APARTMENT MANAGEMENT SYSTEM
CASE STUDY FOR THAWEELERT APARTMENT

PIYAWAN KUNAWATSATIT

MASTER OF COMPUTER SCIENCE
IN ADVANCED INFORMATION TECHNOLOGY

MAE FAH LUANG UNIVERSITY

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AN INDEPENDENT STUDY SUBMITTED TO
MAE FAH LUANG UNIVERSITY IN PARITIAL FULFILLMENT OF
THE REQUIREMENT FOR THE DEGREE OF
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TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS

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ABSTRACT

Nowadays more expansion for room rental business making hectic competition ; however the system used is still being a manual system. This make troubles for the tenants who need to know up-to-date rental information and it is also difficult for the room owner to supply information and transaction date. This causes an easy way to make mistakes and consumes more time.

The purpose system has been designed to help improve such manual operations. The tools of structured analysis such as Data Flow Diagram, Structure Chart, and Data Dictionary being used for analysis. The detailed design is carried out through the file design, interface design, and report design. Computer system can assist in storing, adding, editing, searching and retrieving of data, which result in reduction of the mentioned problems. It will also enhance this business to be more standardization and will certainly save more time in rental fee calculation. Thus, this system can help the owner to provide a better and faster service in order to gain a competitive advantage and be one of the leading entrepreneurs in this business.

Keywords : room rental management system

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CHAPTER 1

INTRODUCTION

1.1 Background

Thaweelert Apartment is a family business apartment for renting service established in 1996. This is located at Soi Pattanakarn30, Pattanakarn area in Bangkok and has room capacity of 50 rooms for tenants. Most of tenants are workers age group. The rental fees, utility fees and telephone fees are calculated every month and the apartment provided in detail to the customers for payment.

Traditionally, Thaweelert Apartment has used the manual system or human manner to operate and to control all processes such as reservation, generate contract agreement, check-in, invoice and receipt management, and utility (water and electricity) fee, check out and so on. All data and information are kept in the paper. The manual system had caused many problems, for instance, information of tenant is outdated, customer service delayed, too many documents need to be collected, receipt is inaccurate, documents are lost. This is very difficult to control and to create a standard for all tenant rules. Nowadays in this competitive world, fast service, accurate information, and updated environment are the added value to obtain the competitive advantage beside monthly rental fee and location of the apartment. The owner has realized this fact and has decided to implement a new computerized to apply for the business. The manual system will be replaced by a computerized system called Apartment Management System. This application will be implemented on personal computer stand alone PC to keep all details and information for utilization.

1.2 Objectives

This project is to develop a proposal for Apartment Management System, which is to replace the current existing apartment management system. The proposed system is to reduce the manual work, paper work and human work, in order to minimize human errors and mistakes. The purposed system also will reduce data redundancy and reduce the time to process the data at the end of the month and generate summary reports for the apartment manager.

1.3 Scope

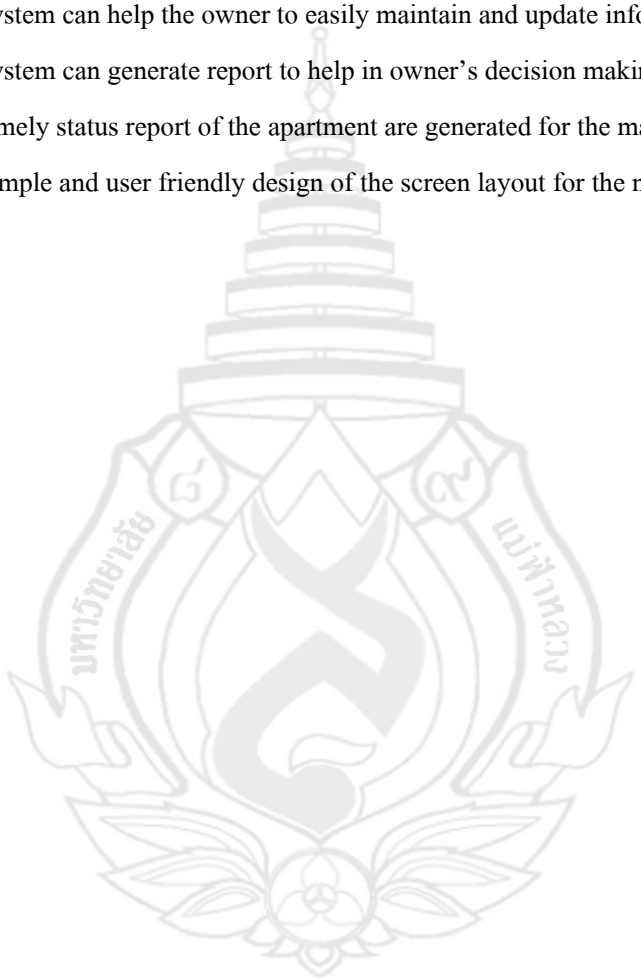
The project will cover the major functions of Thaweelert apartment system, which consists of room management, check in and check out management, searching customer profile, and document input and calculate utility unit, maintain record, generate and manage many reports for concerned users through a graphic user interface(GUI). The scope of new proposed Thaweelert Apartment Management System are as follows :

1. To study the existing system of Thaweelert apartment.
2. To identify the current problems and define user requirements.
3. To design and develop an effective computerized information system.
4. To increase system security by log in process only for the apartment owner.
5. To accurately store tenant's and room's information
6. To improve the operation time in checking the status for available or vacant room, in calculating monthly rental fee and utility fee of each room by using a computerized system.
7. To automatically issue transactional report and summary report for the reference, for decision-making about the business situation.
8. To easily enhance the efficiency of adding, editing, and searching of the tenant's and room's information.

1.4 Expected benefits :

The advantage of developing the new system to cover all the tasks and activities of apartment system are list as below :

1. The system can help the owner to easily maintain and update information.
2. The system can generate report to help in owner's decision making.
3. The timely status report of the apartment are generated for the manager.
4. The simple and user friendly design of the screen layout for the new system.



CHAPTER 2

FEASIBILITY STUDY

Thaweelert Apartment all the while has been using a manual system, which resulted in a repeated job operation. This cause the owner to spend more unnecessary time on their services and operations. Therefore the computerized system is one of the methods to help solve their daily problems and to improve their business to be more standardized. Business activities of Thaweelert Apartment in the part of information management include reserve and renting of the rooms, check-in and check-out, customer information, invoices and receipts operation, room maintenance, printing monthly report and general management. The apartment is operated under the three main functions as follows :

1. Front Office function is responsible for collecting information about reservations, customers, rooms, check-in, check-out, utility unit and searching available rooms for the customers.

2. Accounting function is responsible for recording bills and receipt information, utility expense information, customer payment history, management of monthly reports and cash flow of the apartment.

3. Maintenance functions is responsible for maintaining the equipment in the apartment, fixing common equipment within the apartment such as fixing the doors, windows, desks, floor and changing the light tubes, and cleaning the room when customers check in or check out.

2.1 Problem statement

In the current working environment, all the works are done manually. The data and information are kept in the paper format. The apartment's owner needs to calculate the rental charge and utility unit such as water supply, electric and phone service charge for billing to the customers, the owner spend a lot of time to create bill and receipts to customers and always found incorrect input data by the manual system. The existing system can cause many problems as follow

1. Due to the manual system, the apartment owner uses only his own memory and calculator to manage room status and lease agreement form and calculate the monthly rental fees, the utility fees and the deposits for all rooms. That is very time consuming. However the new system can resolve all the above problems.
2. There are a lot of paper works each year and it requires a lot of space to keep all the documents. And there is always a risk of document loss or damaged.
3. Lack of system standardization. There is no record of room status (Available/Vacancy). They only remember which room is available or rental.
4. There is a miscalculation of all fees, which result in lost of customers confident in paying their invoices.

2.2 Related projects

There have been several projects related to this area including Property Management such as management system software named Happy Home (Demo version), KP House, Property Management (create by Soft Biz Plus co., th) which are manage the small size rental businesses. The proposed system model is finalized will use ER modeling techniques and DFD to design the database and business transaction. The user interface will be designed to facilitate usability and to be attractive. The proposed system will be different from previous projects in term of customize working process to fit in the business activities in the case of the Thaweelert Apartment

2.3 Requirement specification for the new system

Thaweelert Apartment requires an effective apartment information system, which will be developed and design to facilitate in providing information for the management and solve the current problem occurring in the existing manual system. In order to achieve the target, the new proposed Apartment Management System should have the user requirement as follows :

1. The system should be developed to design a good database system to eliminate data redundancy.
2. The system should provide a convenient screen to input data, update and delete data/information in the suitable form.
3. The system should provide data security and control
4. The system should print out all invoices and receipts for customers.
5. The system should provide the data used for calculating and printing receipts including late charge.
6. The system should generate summarized report for management to analyze the business operations.
7. The system should provide information searching system to find the document and information.
8. The system support users to be interactive with the system in a user friendly environment.

2.3.1 Hardware requirement

Since the proposed system is focused on front desk service only, hardware requirements are one personal computer for front desk and for manager.

The hardware requirements are presented in Table 2.1.

Table 2.1 Hardware specification

Hardware	**Specification**
CPU	Pentium 4 1.8 GHz
Memory	512 MB
Hard disk	40 GB
CD-ROM Drive	52X
Floppy Disk	1.44 MB
Network Adapter	Ethernet 10/100 Base T
Display	17” Monitor
Keyboard	PS2 Keyboard
Mouse	Internal Scroll Mouse
UPS	UPS 1050 VA
Modem	High-speed Modem 512 KB
Printer	All-in-one Inkjet Printer

2.3.2 Software requirement

The software specification is presented in Table 2.2

Table 2.2 Software specification

Software	**Specification**
Operation System	Microsoft Windows XP Professional
Application Software(Database)	Microsoft Office 2003(Access)
Application Development Software	Microsoft Visual Studio 2005
Virus Protection Software	McAfee Virus Scan

2.4 Implementation techniques

This project is implemented by System Development Life Cycle (SDLC). It is composed of many sub-processes and each of them could not be implemented separately because they are related to one another. In this case to develop the Apartment Management System for Thaweelert apartment, it requires a clear understanding of the whole processes, so that all of the requirements could be delivered.

The waterfall model is used in this implementation because it is best suited for Apartment Management System. The advantage of this model is it can easily manage the components, each of which has a well defined derivable. This model will also provide a high visibility in term of documentation and is easy to track and verify progress. The proposed system will cover all steps of the SDLC methodology. There are 5 steps of SDLC as follow :

1. Project Identification Phase studies the existing system, user's behavior, feasibility and also define scope and objective
2. Project Planning Phase. This phase defines the purposed system and project schedules
3. Analysis & Design Phase studies the processing steps, creates Data Flow Diagram, and Entity Relationship Diagram and designs input/output layout
4. Implementation Phase starts to do the coding, testing, debugging, installation and training user to use the proposed system
5. Maintenance Phase. The developer has to support the use when the proposed system has errors and find the errors

The proposed system is developed by Visual Studio version 2005 as software development tools and programming language as Visual Basic.Net. The database is developed by Microsoft Access version 2003 as database management software. For design database phase, Microsoft Visio version 2003 is support to draw all diagrams.

2.5 Deliverables

2.5.1 CD containing Program Source Code

2.5.2 User manual (see Appendix B)

2.6 Implementation plan

Task Name	May-07				Jun-07				Jul-07				Aug-07			
	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15	w16
I. System Analysis																
- Define the Objective and Scope																
- Study the Existing System																
- Identify the Existing Problems																
- Develop Context Diagram																
- Develop Data Flow Diagram																
II. System Design																
- User Interface Design																
- Report Layout Design																
- Database Design																
III. System Implementation																
- Coding																
- Testing																
- Hardware Installation																
- Software Installation																
- Prepare Manual																
- Train Users																

CHAPTER 3

ANALYSIS AND DESIGN

The process specification and activities are lists as the following :

1. When customer come to the apartment and ask for reserve the room, the front office will check the available room in the apartment and reserve the room that customer need.
2. If customers decide to rent the room, they have to fill in the application forms, sign the contract agreement and pay the deposit before they move in.
3. At the end of every month, the owner will record the number of utility unit and input to the worksheet and then prepare the invoice with details for the customers.
4. When the owner receives the payment from the customers, the owner will record the payment transaction and give a receipt to the customer.
5. The customer must pay within the first 5 days of each month. If the customer makes late payment, the apartment will add late fee per day.
6. In some cases, if the customer informs the owner to repair something, the owner will record the request in the maintenance information to fulfill the customer request.
7. If the customers decide to move, they must inform the owner a month before they move out.
8. When the customer moves out, the owner will check the period that the customer has rented the room. If they find that the customer has rented less than 3 months, the deposit will not be return to the customer or if they find any damage, the insurance amount will be deducted by the value of the damage.

3.1 Analysis of the existing system

In the first, customer asks the apartment owner for available room and the owner will check room information in the book. If the apartment has available room and customer want to rent the room. The customer has to reserve the room and pay reserved deposit. Then when customer comes to check in the room, he sends reservation paper to the owner for do rental contract agreement. This process is show in figure 3.1

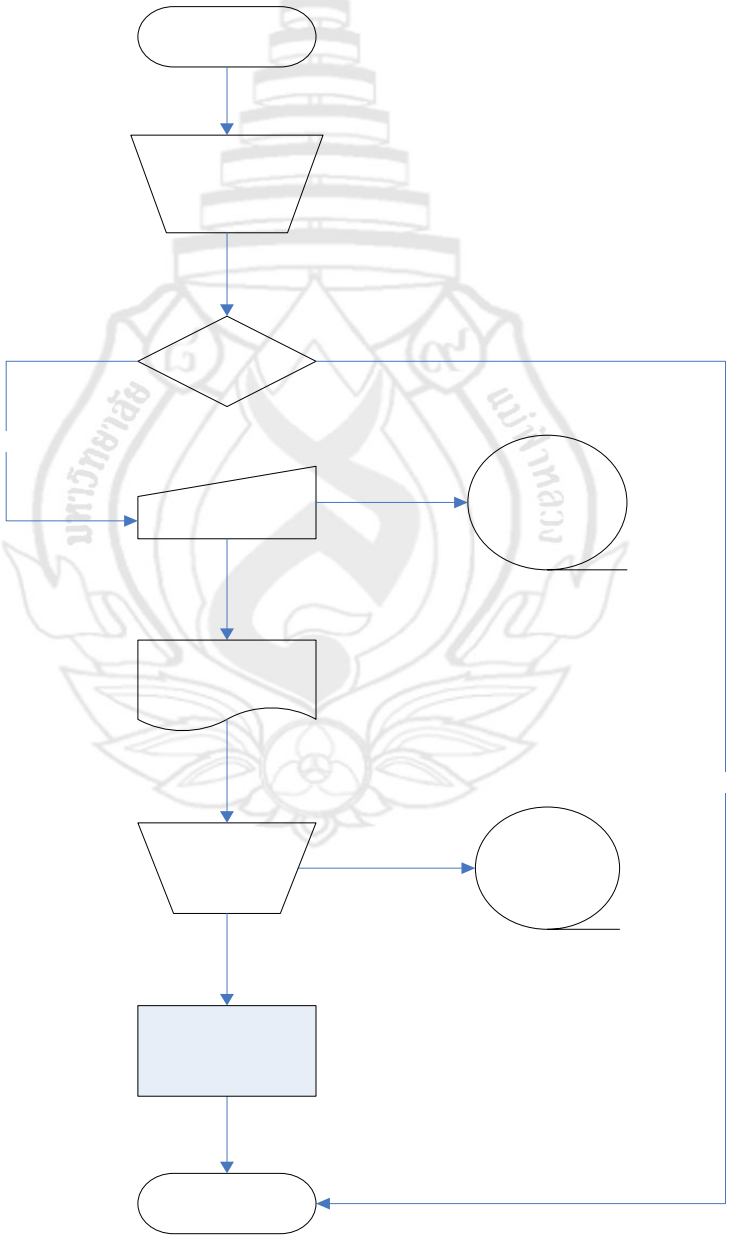


Figure 3.1 Existing workflow of check-in process

In the end of month, the owner has to calculate rental fees by hand which record in the account book and write rental fee details in the paper to customers.

