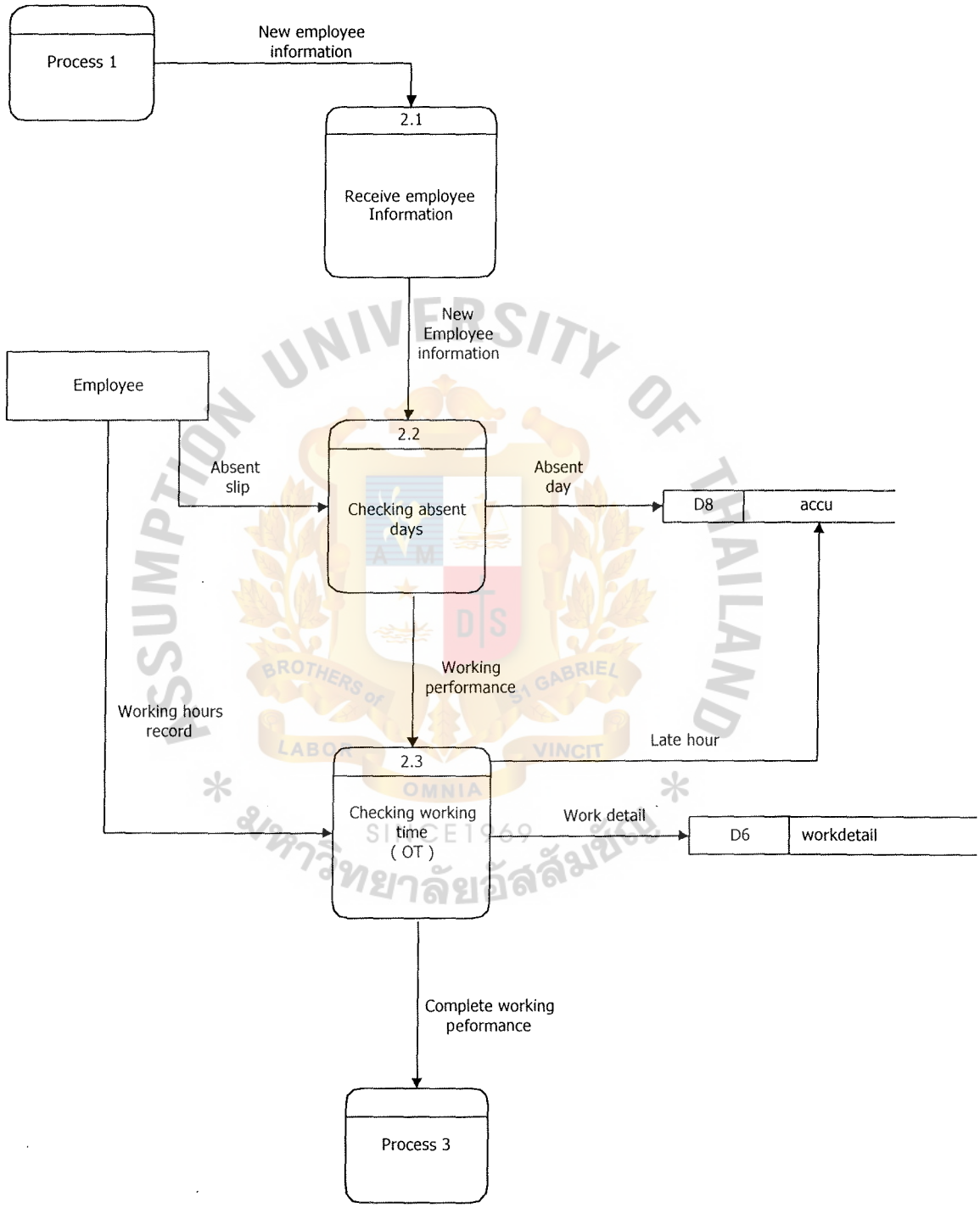

Figure 3-5 Data Flow Diagram – Level 1 for Process 2

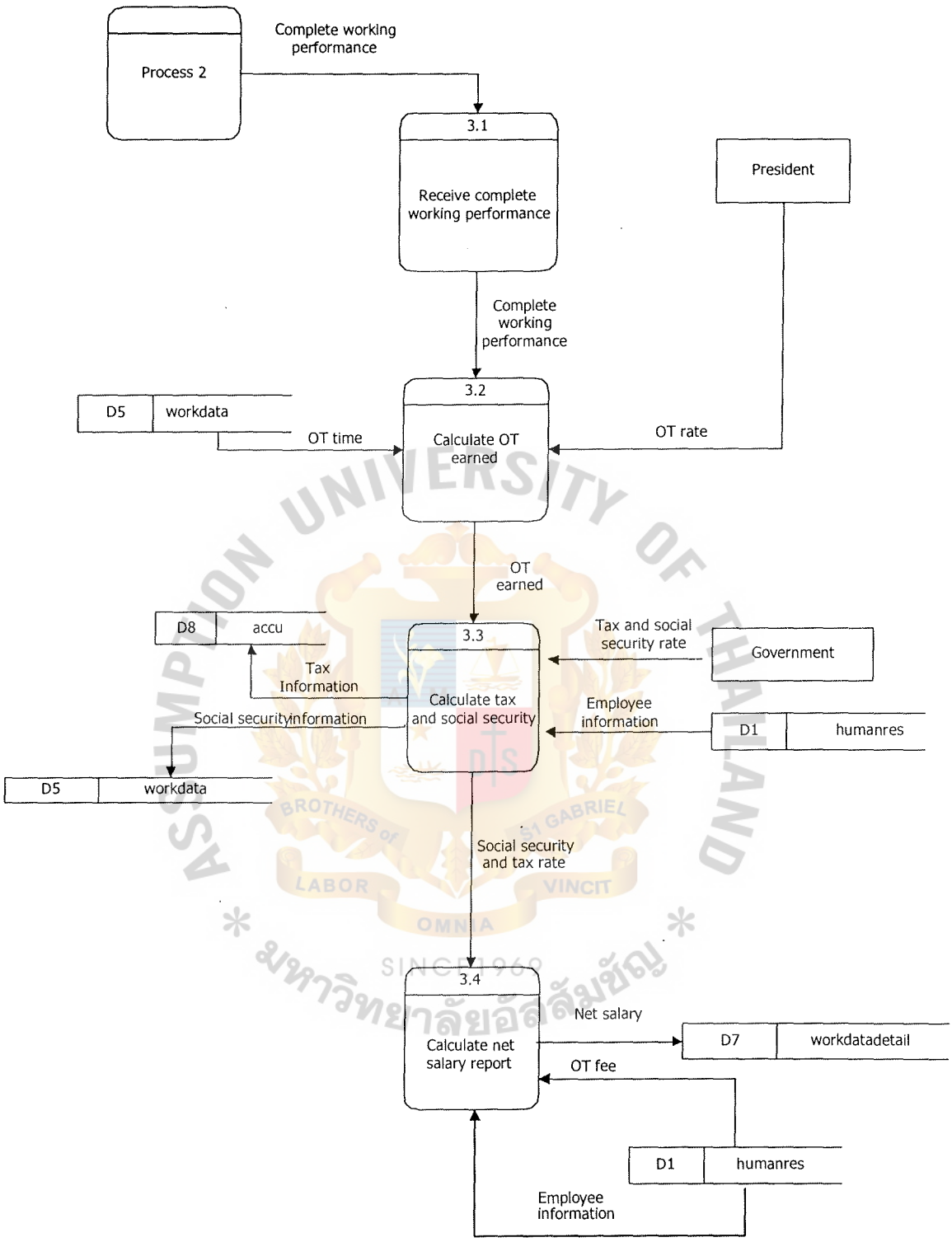

Figure 3-6 Data Flow Diagram – Level 1 for Process3

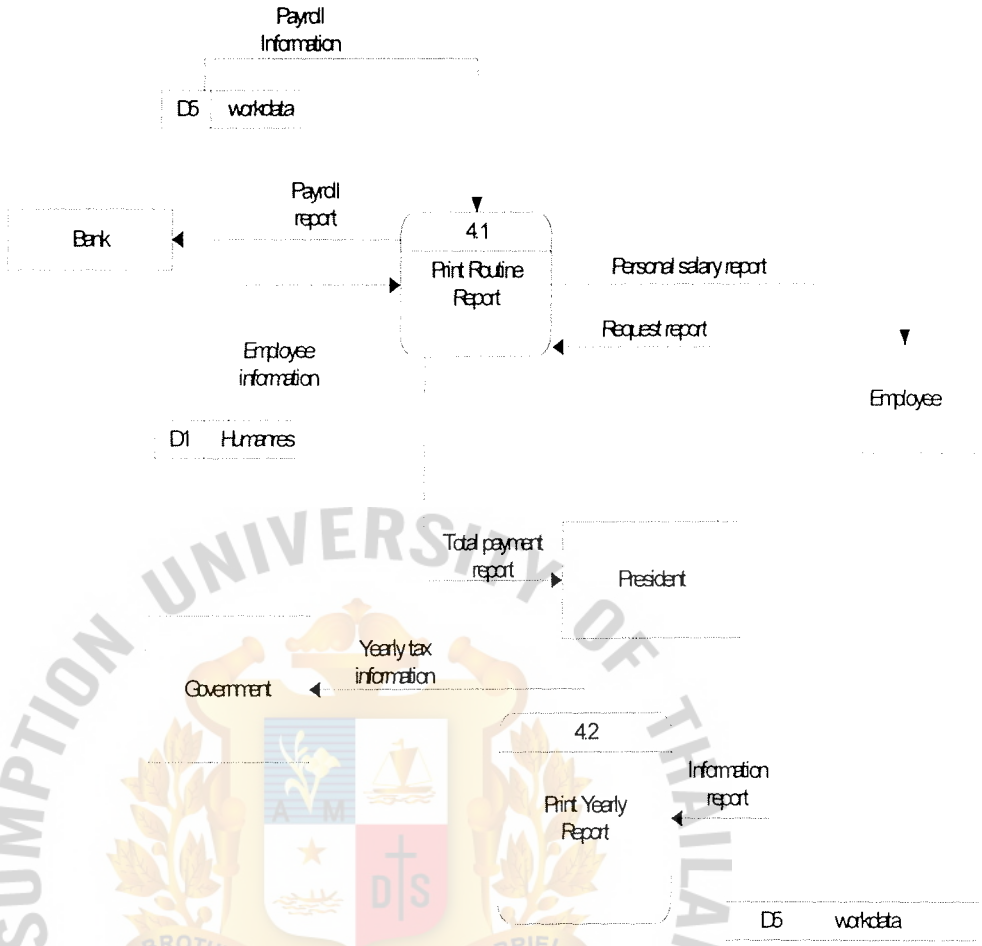