This process is show in figure 3.2

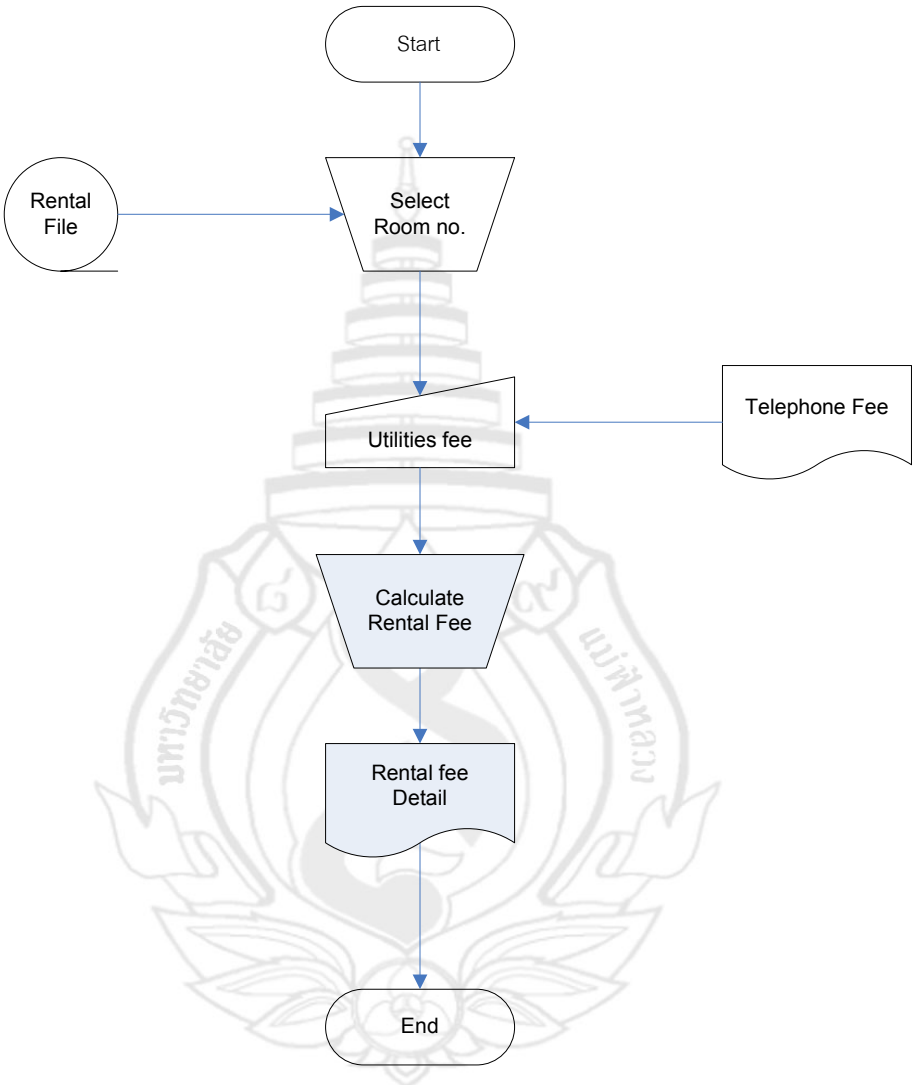


Figure 3.2 Existing workflow of calculate rental fee process

In the beginning of month, the owner received rental fees then record amount of payment and the paid day after that sign paid in the rental fee detail paper (receipt). If customer pay rental fee late after the date of 5th, late fee is included 100 baht per day. This process is show in figure 3.3.

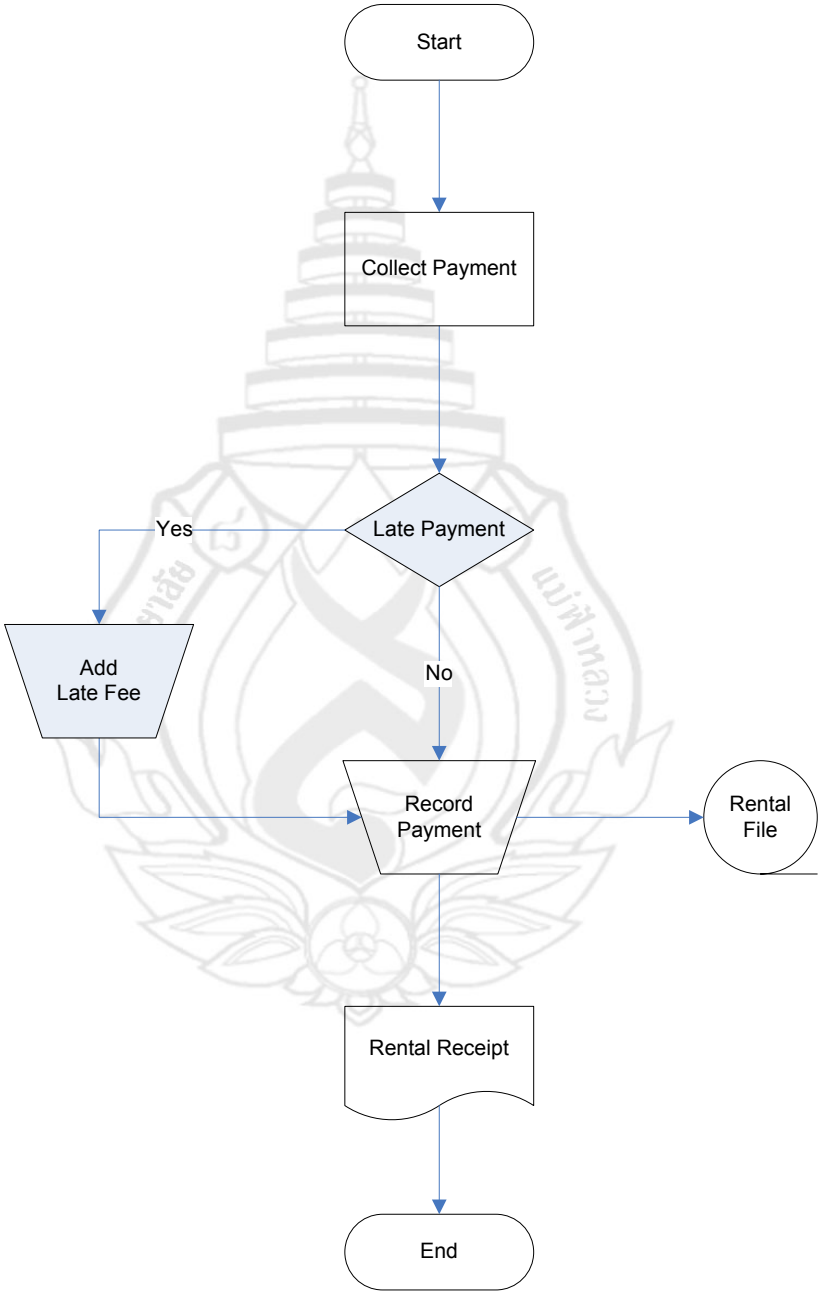


Figure 3.3 Existing workflow of rental payment process

The existing major business operations between the owner and customer in case of Thaweelert Apartment are reservation, check in, calculate rental fee and summarize payment to customers by manual. This process is show in figure 3.4

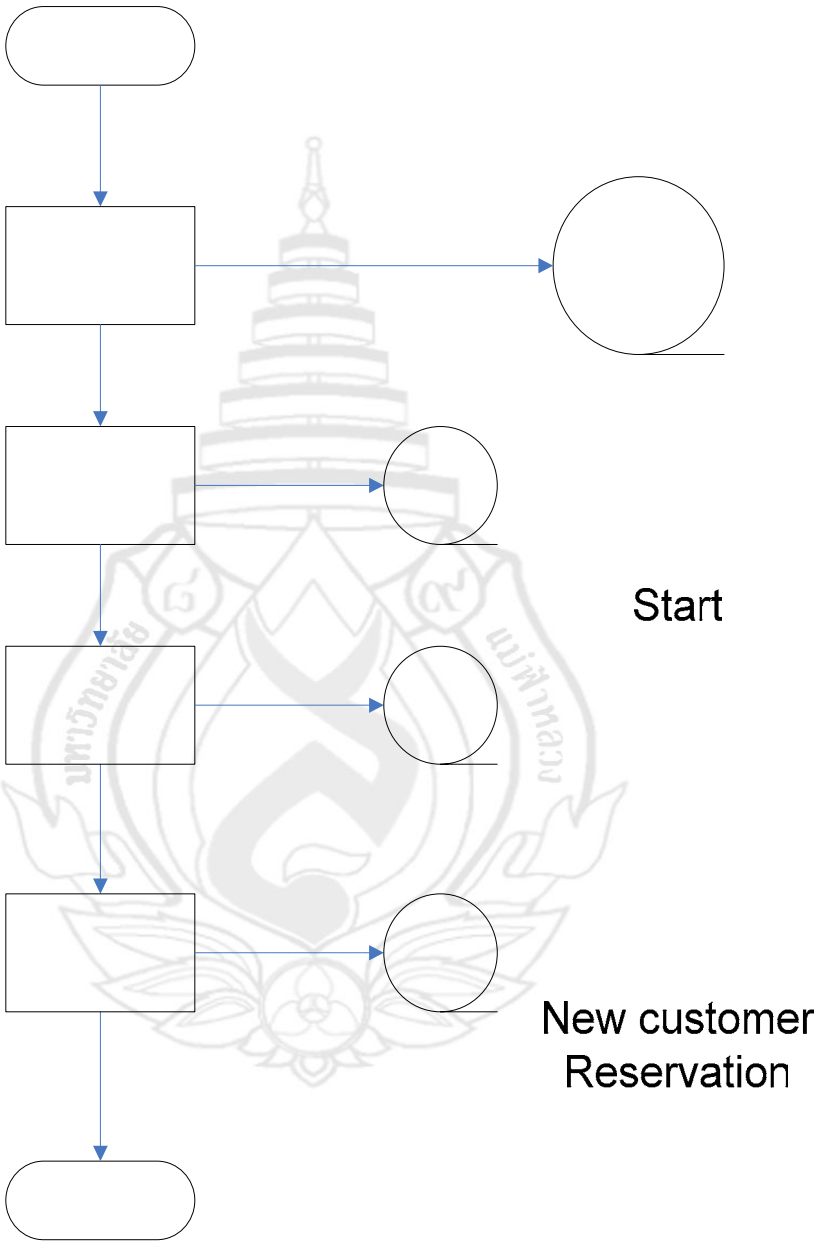


Figure 3.4 Existing workflow of overall processes

The problem of the existing systems which operate manual can be classified as below :

1. Apartment owner cannot accurately provide their new customers with the available or vacant room because the owner must remember the list himself.
2. The apartment owner must calculate a monthly utility fee for each room and issue receipt for both the utility fees and the rental fees to the tenants. Unfortunately, he always does the wrong calculation.
3. The apartment's manager must do the monthly reports, rental income, utility fee cost and utility paid by the tenants and it is extremely difficult for him to do the report by himself.
4. Unfortunately, when customers ask for a room reserve the room, the apartment owner just gives an oral promise instead of written document.

Most of problems occur due to the current processes being operated manually. Once the new information system is implemented, it will be help to reduce the time spent for updating, searching and accessing information. The computerize information system will generate the summarized reports for management for decision-making. The information generated from the system will be more reliable and accurate than the existing system.

3.2 User requirement analysis

User's Requirement is describe as the following :

1. The system should create apartment image standardization
2. The system should reduce time consuming work process
3. The system must provide an accurate and reliable calculation
4. The system should help the apartment owner to facilitate in update tenant's data and room data
5. The system will save storage of data in computer system in stead of paper document
6. The system should be user friendly and easy for anyone to learn or continue working.

7. The system can print out all forms, invoice, receipt and reports and also can provide necessary information for user

8. The system also provides security, it can identify user by using password.

3.3 System design

This project primarily focuses on three main parts: system analysis, system design and system implementation. System analysis is the main study of the existing system to find out the business requirements. To collect the necessary information, gather data and information from the apartment's owner in order to understand the system preciously and to identify problems.

According to the user requirements in the previous section, to gain a better understanding of the new system requirement, the logical model is drawn to depict the system independent of any technical implementation. In this project, process modeling and data modeling techniques are used to document business requirement. The details of each technique can be explained as follows

3.3.1 Process modeling

Process modeling is a technique for organizing and documenting the structure and flow of data through a system's process. This technique is called Data Flow Diagram (DFD). Figure3.5-3.13 are show the flow of data in the overall system.

Figure 3.5 shows the data flow diagram/context diagram which is the scope of the project and process between entities. It shows the data input and data output between customer and manager. The data are process by Apartment Management System.

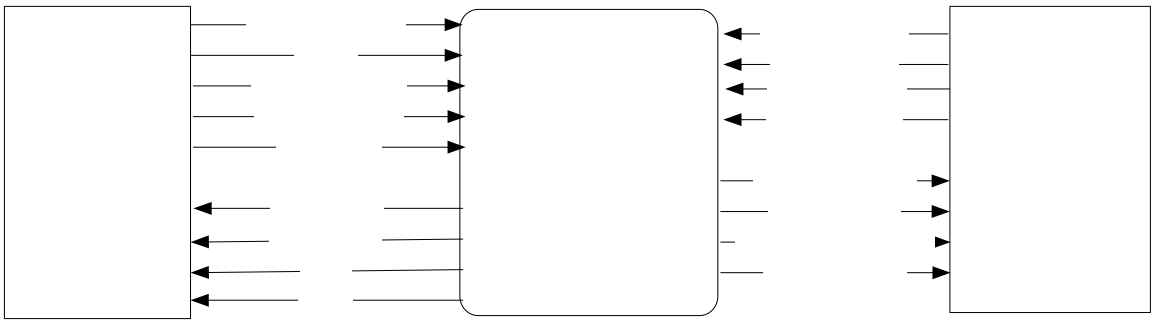


Figure 3.5 Context diagram

Figure3.6 shows the data flow level 0. It compose of 5 major processes includes check user authentication, setting the system, rental service, search information and generate report.

First, the apartment owner (manager) log in to the apartment management system. Second, the owner sets room information. Third, rental services for customer which compose of reservation, check in, calculate monthly rental fee and check out. The additional processes are searching and reporting.

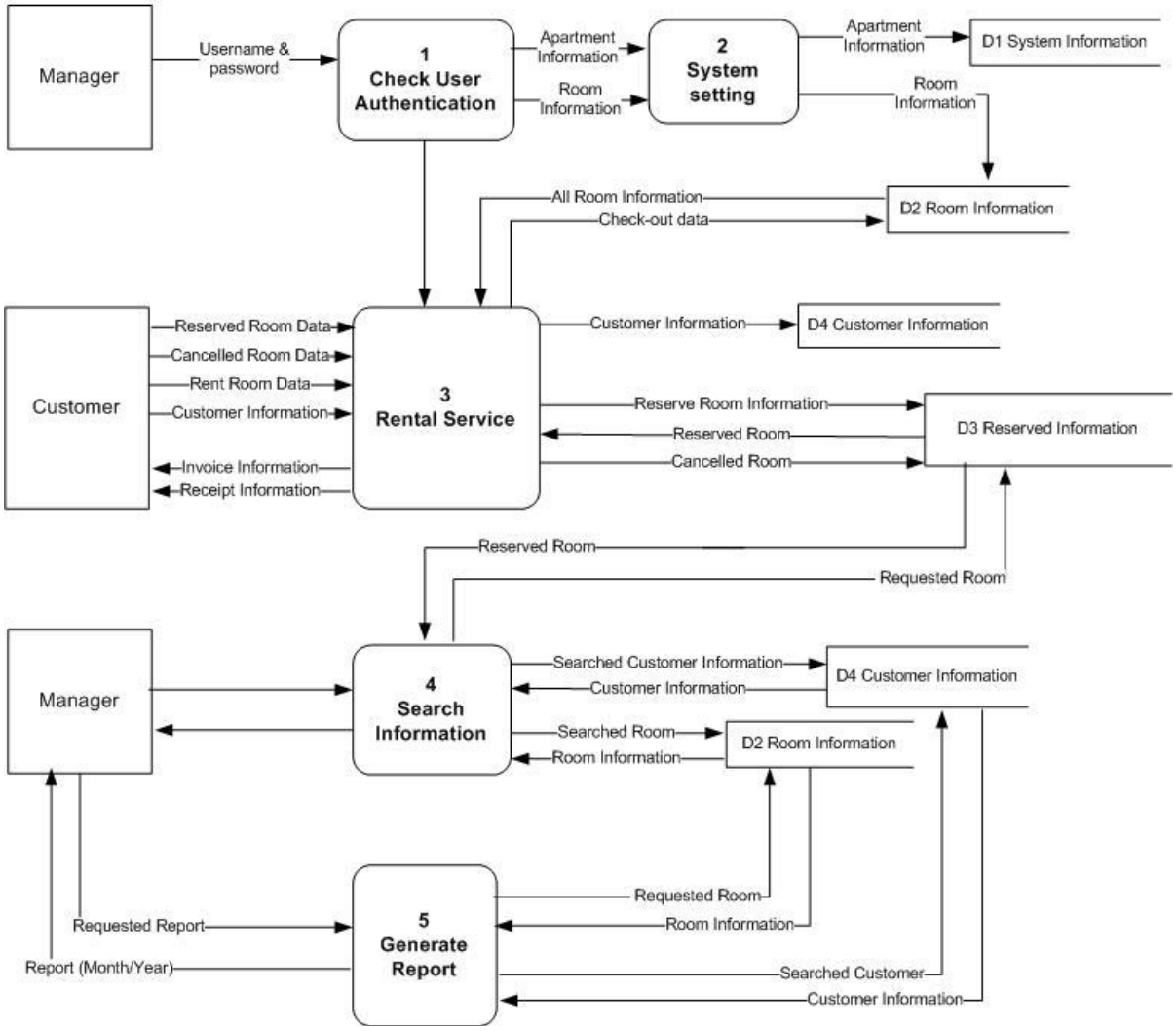


Figure 3.6 Data flow diagram level 0

Figure 3.7 show data flow level 1 of process 2 (system setting). The owner can update the system information (Apartment data store is room database and room_type database).

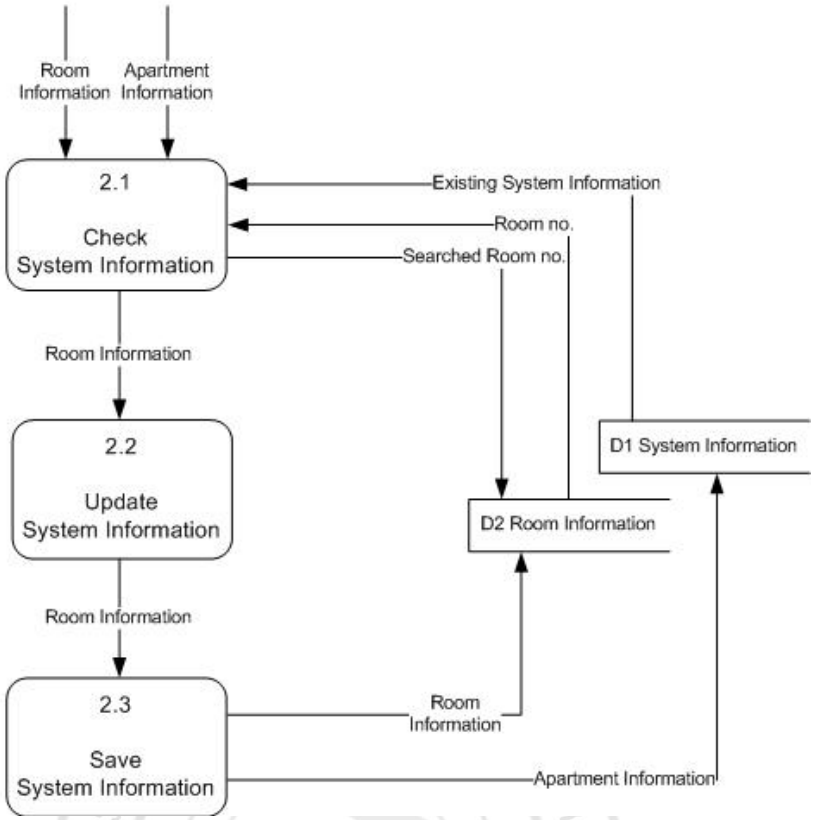


Figure 3.7 Data flow diagram level 1 of system setting

Figure3.8 shows data flow level 1 of process 3 (rental service). At first the owner input existing customer information in the customer database and rental database. And when customer comes to reserve the room so that recorded data to reservation database, room status is changed from available room to reserved room. After that the owner will print reserved paper to the customer. If the customer check in, the owner check reserved paper, update room to rent status, record rental information in room rent database and customer database and print the rental contract agreement. In the end of the month, the owner generate invoice by retrieve rental information (room rent database) and system information (room database). And the owner will give receipt that confirms the customer paid all right. In case of the customer check out, the owner will check customer's invoice status and return room deposit back to customer.

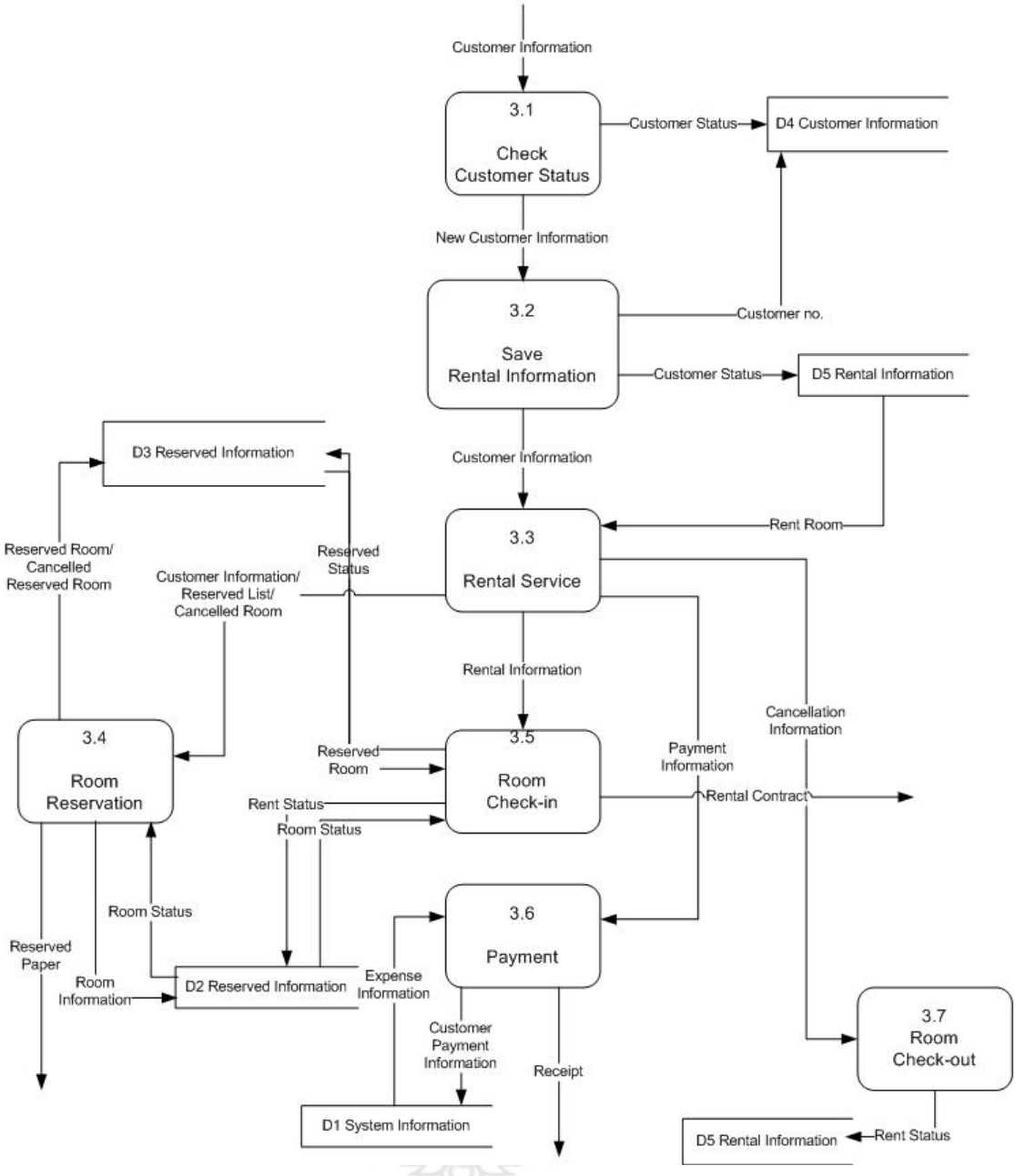


Figure 3.8 Data flow diagram level 1 of rental service

Figure3.9 shows data flow level 2 of process 3 (rental service). The apartment owner can add new customer information and update for existing customers in customer information (customer database) and rental information (room rent database) also.

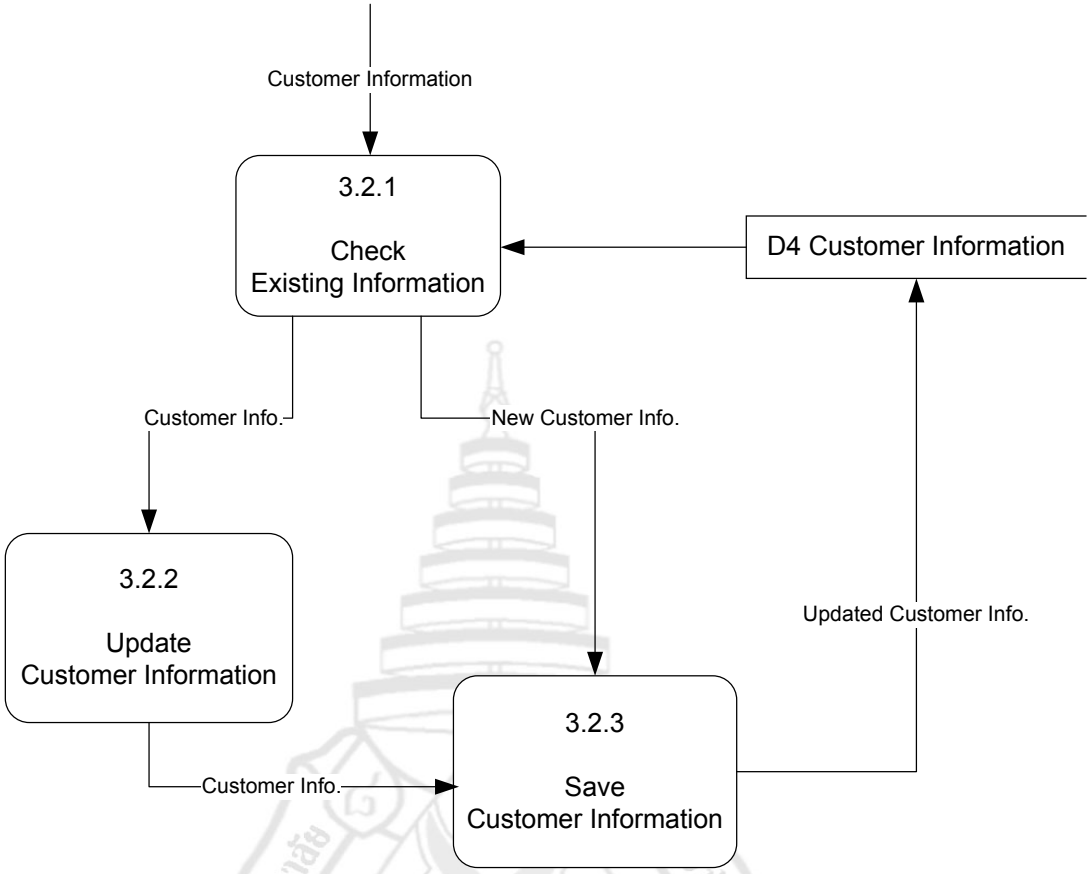


Figure 3.9 Data flow diagram level 2 of rental service (Customer information)

Figure3.10 shows data flow level 2 of process 3(rental service). When the customer comes to reserve the room, the owner record reserved data into reserved information (reservation database) and then reserved room will update its status in room information (room database) to reserve automatically. In case of customer cancel the reserved room, no return deposit and room status update to available.