Figure 3-7 Data Flow Diagram – Level 1 for Process4

(2) Entity-Relationship Diagram

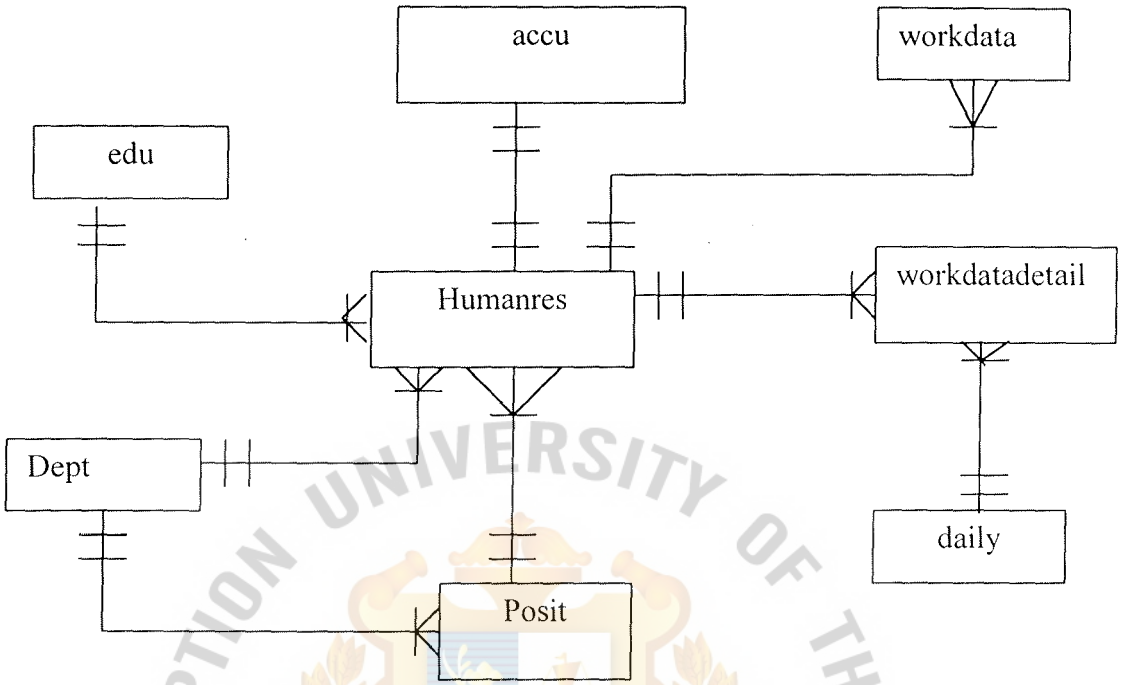

Figure 3-8 Entity-Relationship Diagram

(3) Database Design

Explain and list the tables, and state that the Database Design is exhibited in Appendix A