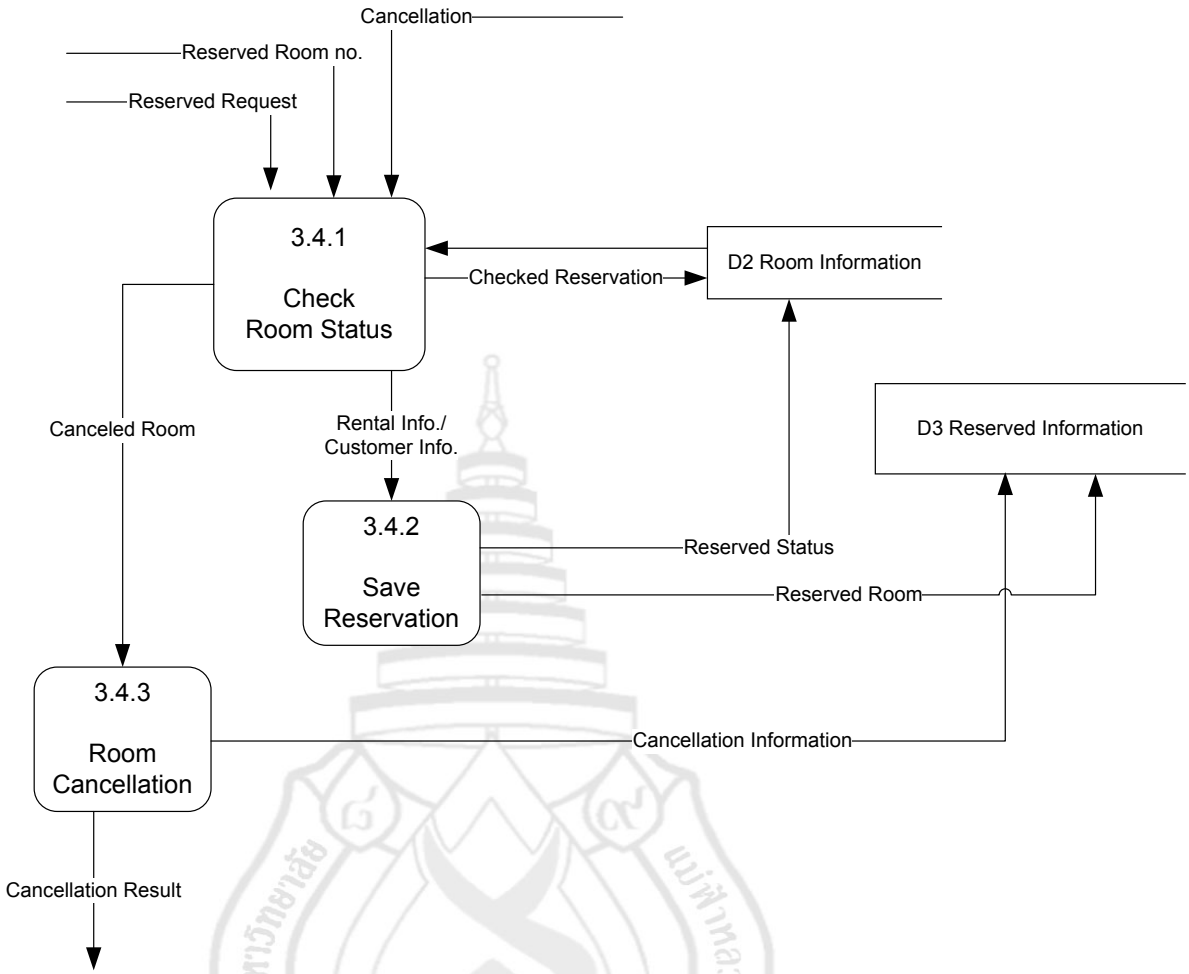


Figure 3.10 Data flow diagram level 2 of rental service (Reservation)

Figure3.11 shows data flow level 2 of process 3 (rental service). In the first case, the owner check reserved paper, update room status from reserved to occupy into room information, record room rent into rental information and print rental contract agreement to customer. The second case, the customer come and check in so no need to reserve the room. Then the owner check for room available, record customer information and print contract to the customer.

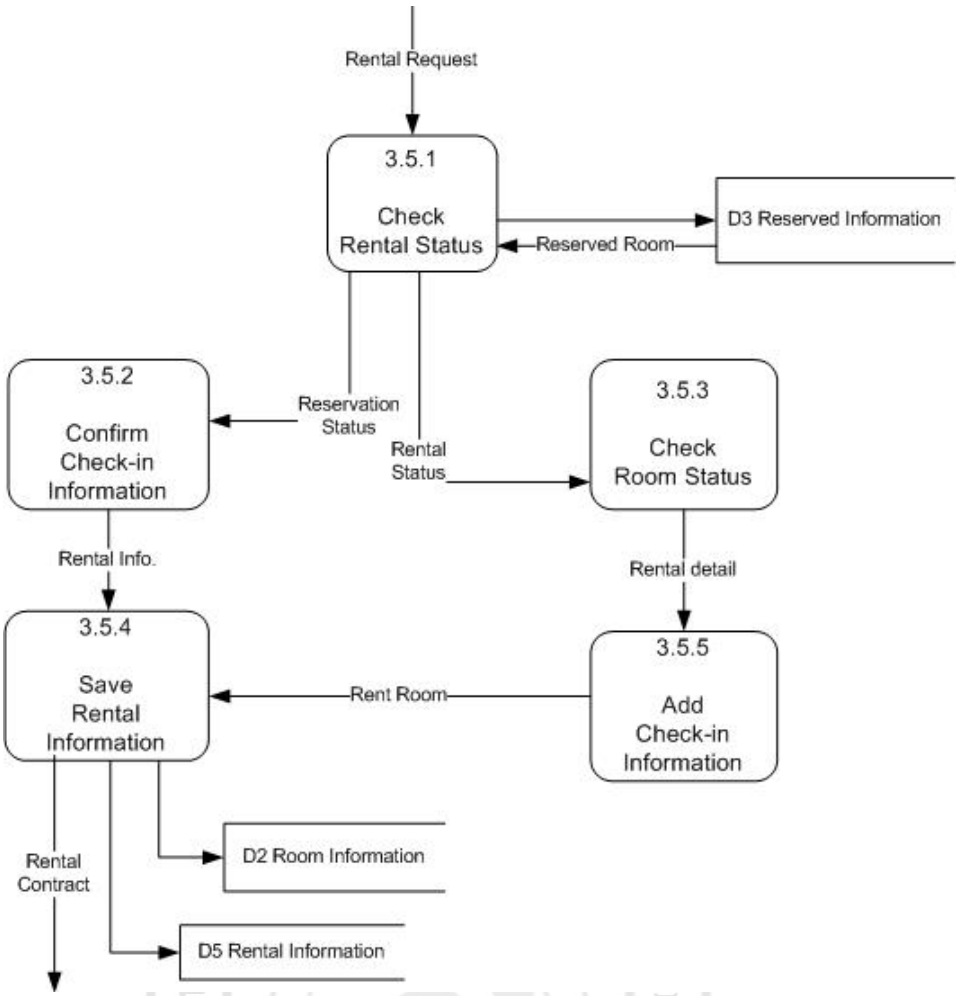


Figure 3.11 Data flow diagram level 2 of rental service (Room rent)

Figure3.12 shows data flow level 2 of process 3 (rental service). In the end of the month, the owner generate invoice to customer. First he select the room number, input utilities (water and electrical) meter so that calculate and summarize rental fee. After that issues invoice to customer.

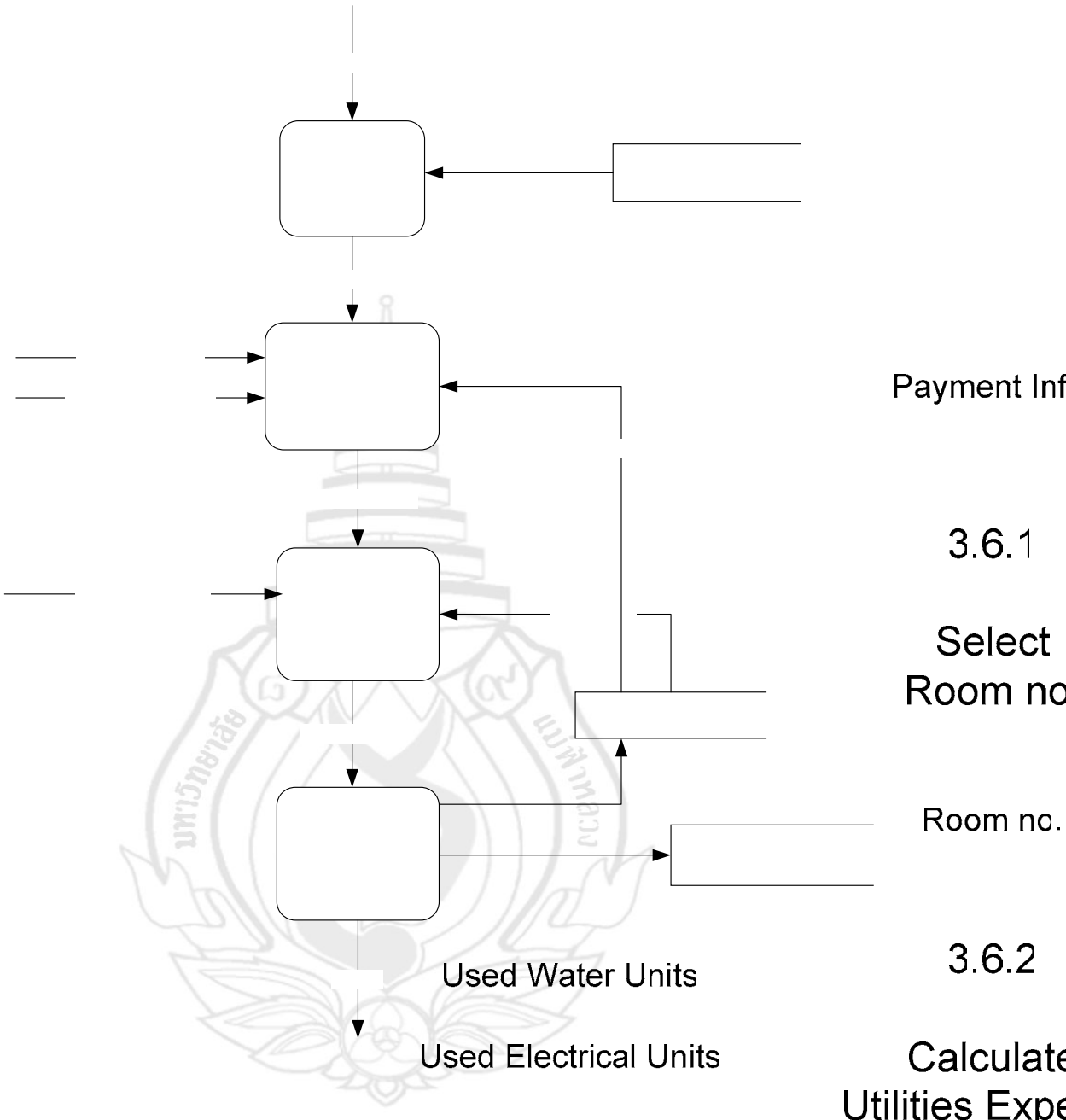


Figure 3.12 Data flow diagram level 2 of rental service (Calculate rental fee)

Figure3.13 shows data flow level 1 of process 4 (search information). The owner can check room status when customer comes to reserve the room and check invoice status whether paid or unpaid invoices. And the owner can check reserved information and rental information.

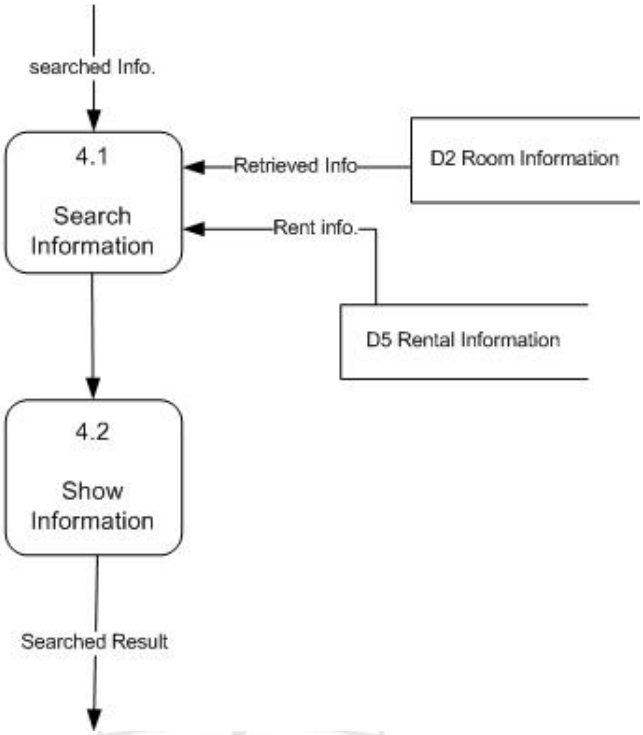


Figure 3.13 Data flow diagram Level 1 of searching information

3.3.2 Data modeling

Data modeling or data structure is one of techniques that we use to implement the database modeling which is called an entity relationship diagram or ERD.

There are 9 tables which are one table name “Login” and 8 tables related to each other by their primary key(candidate key to uniquely identify each row in the table) and foreign key(referential constraint between two tables). The following paragraph are describe how the relationship between 2 tables.

The room table relates to the reservation table by one-to-many relationship that means one room can has many reservations and one reservation can reserved one room. The room table relates to the room rent table by one-to-many relationship that means one room can has many room rent and one room rent event can be rent one room. The room type table relates to the reservation table by one-to-many relationship that means one room type can be assigned to many room and one room can be assigned to one room type. The customer table relates to the room rent table by one-to-many relationship that means one customer can has many rents and one room rent can has one customer. The room rent table relates to the invoice table by one-to-many that means one room rent can has many invoices and one invoice can has one room rent.

The invoice table relates to the utility table by one-to-many that means one invoice can has many utilities and one utility (monthly) can be assign to one invoice. And the invoice table relates to the receipt table by one-to-one relationship that means one invoice has one receipt and one receipt has one invoice.

The figure 3.14 is show the ERD of the proposed system.