Table Humanres- is keep 22 field about the information of employee in the company, status, money, salary, background and etc. It was the main database in the program. For other detail you can see at Table A-1 in Appendix A.

Table dept – is record about department id and department name that fix the department of employee in the company. For other detail you can see at Table A-2 in Appendix A.

Table edu – is record the information of employee in education background For other detail you can see at Table A-3 in Appendix A.

Table daily- is record the daily Id and daily status of employee in every day For other detail you can see at Table A-4 in Appendix A.

Table posit- is record the position Id, name of the employee and link with department Id for checking employees' department and position For other detail you can see at Table A-5 in Appendix A.

Table workdatadetail- is record detail of work in daily, late or absent of that employee For other detail you can see at Table A-6 in Appendix A.

Table workdata- is record about money of that employee, in salary, OT, and etc. It record on the daily status working of employee also. For other detail you can see at Table A-7 in Appendix A.

Table Accumulated- is record money information and daily working status in form of accumulate and keeping. It will use to calculate the salary, tax and social security also. For other detail you can see at Table A-8 in Appendix A.

(4) Interface Design

[Explain and list the screens, and state that the Interface Design is exhibited in Appendix B.]

Interface B-1 is log in form It was the first page that user will be log in for user and admin.

Interface B-2 is Main menu form user will be select function to use in this page.

Interface B-3 is Salary information form, this interface use for calculate the salary, tax and etc. By in put data and ID of Employee.

Interface B-4 is Employee information Form is use to collect edit and etc of the employee information in the company.

Interface B-5 is Working time Form is form to input the date and time that employee do work in company.

Interface B-6 is Add information form is the form to add new department and position of the company.

Interface B-7 is Change password form is use to change password for user and admin. It was done for the security of the program and database.

Interface B-8 is Print report Form, it use to Print report that user require and link with the database.

Interface B-9 is Select Function form, it use select function in salary form it separate between User and Admin.

(5) Report Design

[Explain and list the reports, and state that the Report Design is exhibited in Appendix C.]

Report C-1 is Payroll Report is report that will send account number of employee to Bank for paying salary to employee

Report C-2 is Social Security Report is send Social Security of employee to president

Report C-3 is Tax report send the tax of each employee to government for all year

Report C-4 is Personal salary report, show net salary of individual of each employee and any information of that employee.

Report C-5 is Personal tax report, is individual tax of each employee

Report C-6 is Employees' Absent day is report that show about absent date of all employee in that month

Report C-7 is Individual Absent day is look like on Reportc-6 but different in individual

Report C-8 is Salary payment slip, report show slip of payment for all employee and separate in form of slip

Report C-9 is Salary report is send to president for all salary of employee in the company

IV. SYSTEM IMPLEMENTATION

4.1 Overview of the System Implementation

Baan Klang Thong Company use Parallel Operation for the system implementation, this method requires that both the old and the new information system operate fully for a specified period. Data input into the system and output generated by the new system and compared with the equivalent output form the old system. When users, management , and the IT group are satisfied that the new system operates correctly, the old system is terminated.

The advantage of parallel operation is lower risk. If the new system does not work correctly, the company can use the old system as a backup until appropriate changes are made. It is much easier to verify that the new system is working properly under parallel operation than under direct cutover, because the output from both systems is compared and verified during parallel operation

4.2 Test Plan

First plan : Test methodology on the Windows XP, to check whether there are any error in the payroll system. We use the setup data to use in first method to test the program for easily to do and testing the program in many way and easily to find error. For example, the part of calculate tax, and salary we check that the program are correctly generate the accurate result or not. Programmer will test the system of the program that there are any run time error in process or not. If it have they will correct the wrong point suddenly. Programmer will test the database system that can be store the data easily and fast or not that was related with data that we setup to test the program. The programmer will test the update data and the printed process that will be link with the program that the programmer create.

Second plan : We test the users' knowledge on how they can interact with the system. We will use the real situation and use the real data that will come from our user. We test the users' knowledge on how they can interact with the system. Then users will be using the program and if the program have any problem they will note it for their supervisor. And after that the programmer will come to correct the problem and try to develop the new system that can use faster, easily and efficiently. After that we will bring the real data from our user to test with the first plan again but different in data that we did not set up. It will have more efficiently to test our program in the real situation.

IV. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Almost that know for the exiting system does not change in the new system. But we will add the new program come to help the company comfortable in management their company. And we will bring Information Technology to use in the new system also. The part of collect employee information will be recorded in the computer program that will make admin easier in finding, correcting and etc. The part of salary and working time will be calculated by program easily and fast. And after finish calculate the data will be kept in the database for the next time can be retrieved and printed report. The calculate will be include in tax and social security rate that can be change as according to the government policy and law.

Company can add new department and position in the future if company expand and growth. Program can help company by generating many management report. With all these functional the company faces less error in their salary and tax calculation as well as speeding up the calculation process

5.2 Recommendations

For this program, we recommend user to be use this program with Window XP will make program efficiently in work. The user should be check in the program many time for checking bug in the program. For the data that company kept in the database of this program. User should be make back up for any data to safety in the data again. User should be checking in the tax rate and social security that will be change up to government policy, so the program will be change in coding of calculation for correct program and efficiently in calculation. And our program should have more develop than this because our program is prototype not complete yet. If company have more function and more complex in the system. The program should be develop for matching with complex work also.

In the future, this system can be improved linking the automatic clocking. System can be link directly with bank and government for support in the report.

APPENDIX A
DATABASE DESIGN

Table A-1 humanres

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Human_id	Char(7)	Y	Y		Em99999	Pk	
2	Fname	Varchar(30)	Y					
3	Citizen_id	Char(17)		Y		9-9999-99999-99-9		
4	Tax_id	Char(11)		Y		9999-999999		
5	Marry	Varchar(7)						
6	Children	Int(2)				99		
7	Study	Int(2)				99		
8	Non study	Int(2)				99		
9	Edu_id	Int(1)		Y		9	FK	edu Table
10	Dept_id	Int(1)		Y		9	FK	dept Table
11	Position_id	varchar(15)		Y			FK	posit Table
12	Begindate	Date/Time				DD/MMM/YY		
13	**Salary**	Double				##,####.00		
14	Acc no.	Char(12)		Y		99-9999-9999		
15	Positon fee	Double				##,####.00		
16	Living fee	Double				##,####.00		
17	OT fee	Double				##,####.00		
18	Address	Varchar(50)						
20	Sex	Varchar(6)						
21	Birthday	Date/Time				DD/MMM/YY		
22	Iswork	Int(1)				9		

Table A-2 dept

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Dept_ID	Int(1)	Y	Y		9	PK	
2	Department Name	Varchar(15)		Y				

Table A-3 edu

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Edu_Id	Int(1)	Y	Y		9	PK	
2	Edu	Varchar(15)		Y				

Table A-4 daily

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Daily_Id	Int(1)	Y	Y		9	PK	

2	Daily status	Varchar(7)		Y				

Table A-5 posit

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Position_Id	Int(4)	Y	Y		9	PK	
2	Position name	Char(15)		Y				
3	Dept_Id	Int(1)		Y		9	FK	dept Table

Table A-6 workdatadetail

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Datadetail_Id	Int(3)	Y	Y		999	PK	
2	Human_Id	Char(7)	Y			Em99999	FK	
3	Daily_Id	Int(1)	Y	Y		9	FK	daily Table
4	Workdaily month	Date/Time				DD/MMM/YY	PK	
5	**OT hour**					99		

Table A-7 workdata

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Salmonth	Date/Time				DD/MM/YY	PK	
2	Workdata id	Char(7)				9999999	PK	
3	Salary	Double				##,####.00		
4	OT rate	Double				##,####.00		
5	Late	Int(2)				99		
6	Absent	Int(2)				99		
7	Social	Double				##,####.00		
8	Tax	Double				##,####.00		
9	Net salary	Double				##,####.00		
10	Human_id	Char(7)	Y	Y		Em99999	FK	humanres Table
11	OT hour	Int(2)				99		

Table A-8 Accumulated Table

No	Field name	Field Type	Index	Unique	Nullable	Validity Check	Key	Fk Referenced Table
1	Human_id	Char(7)	Y	Y		Em99999	Pk	
2	OT fee	Double				##,####.00		
3	Absent	Int(2)				99		
4	Late	Int(2)				99		
5	Other inc	Double				##,####.00		
6	Yr	Int(2)				99		
7	Accinc	Double				##,####.00		
8	Tax	Double				##,####.00		

APPENDIX B
PROCESS SPECIFICATION

Table3-8 Process Specification for Process 1.0

Process Name:	Collect Employee information
Data In:	(1) Employee information (2) Employee position information
Data Out:	(1) Employee information (2) Department name (3) Education (4) Position fee (5) New employee information
Process:	(1) Get necessary Employee position and information (2) Get salary information and education (3) Update information to data store
Attachment:	(1) Employee (2) President (3) Data store D1 (4) Data store D2 (5) Data store D3 (6) Data store D4 (7) Process 2

Tabel3-9 Process Specification for Process 1.1

Process Name:	Identify Employee
Data In:	(1) Employee information
Data Out:	(1) Employee information
Process:	(1) Get necessary Employee information and identify
Attachment:	(1) Employee (2) Data store D3

Table 3-10 Process Specification for Process 1.2

Process Name:	Assign position and salary
Data In:	(1) Employee Position information
Data Out:	(1) Employee information (2) Department name (3) Position Fee
Process:	(1) Get Position and salary information
Attachment:	(1) President (2) Data store D2 (3) Data store D4

Table 3-11 Process Specification for Process 1.3

Process Name:	Update employee record
Data In:	(1) Employee information
Data Out:	(1) New employee information
Process:	(1) Get necessary Employee information and update to data store
Attachment:	(1) Data store D1

	(2) Process 2

Table 3-12 Process Specification for Process 2.0

Process Name:	Calculate Working hour
Data In:	(1) New Employee information (2) Working hour record (3) absent slip
Data Out:	(1) Work detail (2) Absent day (3) Late hour
Process:	(1) Get working detail and Absent slip (2) Checking working time and absent (3) Store data to D6 and D8
Attachment:	(1) Employee (2) Data store D6 (3) Data store D8 (4) Process 3

Table 3-13 Process Specification for Process 2.1

Process Name:	Receive employee information
Data In:	(1) New Employee information
Data Out:	(1) New Employee information
Process:	(1)Get new Employee information
Attachment:	(1) Process 1

Table 3-14 Process Specification for Process 2.2

Process Name:	Checking absent date
Data In:	(1) New Employee information (2) Absent Slip
Data Out:	(1)Absent day (2) Working performance
Process:	(1)Get employee information (2)Get absent slip (3)Calculate absent date (4) Store to D8
Attachment:	(1)Employee (2)Data store D8

Table 3-15 Process Specification for Process 2.3

Process Name:	Checking working time(OT)
Data In:	(1)Working performance (2) Working hours record
Data Out:	(1) Late Hour (2) Work detail (3) Complete working performance

Process:	(1)Get working hour record (2) Checking working time
Attachment:	(1)Employee (2) Data store D6 (3) Process 3

Table 3-16 Process Specification for Process 3.0

Process Name:	Calculate net salary
Data In:	(1) Complete working performance (2) OT time (3) Employee information (4) Tax and social security rate (5) OT rate
Data Out:	(1) Net salary (2) Tax infomation (3) Social security
Process:	(1) Get Complete working performance (2) Get OT time and OT rate (3) Get employee information (4) Get working time (5) Get Tax and social security rate (6) Calculate net salary by all get data
Attachment:	(1) President (2) Government (3) Data store D1 (4) Data store D5 (5) Data store D7 (7) Data store D8

Table 3-17 Process Specification for Process 3.1

Process Name:	Received complete working performance
Data In:	(1) Complete working performance
Data Out:	(1) Complete working performance
Process:	(1) Receive complete working performance
Attachment:	(1) Process 2