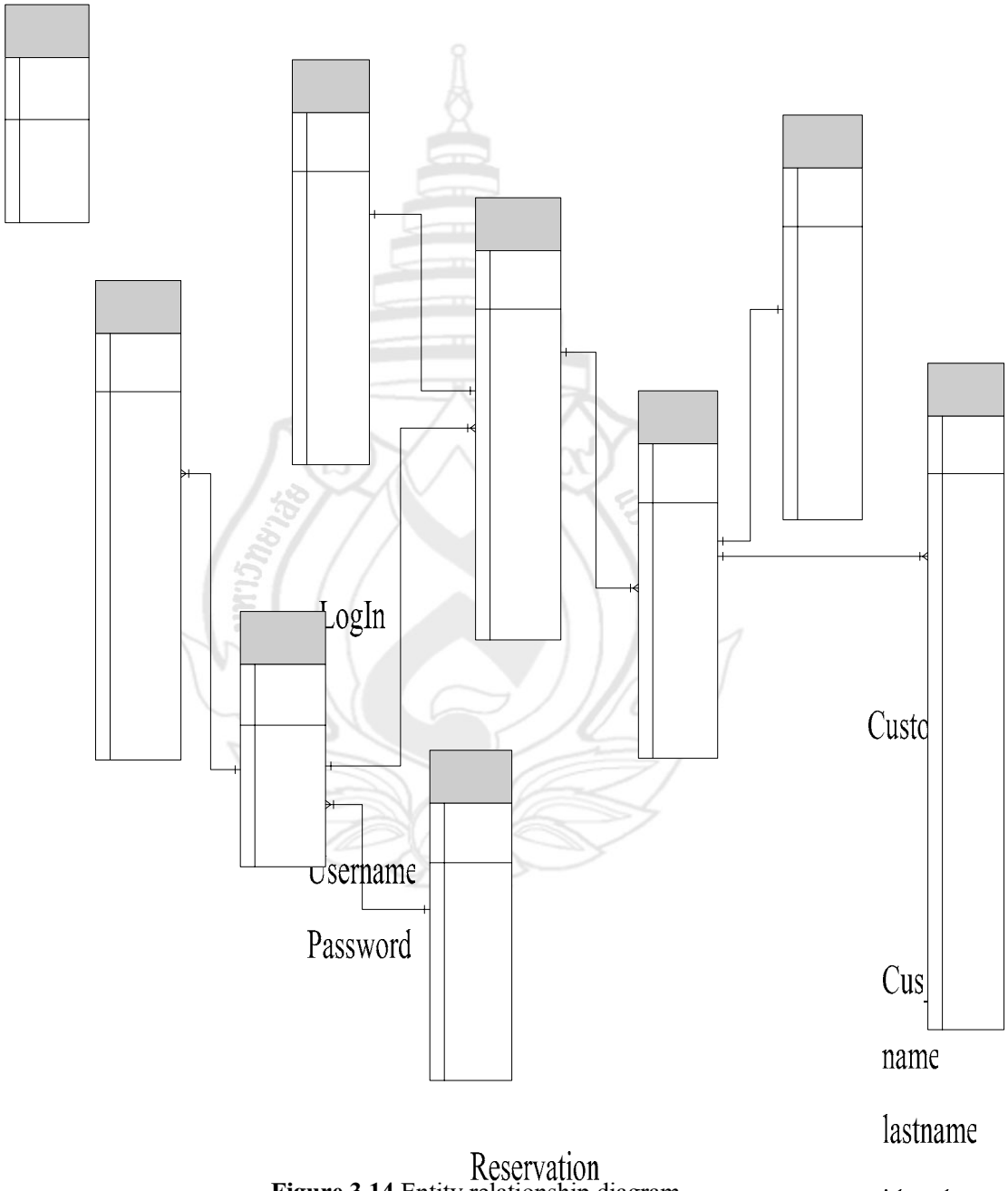


Figure 3.14 Entity relationship diagram

For the concept of User Interface is includes reservation, check-in, check-out, generate invoice and receipt, print reports which all interfaces are easy to use and understand for the user. Concept of Reports includes available room report, reserved room report. And also summarize utilities meters used, customer information, rental information and rental revenue.

CHAPTER 4

SYSTEM FUNCTIONALITY

There are 5 major functions in the proposed system include room management, financial, searching, system setting and summarize reports.

4.1 System architecture

The structure of the proposed system is shown as a functional decomposition diagram that is created to present the top-down functional decomposition and structure of the system. The functional decomposition diagram of the proposed system is shown in figure 4.1

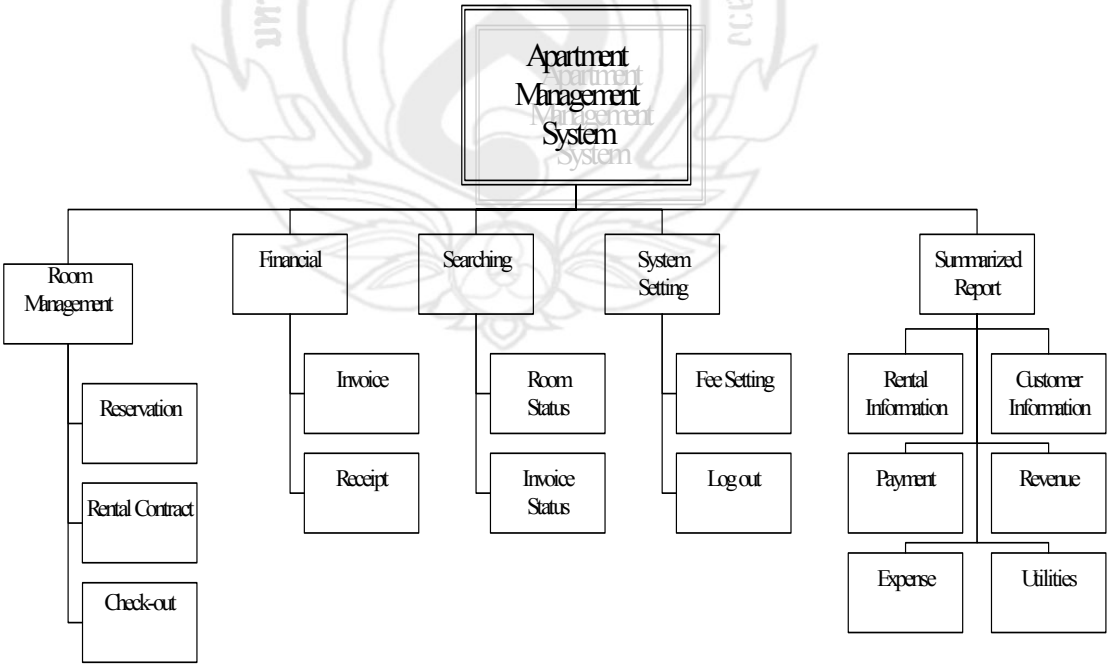


Figure 4.1 The functional decomposition diagram of the Apartment Management System

4.2 Test plan

In the proposed system, the writer did test and modifications to verify the basic logic of each functions in the entire system. After finish implementation phase, the writer used questionnaire technique to observe the satisfaction of the user.

The questionnaire is divided into 2 parts includes ;

Part 1 : Personal data of user (sex, age, position, education)

Part 2 : User's opinion and comment. In this part, there are 2 sections includes input screen/ user interface and result.

4.3 Test results

After the user was testing the proposed system, the user's opinions are almost good response in answer the questionnaire. Especially, comparing the working time between the existing operations and the proposed system in Table 5.1 shows that the user can operate the apartment business better in term of less time, information processes accurately and increase standardization. Therefore, participating users are satisfied with the results of the test.

CHAPTER 5

SUMMARY AND SUGGESTIONS

5.1 Project summary

In the past, Thaweelert Apartment is operating all activities by manual. There are many problems such as data redundancy and time consuming to do the routine task. It wastes time to find the rental information, and calculate rental fee in every month. After the writer listed the problem of the existing system, the writer made an interview with the owner of Thaweelert apartment for more information. Next, the writer designed the database and data flow for the new system. The proposed system can provide more efficient service to customer and help the apartment owner to do the routine task conveniently and quickly. Moreover, it can provide accurate, timely and up-to-date information in form of reports. After complete implementation of the proposed system, the user (the owner of the apartment) tested the system. The comparison between the existing system and the proposed system show that the user spends less time when using the proposed system in each process. Therefore, from the data in Table 5.1 it means that the proposed system is more efficient and effective than the existing system.

Table 5.1 The degree of achievement between the proposed system and the existing system

Process	**Existing system**	**Proposed system**
Room available searching	10 minutes	2 minutes
Reserve the room	10 minutes	3 minutes
Do rental contract	15 minutes	3 minutes
Calculate rental fees	2 hours	20 minutes
Generate invoice	2 hours	30 minutes

Table 5.1 The degree of achievement between the proposed system and the existing system (Continued)

Process	**Existing system**	**Proposed system**
Generate receipt	15 minutes	5 minutes
Rental information searching	10 minutes	2 minutes
Check payment status	10 minutes	2 minutes
Report generation	3 hours	20 minutes

There are three important success factors to the implementation of Thaweelert Apartment System

1. Developer should assist the users while the system is in the implementation stage.
2. The owner should not allow the customer to access the information individually.
3. The owner has to understand the system processes of the apartment management system operation.

5.2 Suggestions for further development

In the future, this system can be expanded and further developed to fit the user requirements. The further development for this system would be :

1. To allow the customer to access the information by himself.
2. To develop a mailing system. The tenant can check the mail from the apartment system instead of finding it in the mailbox, which sometimes can end up with a loss of mail.
3. To improve the security system. When the apartment system allows the tenant to access the system, the system has to improve the security system to provide the rights to the user.
4. To improve the database system in order to support high volume of data.

REFERENCES

Happy Home (Rental Business Software). available : http://www.emiszone.com/happyhome/index.html (5 May 2005)

Hoffer, Jeffey A. ; Prescott , Mary B. and McFadden, Fred R. (2004). **Modern Database Management**. 7th ed. Upper Saddle River, N.J. : Prentice Hall International Company.

KP House (Rental Business Software). available from http://www.thaiware.com/main/info.php?id=3282 (7 May 2005)

Laudon, Kenneth and Jane P. London. (1999). **Management Information System**. 6th ed. NJ : Prentice Hall International Company.

Property Management (Rental Business Software). available from http://www.softbizplus.com/p01.htm (10 May 2005)

Rob, Peter and Colonel, Carlos. (2004). **Database Systems : Design Implementation and Management**. 6th ed. Cambridge, MA : Course Technology.

Software Development Life Cycle (SDLC). available from http://www.stylusinc.com/Common/Concerns/SoftwareDevtPhilosophy.php (4 May 2005)

VB.NET. available from http://msdn2.microsoft.com/en-us/vstudio/default.aspx. (1 May 2005)

VB.NET. available from http://www.devarticles.com/c/b/VB.Net/ (6 May 2005)

Whitten, Jeffrey L. and Lonnie D. Bentley. (1997). **System Analysis and Design Methods**. 4th ed. Bostion : Irwin McGraw Hill International.

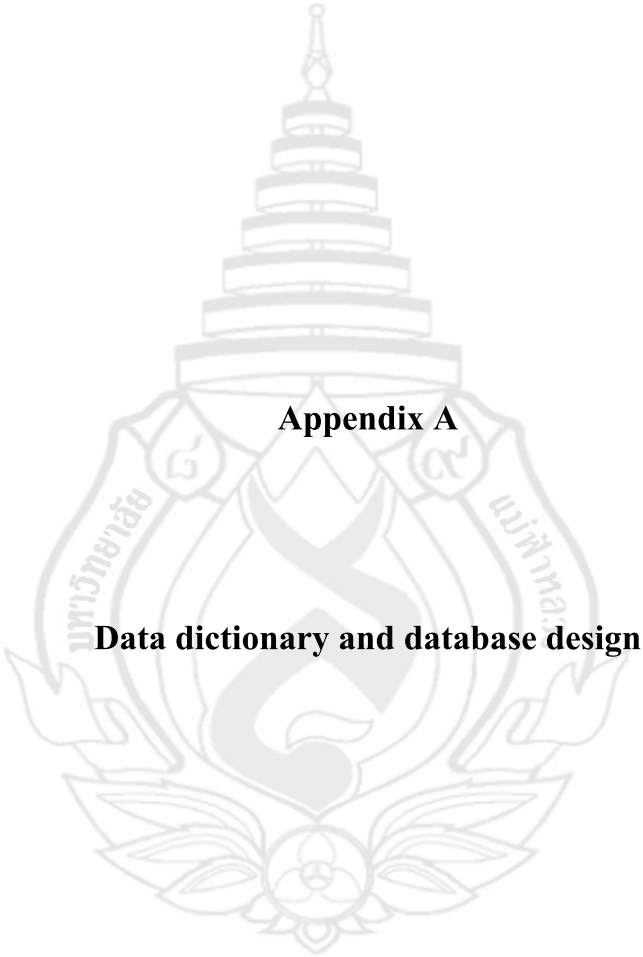
นันทนี แขวงโสภา. (2548). **อินไซด์ Access 2003**. กรุงเทพฯ : โปรวิชั่น.

ศรีไพร ศักดิ์รุ่งพงศากุล. (2547). **เทคโนโลยีคอมพิวเตอร์และสารสนทศ.** กรุงเทพฯ : ซีเอ็ดยูเคชั่น.

สุรสิทธิ์ คิวประสพศักดิ์ และ นันทนี แขวงโสภา. (2546). **อินไซด์ Visual Basic.NET**. ฉบับสมบูรณ์. กรุงเทพฯ : โปรวิชั่น.

โอภาส เอี่ยมสิริวงศ์. (2549). **การวิเคราะห์และออกแบบระบบ**. กรุงเทพฯ : ซีเอ็ดยูเคชั่น.

Appendix



Appendix A

Data dictionary and database design

TableA.1 Data dictionary for room

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Room_No	Text	201	☐			Room's number	
Type_ID	Text	1		☐	Customer, Room_type	Type of room (1, 2, 3, …)	
rmstatus	Text	Rent				Status of room	
						-Available -Reserved -Rent	

TableA.2 Data dictionary for room_type

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Type_ID	Text	1	☐			Type of room	
wpunit	Number	5 Baht				Water unit rate fee	
epunit	Number	8 Baht				Electric unit rate fee	
rmfee	Number	5,000 Baht				Rental fee per month	
monthfee	Number	100 Baht				Monthly fee	

TableA.3 Data dictionary for customer

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Cus_ID	Number	c-001	☐			Customer's identification	
name	Text	Michael				Customer's name	
lastname	Text	Owen				Customer's lastname	
idcardno	Text	3-4323-65788-11-5				Identification card number	
address	Text	144 Bangkapi 10230				Customer's address	
tel	Text	089-547-4411				Customer's telephone number	
image	Text					Customer's image	

TableA.4 Data dictionary for reservation

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Rsv_No	Number	rsv-001	☐			Reservation identification	
Room_No	Number	102				Reserved room number	
name	Text	Celine				Customer's name	
lastname	Text	Dion				Customer's lastname	
idcardno	Text	3-4323-65788-11-5				Identification card number	
tel	Text	081-324-8876				Customer's telephone number	

TableA.4 Data dictionary for reservation (Continued)

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
rsvdeposit	Number	500 บาท				Deposit for reservation	
rsvdate	Date/time	25/8/2550				Reserve date	
chkin	Date/time	1/9/2550				Check in date	
rsvstatus	Text	Reserved				Status of reservation -Reserved -Rent -Cancel	

TableA.5 Data dictionary for room rent

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Rent_ID	Number	rt-001	□			Rental identification	
Cus_ID	Number	c-001		□		Customer's identification	
Room_no	Text	201		□		Room's number	
chkin	Date/Time	1/7/2550				Date of check in	
chkout	Date/Time	30/9/2550				Date of check out	
rstatus	Text	Rent				Status of rent -Rent -Checkout	
rdeposit	Number	1,000 Baht				Deposit of rental	
duration	Number	12 months				Rental duration(month)	