Table 3-18 Process Specification for Process 3.2

Process Name:	Calculate OT earn
Data In:	(1) Complete working performance (2) OT rate (3) OT Time
Data Out:	(1) OT earn
Process:	(1) Get complete working performance (2) Get OT rate (3) Get OT hour (4) Calculate OT earn
Attachment:	(1) President (2) Data store D6

Table 3-19 Process Specification for Process 3.3

Process Name:	Calculate Tax and Social Secure
Data In:	(1) OT earn (2) Tax and Social secure rate (3) Employee information
Data Out:	(1) Tax information (2) Social security information (3) Social security and tax rate
Process:	(1) Get OT earn, Social secure rate, and employees information (2) Calculate tax and social secure (3) Store tax and social security report
Attachment:	(1) Data Store D1 (2) Data Store D5 (3) Government (4) Data Store D8

Table 3-20 Process Specification for Process 3.4

Process Name:	Calculate net salary report
Data In:	(1) Social security and tax rate (2) Employee information (3) OT Fee
Data Out:	(1) Net salary
Process:	(1) Get Social secure and tax rate (2) Get position fee, OT fee, Salary, Living fee (3) Calculate net salary (4) Store all Data (5) Send net salary report to president
Attachment:	(1) Data Store D1 (2) Data Store D7

Table 3-21 Process Specification for Process 4.0

Process Name:	Print report
Data In:	(1) Employee information (2) Request report (3) Information report
Data Out:	(1) Yearly tax report (2) Payroll information (3) Total payment report (4) Personal salary report (5) Employee net salary and paid information
Process:	(1) Get net payment and employee information (2) Send information to bank (3) Send yearly tax report to government (4) Store social security data (5) Sent Total payment report to President
Attachment:	(1) Bank (2) Government (3) Employee (4) President (5) Data store D1 (6) Data store D5

Table 3-22 Process Specification for Process 4.1

Process Name:	Print Routine Report
Data In:	(1) Employee information (2) Request report
Data Out:	(1) Payroll report (2) Payroll information (3) Personal Salary report (4) Total payment report
Process:	(1) Get net salary payment (2) Prepare to print any data report
Attachment:	(1) Bank (2) Employee (3) President (4) Data store D1 (5) Data store D5

Table 3-23 Process Specification for Process 4.2

Process Name:	Print Yearly report
Data In:	(1) Information report
Data Out:	(1) Yearly tax report
Process:	(1) Get tax information

	(2) Print tax report and social secure report (3) Sent report to government
Attachment:	(1) Government (2) Data store D5

APPENDIX C
DATA DICTIONARY

Data Dictionary

Table 3-24 Data Dictionary of Order Processing System Database

Data Item	Meaning
Absent day	Employee absent day
Absent information	Information of absent for employee
Complete working performance	Employee working information
Department name	Name of the department
Education	Employee education level
Employee Information	Information about employee
Employee position information	Position of the employee
Late hour	Employee late for work
Living fee	Standard of living fee
Net salary	Net salary for employee
Net payment	Net payment to employee
Net payment report	Total payment to employeesend to bank
New employee information	Updated or new employee(information)
OT earn	Overtime earn
OT fee	Overtime fee
OT hour	Overtime hour
OT rate	Overtime rate
OT time	Overtime time
Payroll information	Information of employee to pay
Personal tax report	Tax report for individual employee
Position fee	Employee fix position fee
Salary information	Salary of employee
Salary report	Report of employee salary
Social security information	Social security of the employee
Social security rate	Employee social security rate
Tax Information	Information about tax
Tax rate	Tax rate given by government
Total payment report	Total payment to employee report
Work detail	Work detail of employee
Working time	Working time of employee
Working hours record	Record the working hour of employee
Working performance	Working information of employee
Yearly tax report	Yearly tax report given to government

APPENDIX D
INTERFACE DESIGN

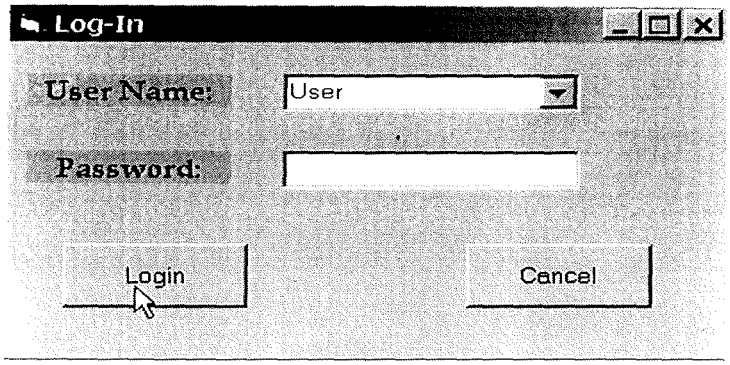

Figure B-1 Login Form

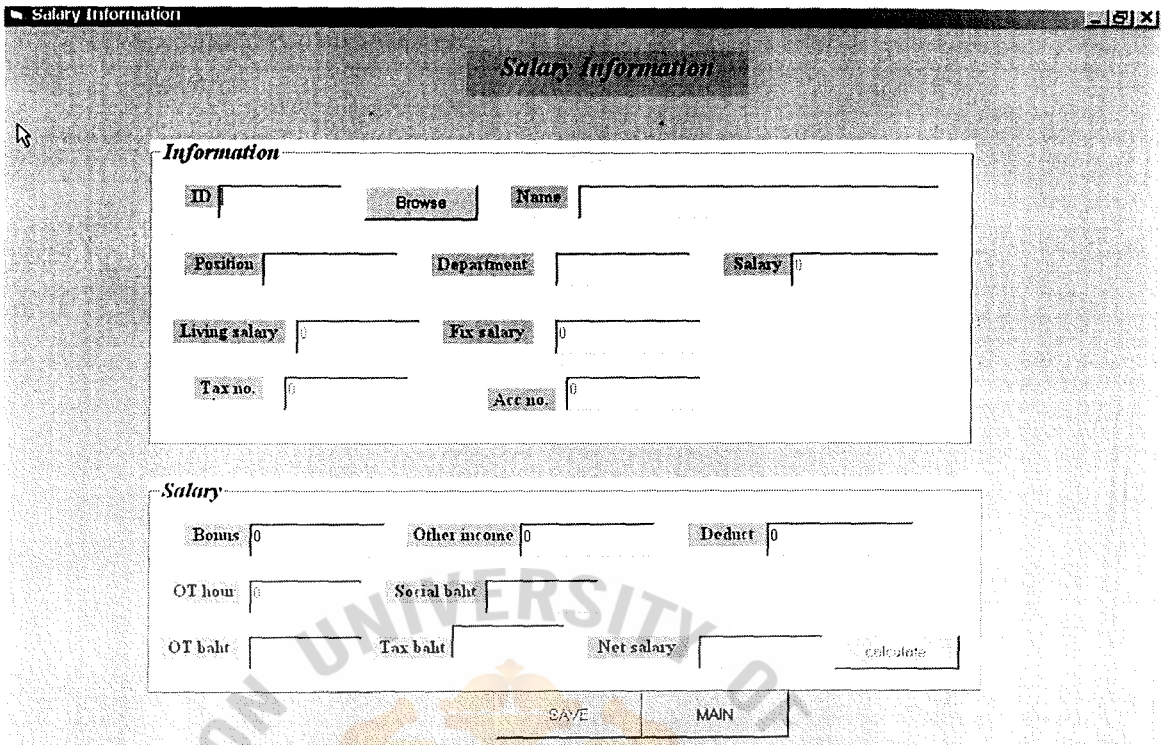

Figure B-3 Salary Information Form

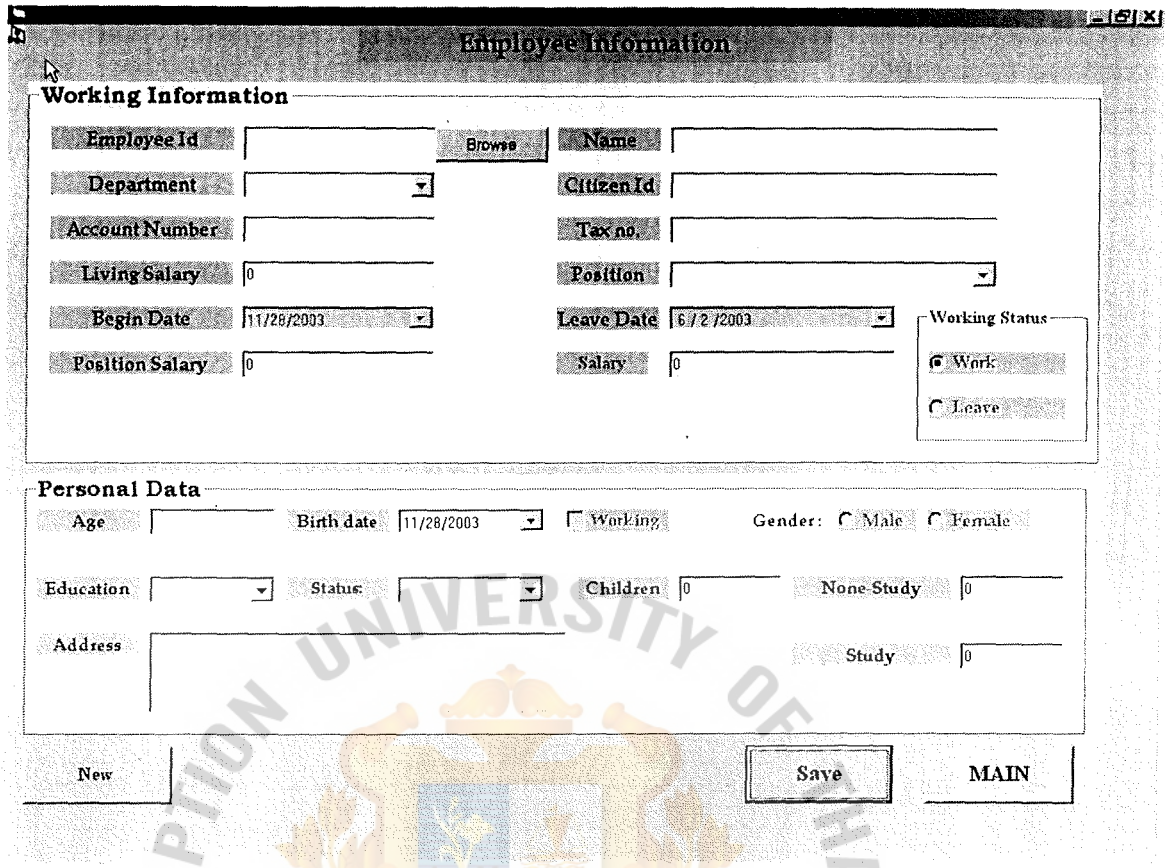

Figure B-4 Employee Information Form

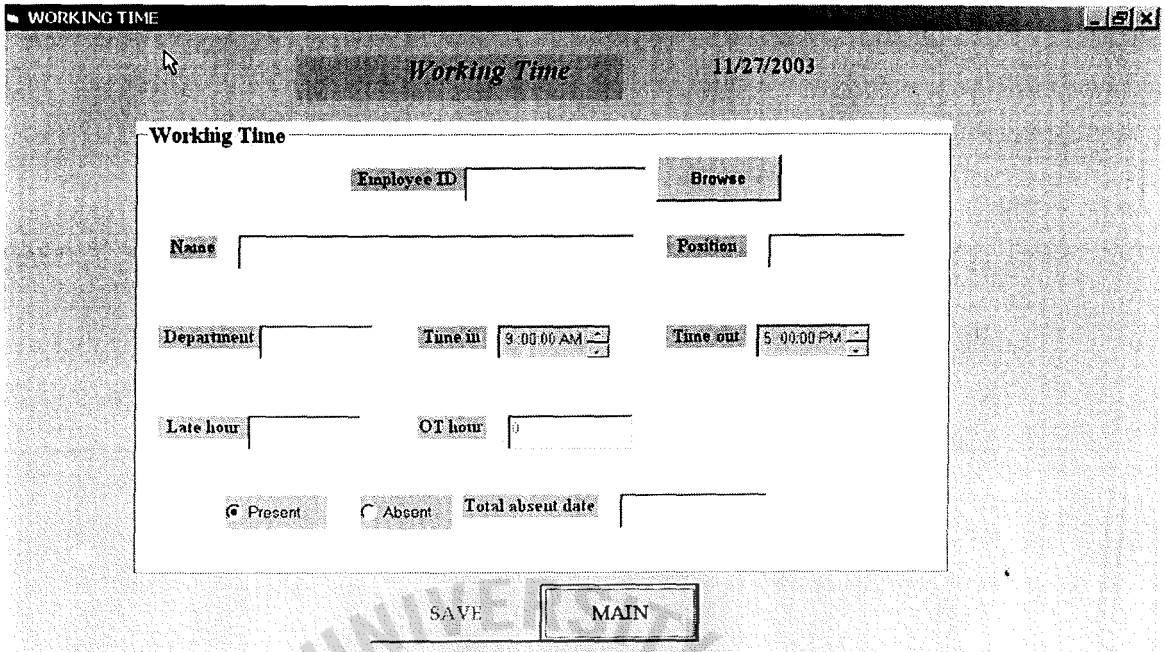

Figure B-5 Working Time Form

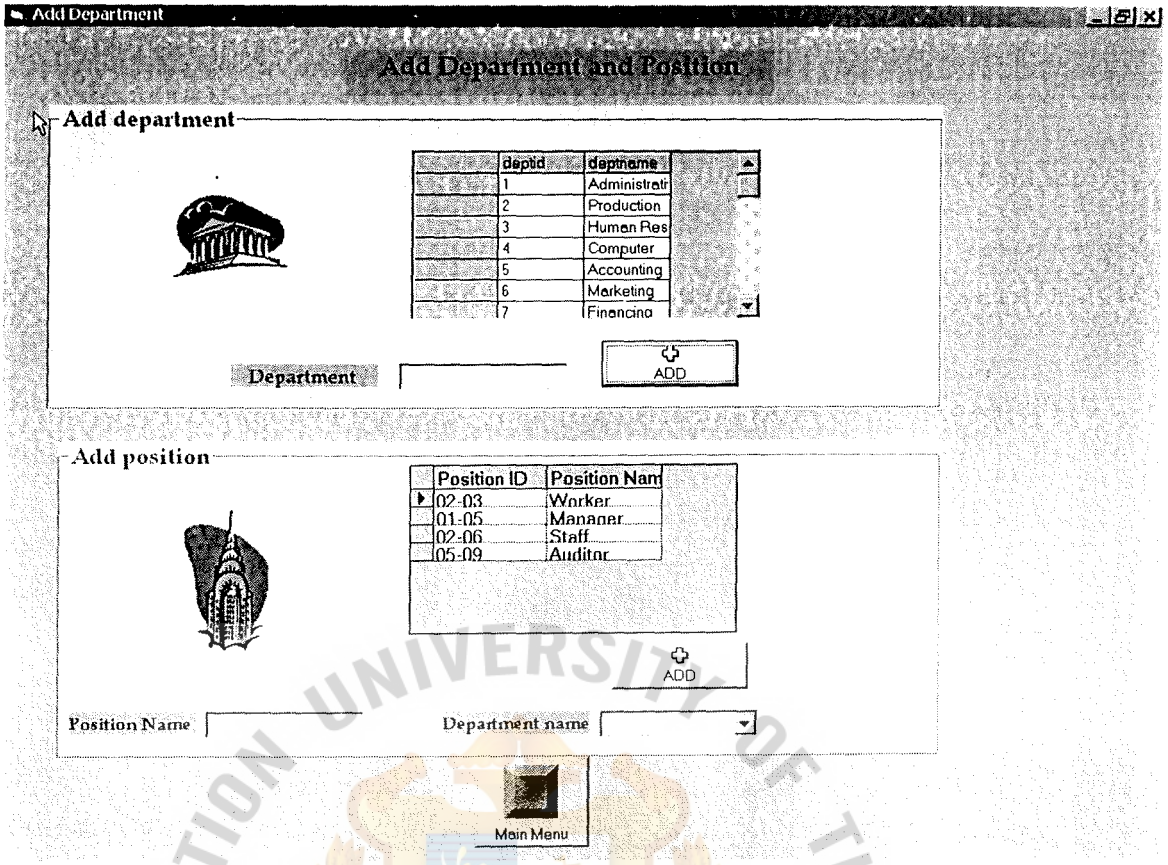

Figure B-6 Add information Form

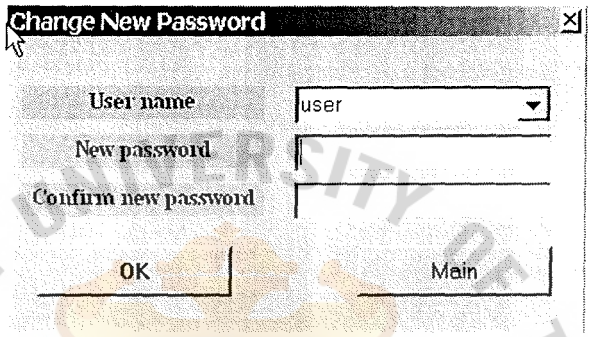

Figure B-7 Change Password Form

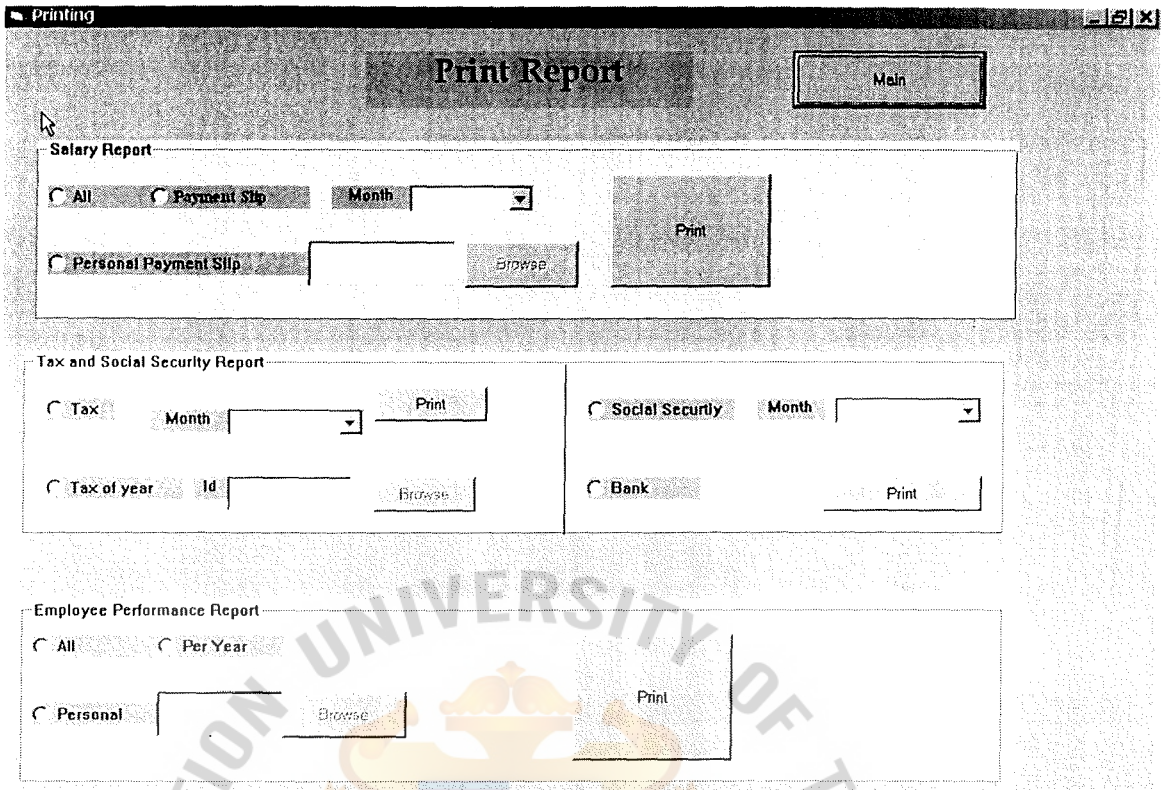

Figure B-8 Print Report Form

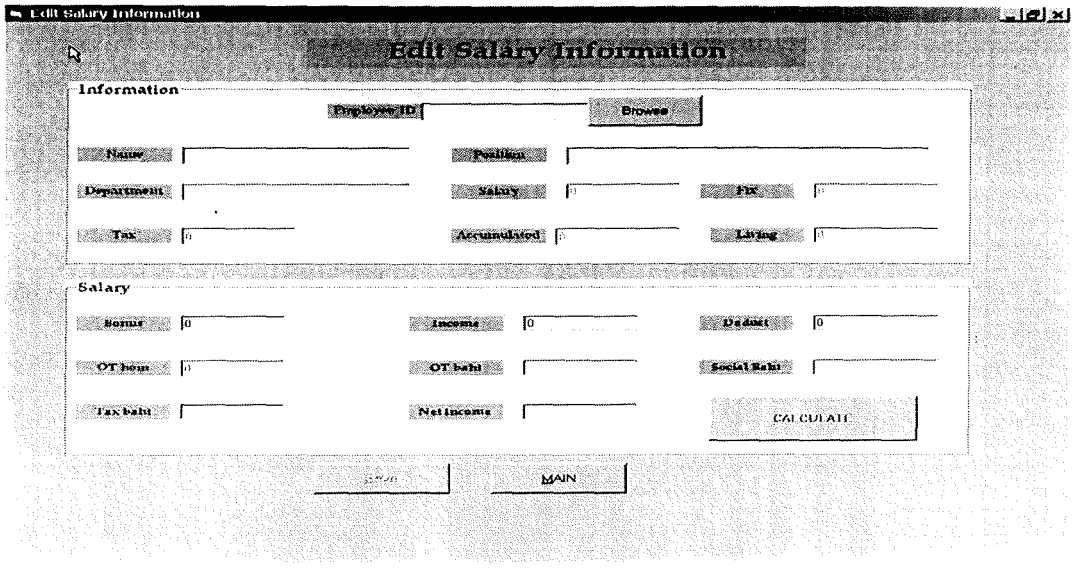

Figure B-9 Edit Salary Information Form

APPENDIX E
MANAGEMENT REPORT DESIGN

Computer Peripherals and Supplies Co.,Ltd

244 Pattanakarn, Bangkok10120

Tel: 0-2322-9535

Salary Report

15/9/2003

Page 1/1

Name:	Salary:	OT rate:	Social:	Tax:	Net salary:
Matee	23600	0	650	469	23131
Nalinee	1201	1.25	620	0	1201.25
Nalinee	1200	0	620	0	1200
name	1400	0	620	0	1290