TableA.6 Data dictionary for utility

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Util_ID	Number	ut-0001	☐			ID number of utilities	
Inv_No	Text	inv-0001				ID number of rental	
udate	Date/Time	31/8/ 2550				Date of used utilities	
wstart	Number	0				Water meter start number	
estart	Number	0				Electric meter start number	
wend	Number	10				Water meter end number	
eend	Number	10				Electric meter end number	
wused	Number	10				Water meter used	
eused	Number	10				Electric meter used	
wfee	Number	90 Baht				Water charge per month	
efee	Number	100 Baht				Electric charge per month	
telfee	Number	50 Baht				telephone charge per month	
damages	Number	50 Baht				damages	
total	Number	270 Baht				Total of utilities fee	

TableA.7 Data dictionary for invoice

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Inv_No	Text	inv-0001	☐			Invoice identification	
Rent_ID	Text	r-001		☐	Customer	Rent identify	
invdate	Date/time	31/8/ 2550				Date of issue invoice	
total	Number	3,270 Baht				Total of rent fee	
invstatus	Text	paid				Status of payment -paid -unpaid	
comment	Text					Comment	

TableA.8 Data dictionary for receipt

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Rc_No	Number	rc-0001	☐			Receipt identification	
Inv_No	Number	inv-0001		☐	Invoice	Invoice identification	
rcdate	Date/Time	1/9/2550				Date of issued receipt	
total	Number	3,270 Baht				Total of rental fee	
Late_fee	Number	100 Baht				Late payment fee (100 per day) (in case of pay after the 5th of month)	
total2	Number	3,370 Baht				Total of rental fee	
Comment	Text					Comment	

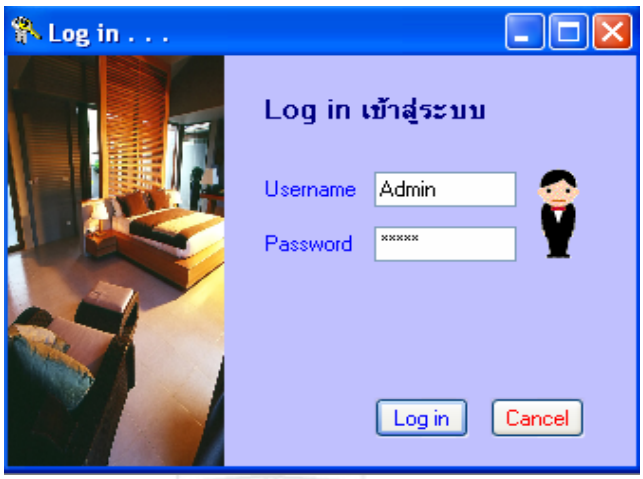
Table A.9 Data dictionary for login

Attribute	Type	Sample Value	PK	FK	Reference	Description	Null
Username	Text	Admin	☐			Username for login to the system	
Password	Text	******				Pass code of user	

Appendix B

User manual and user interface

1. Open the application, and then insert correct username and password in order to logging into the system.

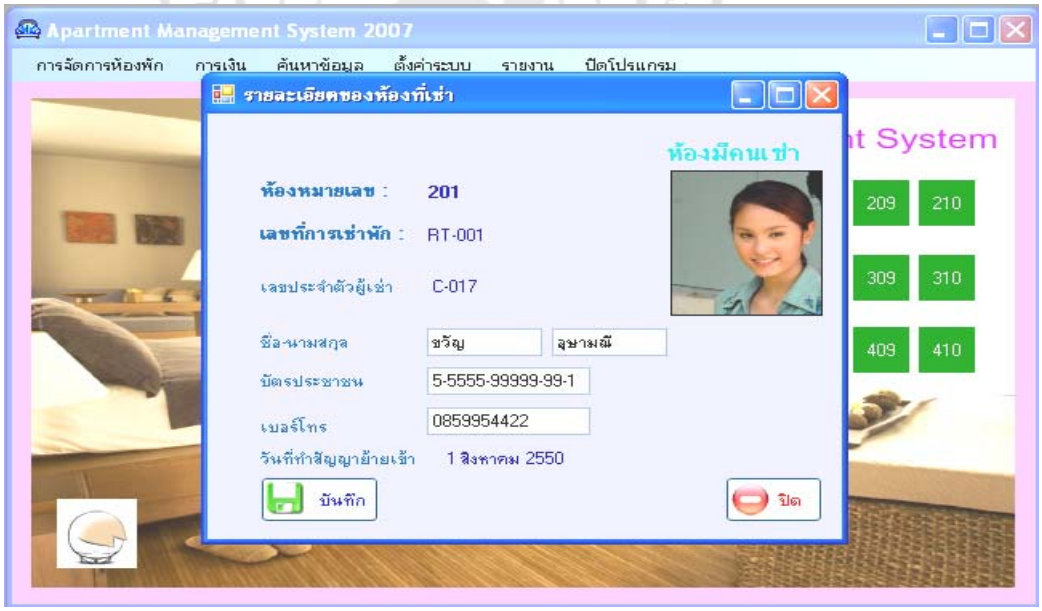


FigureB.1 Interface design of the log in

2. When the user log in correctly, the main menu of the Apartment Management System will show. The main menu of Apartment Management System shows 30 rooms (room no.201 to room no.410) that each block of room number will show room status by color. The new customer can check available room by select the green room to see room's information. The existing customer can check his information by select the blue room.

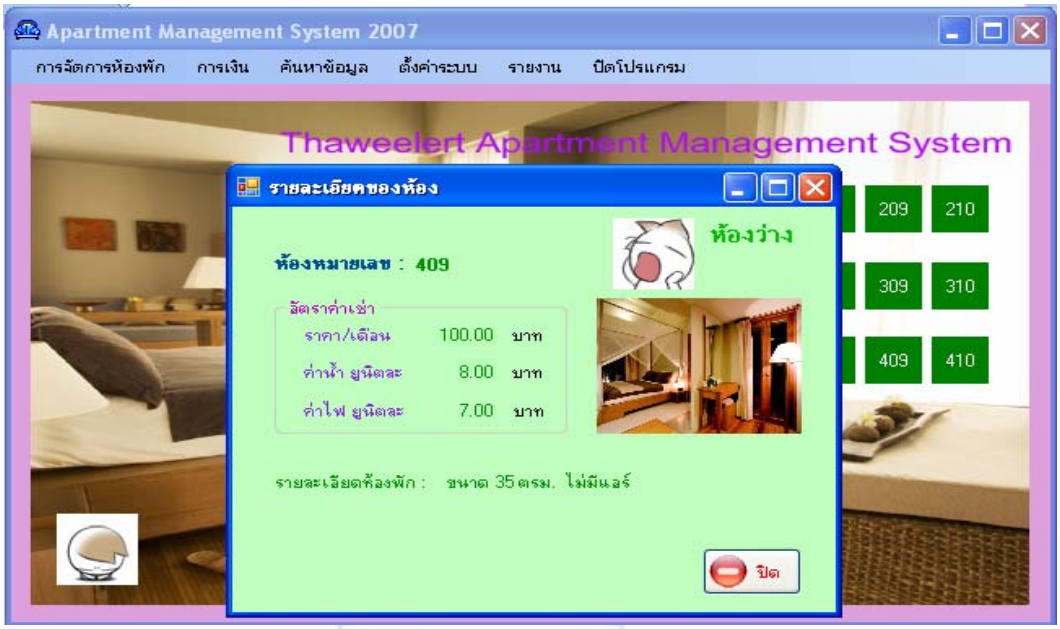
FigureB.2 Interface design of main menu

2.1 The blue block means the room had rent.



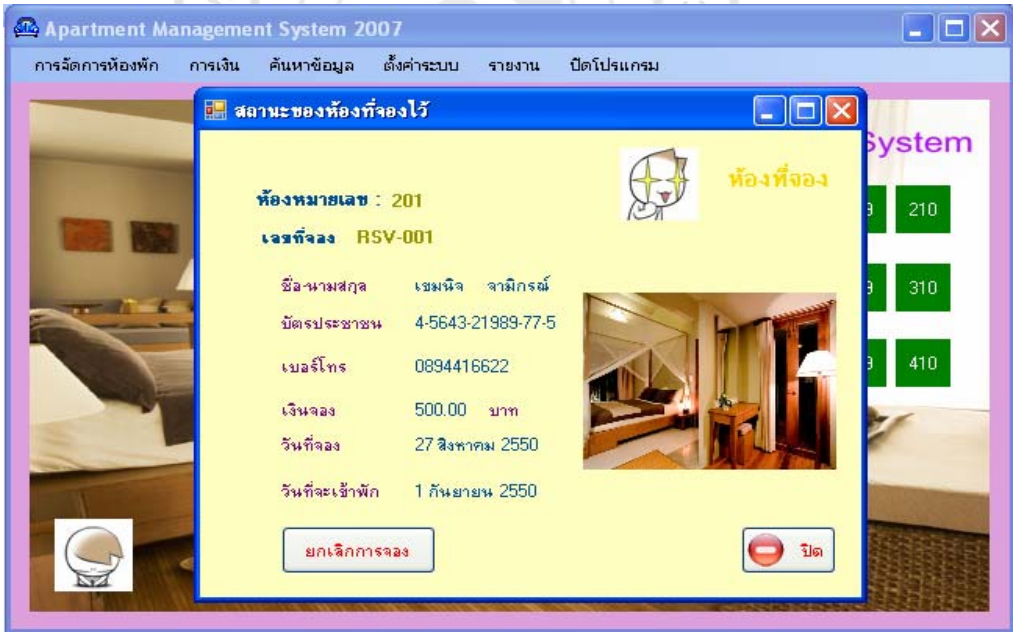
FigureB.3 Interface design of rent room status (blue color room)

2.2 The green block means the room is available.



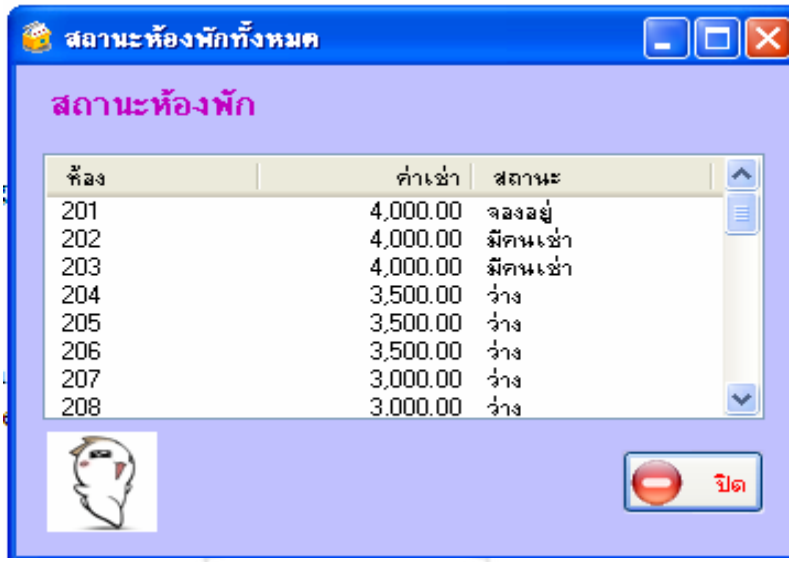
FigureB.4 Interface design of available room status (green color room)

2.3 The yellow block means the room is reserved.



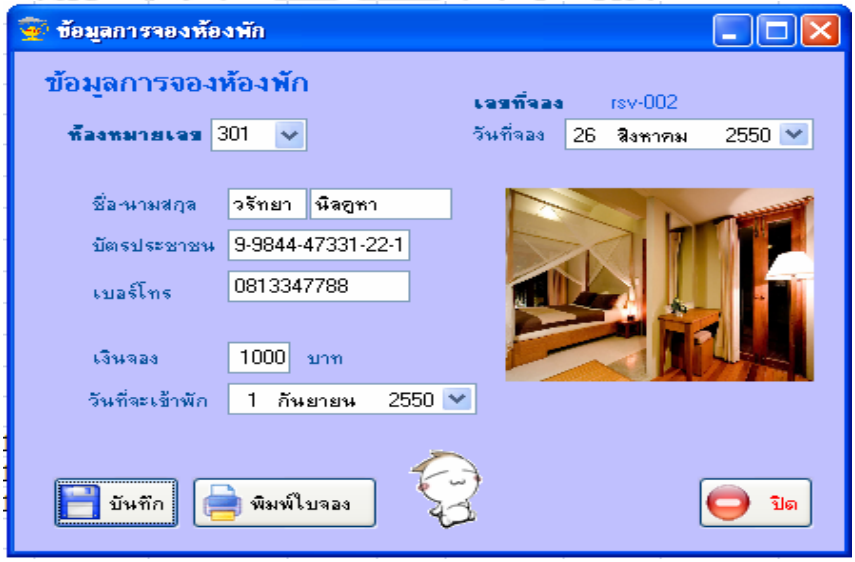
FigureB.5 Interface design of reserved room status (yellow color room)

3. When the customer come to reserve room, select menu named “ค้นหาข้อมูล” and select “สถานะห้องพัก ” to check room available.



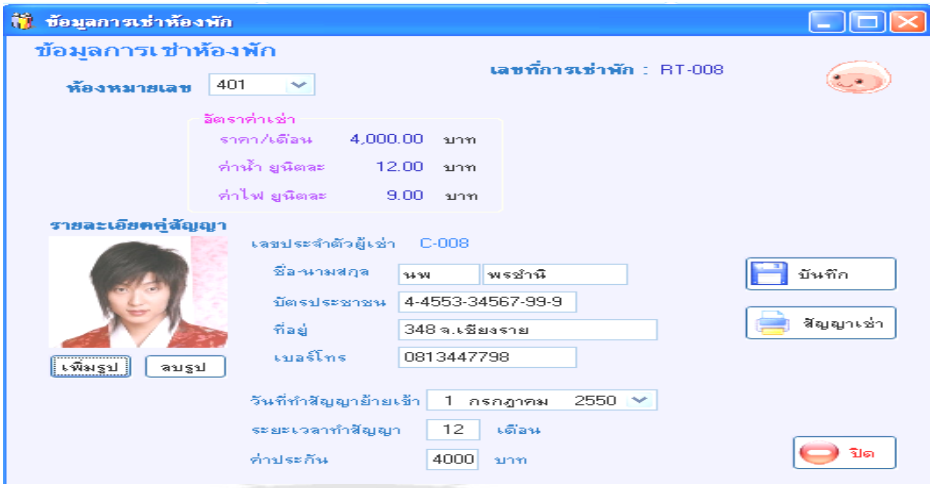
FigureB.6 Interface design of room status

4. Select menu named “การจัดการห้องพัก” and select “จองห้อง” in main menu interface. Insert reservation data and save, then print reservation paper for customer.