aaaa	24600	0	650	519	24081
Final	666666	0	650	32622	634044

Figure C-1 Salary Report

Computer Peripherals and Supplies Co.,Ltd

244 Pattanakarn, Bangkok10120

Tel: 0-2322-9535

Personal Salary Report

15/9/2003

Page1/1

Human Id: 46002 **Name**: Attaphon **Account No**: 111111111111

Citizen Id: 1111111111111 **Department**: Sales **Position name**: Sales Executive

OT rate: 0 **Late**: 0 **Absent**: 1

Tax: 0 **Social**: 620

Net salary: 12000

Figure C-2 Personal Salary Report

Computer Peripherals and Supplies Co.,Ltd

244 Pattanakarn, Bangkok10120

Tel: 0-2322-9535

Tax report

15/9/2003

Page1/1

Name:	Citizen Id:	Tax ID:	Begin date:	Marry:	Study:	Non study:	Salary	Tax
Attaphon	1111111111111111	1111111111	13/3/2003	single	1	0	100	0

Figure C-3 Tax Report

Computer Peripherals and Supplies Co.,Ltd

244 Pattanakarn, Bangkok10120

Tel: 0-2322-9535

Payroll Report

15/9/2003

Page1/1

Name:	Account number:	Net salary:
Attaphon	111111111111	12000

Figure C-4 Payroll Report

Computer Peripherals and Supplies Co.,Ltd

244 Pattanakarn, Bangkok10120

Tel: 0-2322-9535

Social security report

15/9/2003

Page1/1

Name:	Social Security ID:	Salary:	Social security:
Attaphon	111111111111111111	12000	620

Figure C-5 Social Security Report

Computer Peripherals and Supplies Co.,Ltd
244 Pattanakarn, Bangkok10120
Tel: 0-2322-9535

Yearly Tax Report

15/9/2003

Page1/1

Name:	Citizenid:	Taxid:	Begindate	Study:	Non study:	Accinc:	Tax:
Bom P.	1111111111111111	1111111111	13/9/2546	0	0	0	0

Figure C-6 Yearly Tax Report

Computer Peripherals and Supplies Co.,Ltd
244 Pattanakarn, Bangkok10120
Tel: 0-2322-9535

Personal Tax per Year Report

16/9/2547

Page1/1

Name: Bom P. **Citizen ID**: 1111111111111111

Begin Date: 13/9/2546 **Social Security**: 600

Tax ID: 1111111111 **Tax**: 1067

Accumulated Income: 22533

Figure C-7 Personal Tax per year Report

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