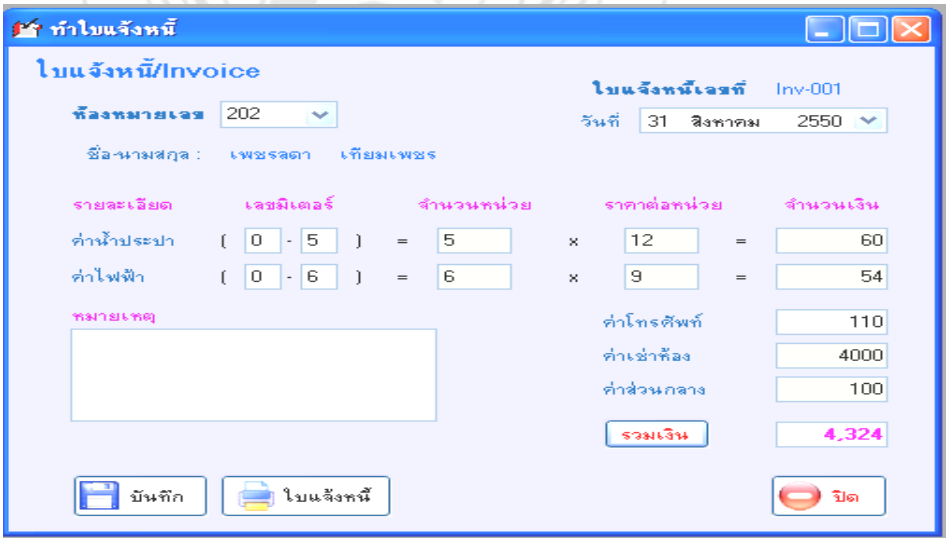
FigureB.7 Interface design of reservation

5. When customer return to check-in the reserved room, select the menu named “ทำสัญญาเช่า” in main menu interface, then select room number ,insert data, save and print contract agreement button “สัญญาเช่า”.



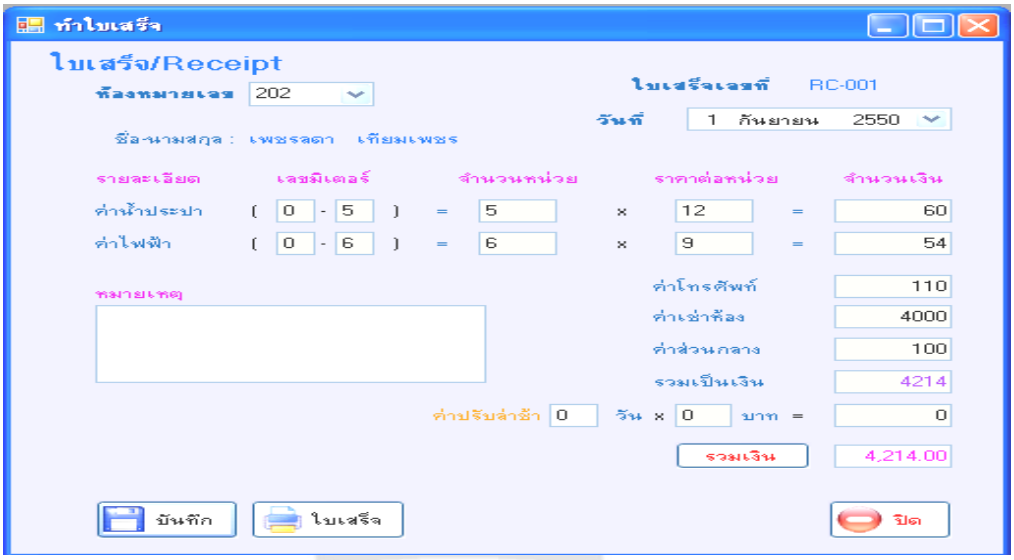
FigureB.8 Interface design for rental information

6. In the end of the month, to generate invoice to customer select menu “การเงิน” then select “ทำใบแจ้งหนี้” in main menu. Select room number and input water/electrical meter used and telephone fee. Then summarize all rental fee and print invoice.



FigureB.9 Interface design for generate invoice

7. When the customer pay the rental fee, the owner generate receipt by select “การเงิน” and “ทำใบแจ้งหนี้” .If customer pay late after 5th of the month, you add late fee in the receipt.



FigureB.10 Interface design for generate receipt

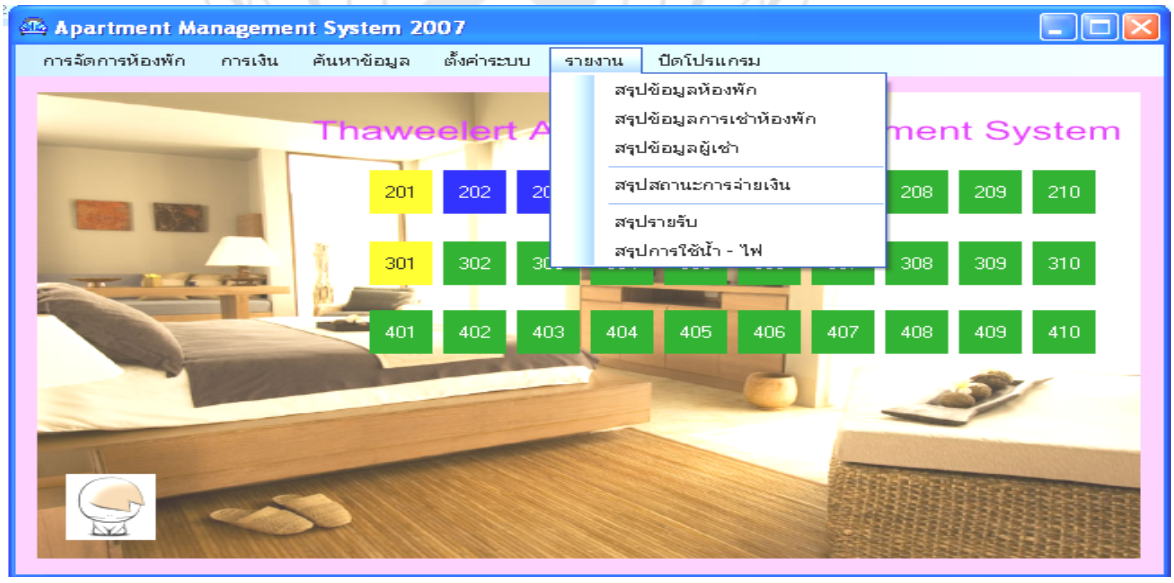
8. In case of checking payment status of customer, select menu “ค้นหาข้อมูล” and “สถานะการจ่ายเงิน”

FigureB.11 Interface design for payment status

9. When customer check out, select menu “การจัดการห้องพัก” and “แจ้งย้ายออก”, select room number and return rental deposit to customer.

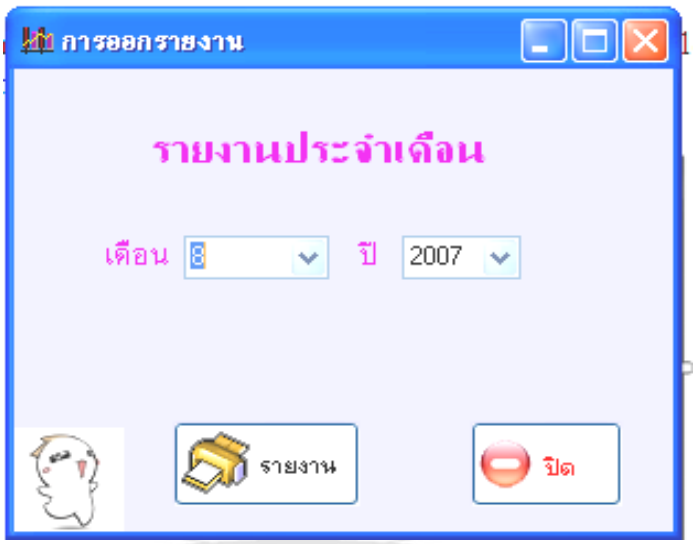
FigureB.12 Interface design for check out

10. When the owner would like to summarize the rental information, generate report by menu “รายงาน” and select report’s type.



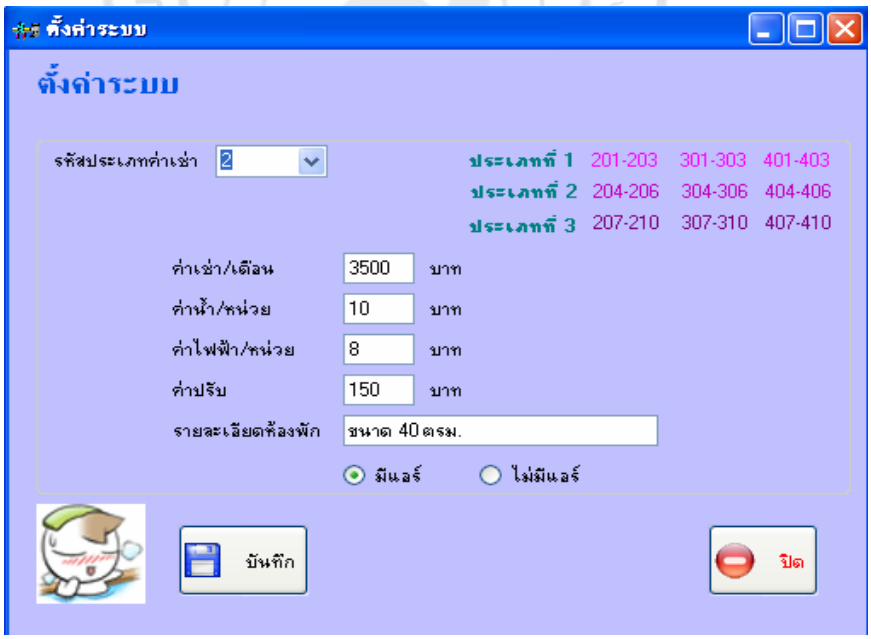
FigureB.13 Interface design for select type of reports

11. Select month and year of rental information menu named “สรุปรายรับ”, “สรุปการใช้น้ำ-ไฟ” and then click the button “ออกรายงาน”



FigureB.14 Interface design for generate reports

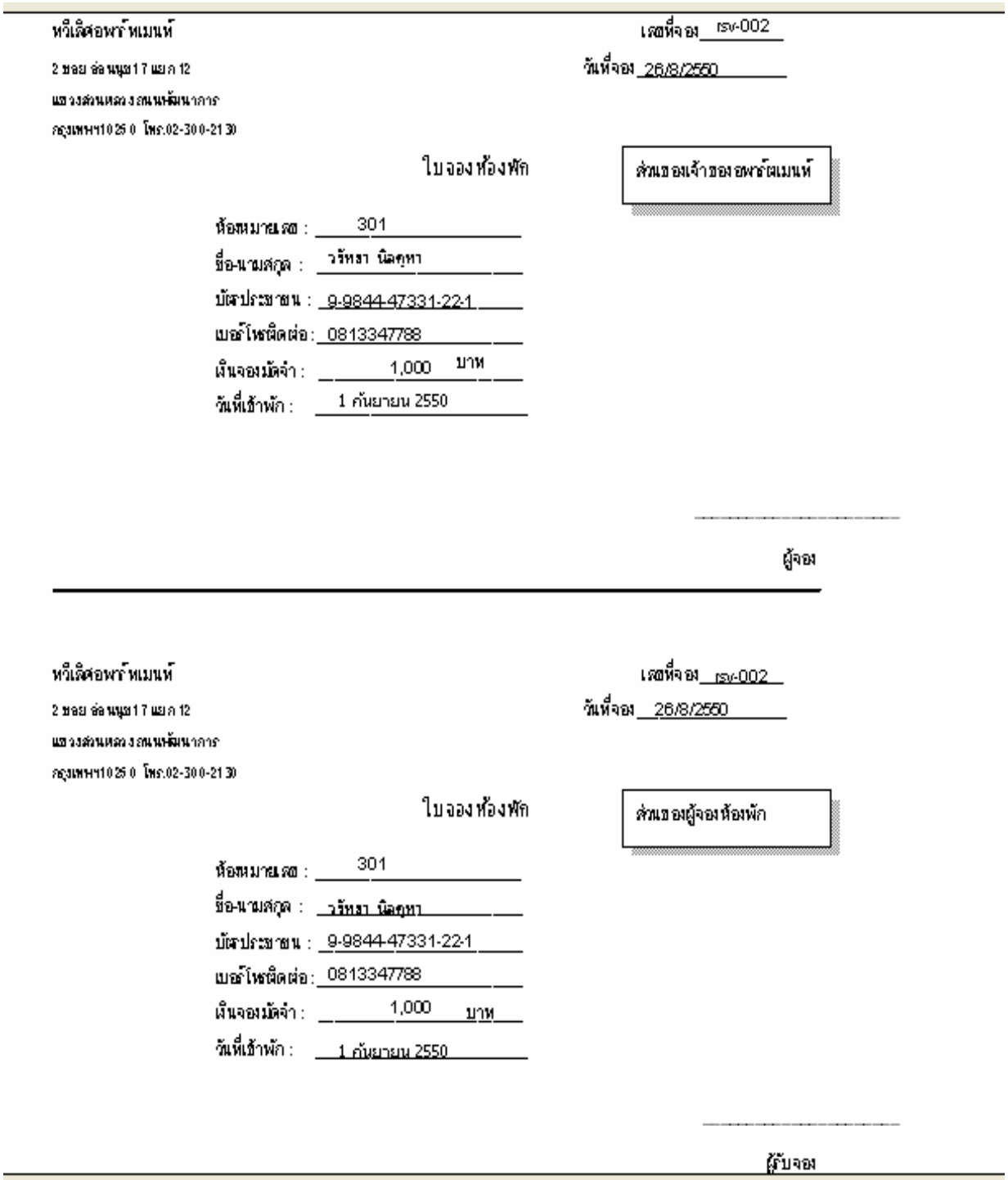
12. The user can set the room rate fee by select menu “ตั้งค่าระบบ” and select “อัตราค่าบริการ”



FigureB.15 Interface design for room fee setting

Appendix C

Report design



FigureC.1 Report design for reservation form

เลขที่สัญญา rt-001

หนังสือสัญญาเช่า

สัญญาทำที่ ทวีเลิศอพาร์ตเม้นท์ ณ วันที่ 1 สิงหาคม 2550 ระหว่าง

สิวาพร สุทธิเลิศกุล ซึ่งต่อไปนี้เรียกว่าผู้ให้เช่าฝ่ายหนึ่ง กับ

เพชรลดา เทียมเพชร ซึ่งต่อไปนี้เรียกว่าผู้เช่าอีกฝ่ายหนึ่ง ได้ทำสัญญากันดังต่อไปนี้

ข้อ 1. ผู้ให้เช่าตกลงให้เช่าและผู้เช่าตกลงรับเช่า ห้องหมายเลข 202 เพื่อพักอาศัย

2 ซ.อ่อนนุช 17 แยก 12 แขวงสวนหลวง ถ.พัฒนาการ กทม.10250

มีกำหนดเวลา 12 เดือน นับตั้งแต่วันที่ 1 สิงหาคม 2550 เป็นต้นไป โดยผู้เช่ายอมเสียค่าเช่าให้แก่ผู้ให้เช่าเป็นเงินค่าเช่าเดือนละ 4,000 บาท

ข้อ 2. ผู้ให้เช่าได้รับเงินล่วงหน้าไว้เป็นประกันการเช่าจากผู้เช่าเป็นจำนวนเงิน 5,000 บาท

ข้อ 3. ผู้เช่ายอมชำระค่าเช่าแก่ผู้ให้เช่าภายในวันที่ 5 ของทุกๆเดือน ถ้าไม่ชำระตามกำหนดนี้ ผู้เช่ายอมให้ผู้ให้เช่ายึดทรัพย์สินของผู้เช่าได้ และใส่กุญแจห้องของผู้เช่าได้

ข้อ 4. ค่าภาษีโรงเรือนและที่ดิน ผู้ให้เช่า เป็นผู้เสีย

ข้อ 5. ผู้เช่ายอมรับรักษาตัวห้องพักนี้ให้ชำรุดทรุดโทรมไปกว่าเดิม ถ้าผู้เช่ามีความประสงค์จะดัดแปลงหรือเพิ่มเติมสิ่งใดลงไปอีก ต้องได้รับอนุญาตจากผู้ให้เช่าเป็นลายลักษณ์อักษรก่อน จึงจะทำการได้ ถ้าเกิดความเสียหายใดๆขึ้น ผู้เช่ายอมรับผิดและใช้ค่าเสียหายทั้งสิ้น

ข้อ 6. บรรดาสิ่งก่อสร้างหรือซ่อมแซมลงในบริเวณห้องเช่านี้ เมื่อผู้เช่าออกจากห้องเช่า ห้ามมิให้รื้อถอนหรือทำลายเป็นอันขาดและสิ่งก่อสร้างซ่อมแซมดังกล่าวแล้วนั้นต้องตกเป็นของผู้ให้เช่าทั้งสิ้น โดยผู้เช่าจะเรียกค่าใดๆไม่ได้เลย ถ้าเกิดอัคคีภัยขึ้นสัญญานี้เป็นอันระงับสิ้นสุดลง

FigureC.2 Report design for contract agreement form

ทวีเลิศอพาร์ทเมนท์ เลขที่ inv-0001

2 ซอยอ่อนนุช 17 แยก 12 วันที่ 31 สิงหาคม 2550

แขวงสวนหลวงถนนพัฒนาการ

กรุงเทพฯ10250 โทร.02-300-2130

ใบแจ้งหนี้ / Invoice

ห้องหมายเลข 202

ชื่อ-นามสกุล เพชรลดา เทียมเพชร

รายละเอียด	เลขมิเตอร์ ต้นเดือน	เลขมิเตอร์ สิ้นเดือน	จำนวนหน่วยที่ใช้	ราคาต่อหน่วย	จำนวนเงิน
ค่าน้ำประปา	0	5	5	12	60.00
ค่าไฟฟ้า	0	6	6	9	54.00
ค่าโทรศัพท์					110.00
ค่าเช่าห้อง					4,000.00
ค่าส่วนกลาง					100.00
				รวมเงินทั้งหมด	4,324.00

หมายเหตุ : วันสิ้นสุดการชำระเงิน วันที่ 5 ของทุกเดือนค่าปรับล่าช้าวันละ 100 บาท

FigureC.3 Report design for invoice

ทวีเลิศอพาร์ทเมนท์
2 ซอยอ่อนนุช 17 แยก 12
แขวงสวนหลวงถนนพัฒนาการ
กรุงเทพฯ10250 โทร.02-300-2130

เลขที่ rc-0001
วันที่ 1 กันยายน 2550

ใบเสร็จรับเงิน / Receipt

ห้องหมายเลข 202
ชื่อ-นามสกุล เพชรลดา เทียมเพชร

รายละเอียด	เลขมิเตอร์ ต้นเดือน	เลขมิเตอร์ สิ้นเดือน	จำนวนหน่วยที่ใช้	ราคาต่อหน่วย	จำนวนเงิน
ค่าน้ำประปา	0	5	5	12	60
ค่าไฟฟ้า	0	6	6	9	54
ค่าโทรศัพท์					110
ค่าเช่าห้อง					4,000
ค่าส่วนกลาง					100
				รวมเงิน	4,324
ค่าปรับล่าช้า วันละ 100 บาท x จำนวน_____วัน เป็นเงิน					0
				รวมเงินทั้งหมด	4,214

หมายเหตุ : วันสิ้นสุดการชำระเงิน วันที่ 5 ของทุกเดือนค่าปรับล่าช้าวันละ 100 บาท

FigureC.4 Report design for receipt

ทวีเลิศอพาร์ทเมนท์

2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง

ถนนพัฒนาการ กรุงเทพฯ10250

โทร.02-300-2130 11/9/2550

รายงานสรุปการเช่าห้องพัก

ประจำเดือน **กันยายน 2550**

เลขที่การเช่าพัก	ห้องหมายเล	ชื่อ-นามสกุล		วันที่ทำสัญญาย้ายเข้า	ระยะเวลาสัญญา
1	202	เพชรลดา	เทียมเพชร	1 สิงหาคม 2550	12
2	203	สราวุฒิ	มาตรทอง	1 สิงหาคม 2550	24

สรุปมีการเช่าพักจำนวน 2 ห้อง

FigureC.5 Report design for rental information

ทวีเลิศอพาร์ทเมนท์
2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง
ถนนพัฒนาการ กรุงเทพฯ10250
โทร.02-300-2130

11/9/2550

รายงานสรุปผู้เช่าห้องพัก

ประจำเดือน 8 ปี 2007

เลขประจำตัวผู้เช่า	ชื่อ-นามสกุล		บัตรประชาชน	เบอร์โทร	ค่าประกัน
1	เพชรลดา	เทียมเพชร	4-3254-35676-78-9	0893321145	5,000
2	สราวุฒิ	มาตรทอง	6-8885-55599-99-9	0853325466	5,000

สรุปมีผู้เช่าพักจำนวน 2 ห้อง

FigureC.6 Report design for customer information

ทวีเลิศอพาร์ทเมนท์

2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง

ถนนพัฒนาการ กรุงเทพฯ10250

โทร.02-300-2130 12/9/2550

รายงานสถานะการจ่ายเงิน

ประจำเดือน **กันยายน 2550**

เลขที่ใบแจ้งหนี้	ห้องหมายเลข	สถานะการจ่ายเงิน	จำนวนเงิน
1	202	จ่ายแล้ว	4,327.00
2	203	ค้างจ่าย	4,440.00

สรุปห้องที่จ่ายแล้วจำนวน 1 ห้อง

สรุปห้องที่ค้างจ่ายแล้วจำนวน 1 ห้อง

FigureC.7 Report design for payment status

ทวีเลิศอพาร์ทเมนท์

2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง

ถนนพัฒนาการ กรุงเทพฯ10250

โทร.02-300-2130

11/9/2550

รายงานสรุปรายรับ

ประจำเดือน 9 ปี 2,007

เลขที่ใบเสร็จ	วันที่รับเงิน	จำนวนเงิน
1	1 กันยายน 2550	4,214
2	6 กันยายน 2550	4,350
	รวมเงินทั้งหมด	8,564.00

FigureC.8 Report design for revenue

ทวีเลิศอพาร์ทเมนท์

2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง

ถนนพัฒนาการ กรุงเทพฯ10250

โทร.02-300-2130

11/9/2550

รายงานการใช้น้ำ-ไฟ

ประจำเดือน 8 ปี 2007

ห้องหมายเลข	เลขที่ใบแจ้งหนี้	หน่วยน้ำที่ใช้(ยูนิต)	ค่าน้ำ	หน่วยไฟที่ใช้(ยูนิต)	ค่าไฟ
202	1	5	60	6	54
203	2	8	96	6	54
	สรุปรวมทั้งหมด	13.00	156.00	12.00	108.00

FigureC.9 Report design for utility used information

ทวีเลิศอพาร์ทเมนท์
2 ซอย อ่อนนุช 17 แยก 12 แขวงสวนหลวง
ถนนพัฒนาการ กรุงเทพฯ10250

12/9/2550

รายงานข้อมูลห้องพัก

ประจำเดือน **กันยายน 2550**

หมายเลขห้อง	สถานะห้องพัก	อัตราค่าเช่า/เดือน	ค่าน้ำ ยูนิตละ	ค่าไฟ ยูนิตละ
201	จองอยู่	4,000	12	9
202	มีคนเช่า	4,000	12	9
203	มีคนเช่า	4,000	12	9
204	ว่าง	3,500	10	8
205	ว่าง	3,500	10	8
206	ว่าง	3,500	10	8
207	ว่าง	3,000	8	7
208	ว่าง	3,000	8	7
209	ว่าง	3,000	8	7
210	ว่าง	3,000	8	7
301	จองอยู่	4,000	12	9
302	ว่าง	4,000	12	9
303	ว่าง	4,000	12	9
304	ว่าง	3,500	10	8
305	ว่าง	3,500	10	8
306	ว่าง	3,500	10	8
307	ว่าง	3,000	8	7
308	ว่าง	3,000	8	7
309	ว่าง	3,000	8	7
310	ว่าง	3,000	8	7
401	ว่าง	4,000	12	9
402	ว่าง	4,000	12	9
403	ว่าง	4,000	12	9
404	ว่าง	3,500	10	8
405	ว่าง	3,500	10	8
406	ว่าง	3,500	10	8
407	ว่าง	3,000	8	7
408	ว่าง	3,000	8	7
409	ว่าง	3,000	8	7
410	ว่าง	3,000	8	7

สรุป ห้องพักทั้งหมด 30 ห้อง
ห้องที่ว่าง 26 ห้อง
ห้องที่มีคนเช่าและห้องที่จองอยู่ 4 ห้อง

FigureC.10 Report design for room information

Appendix D

Questionnaire

Questionnaire

Part1: Personal data

1. Sex : ☐ Male ☐ Female

2.

Age……...…

..

3. Position

……..……..…..

4.

Education…….

..

Part 2: User's opinion

Question	Poor	Fair	Good	Very Good
1. Input and user Interface Meet the user's requirements Easy to use Form and report appropriateness				
2. Result Speed of the result Accuracy of the result Overall user's satisfaction				

3. Commend and suggestion

_____

_____

_____

_____

_____

_____

CURRICULUM VITAE

NAME	Ms.Piyawan Kunawatsatit
DATE OF BIRTH	11 November 1982

EDUCATIONAL BACKGROUND

BACHELOR DEGREE	Bachelor of Science and Technology
	Major in Telecommunication Science
	Assumption University (2000-2005)
WORK EXPERIENCE	Project Secretary B.C.M. Co., Ltd.

Program Source Code

Login.vb

```
Public Class login

  Private Sub login_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load

    conn.Open()

  End Sub

        Private Sub bt_cancel_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles bt_cancel.Click
                conn.Close()
                conn = Nothing
                da = Nothing
                ds = Nothing
                Me.Close()
        End Sub

   Private Sub bt_login_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_login.Click
      Try
       SQLcom = " select * from login where Username ='" & tx_user.Text & "' and Password ='" &
tx_pwd.Text & "'   "
       da = New OleDb.OleDbDataAdapter(SQLcom, conn)
       ds.Clear()
       da.Fill(ds, "fu")

         Dim yo As Byte = ds.Tables("fu").Rows.Count
         If yo = 0 Then
```

```
            tx_user.focus()
            tx_user.SelectAll()
            MsgBox("username หรือ พาสเวิร์ด ผิด กรุณาใส่ใหม่อีกครั้ง..!", MsgBoxStyle.Critical)
            Exit Sub
        End If
          'start main menu
          Me.Hide()
          mainmenu.Show()

        Catch ex As Exception
          MsgBox(ex.Message)
        End Try
    End Sub
End Class
```

~~~~~~

Mainmenu.vb

```
Public Class mainmenu

    Dim strStatus As String   ' ตัวแปรสำหรับรับค่าสถานะ
    Dim xLB As Label

    Private Sub rsv_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles rsv_ToolStripMenuItem.Click
        Me.Hide()
        reservation.Show()
    End Sub

    Private Sub rent_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles rent_ToolStripMenuItem.Click
        Me.Hide()
        rentinfo.Show()
    End Sub
```
~~~~~~

```
    Private Sub chkout_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles chkout_ToolStripMenuItem.Click
        Me.Hide()
        checkout.Show()
    End Sub

    Private Sub inv_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles inv_ToolStripMenuItem.Click
        Me.Hide()
        invoice.Show()
    End Sub

    Private Sub reciv_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles reciv_ToolStripMenuItem.Click
        Me.Hide()
        reciept.Show()
    End Sub

    Private Sub roomstatus_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles roomstatus_ToolStripMenuItem.Click
        Me.Hide()
        roomstatus.Show()
    End Sub

    Private Sub invstatus_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles invstatus_ToolStripMenuItem.Click
        Me.Hide()
        Invstatus.Show()
    End Sub
```

```
    Private Sub roomrate_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles roomrate_ToolStripMenuItem.Click
        Me.Hide()
        feesetting.Show()
    End Sub

    Private Sub login_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Hide()
        login.Show()
    End Sub

    Private Sub exit_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    'Part of generate reports
    Private Sub sumrentinfo_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles sumrentinfo_ToolStripMenuItem.Click

    strPathReport = SelectReport("rmstatusrep")
    strReportFormula = Nothing
    frmShowReport.TopMost = True
    frmShowReport.Show()
    End Sub

    Private Sub sumcusinfo_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles sumcusinfo_ToolStripMenuItem.Click


        ' สรุปการเช่าห้องพัก
```

```
    strPathReport = SelectReport("rentrp")
    strReportFormula = Nothing
    frmShowReport.TopMost = True
    frmShowReport.Show()
    End Sub

    Private Sub sumpaystatus_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles sumpaystatus_ToolStripMenuItem.Click

        ' สรุปข้อมูลผู้เช่า
    strPathReport = SelectReport("Customerinfo")
    strReportFormula = "{Query2.rStatus} = 'มีคนเช่า' "
    frmShowReport.TopMost = True
    frmShowReport.Show()
    End Sub

    Private Sub sumexp_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles sumexp_ToolStripMenuItem.Click
        ' สรุปสถานะการจ่ายเงิน
        strPathReport = SelectReport("invstatusrpt")
        strReportFormula = Nothing
        frmShowReport.TopMost = True
        frmShowReport.Show()
    End Sub

    Private Sub summeterused_ToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles summeterused_ToolStripMenuItem.Click
        strFromForm = "001"
        Me.Hide()
        rptmonthyear.Show()
    End Sub
```

```
Private Sub mainmenu_FormClosed(ByVal sender As Object, ByVal e As
System.Windows.Forms.FormClosedEventArgs) Handles Me.FormClosed
    login.Close()
End Sub

Private Sub ExitProgram_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
ExitProgram.Click
  Me.Close()
End Sub

Public Sub ListStatusOfRoom()
    ' Display Status to object Label ----------------------
    SQLcom = " SELECT     Room_No, rmstatus FROM  Room  ORDER BY Room_No"
    xCreateTable = "DisplayStatus"
    '
    If GetDataFromSQLcommand() = True Then
        For Each row As DataRow In ds.Tables(xCreateTable).Rows
            SetColorRoom = row("Room_no").ToString
            strStatus = row("rmstatus").ToString
            SetColorLabel()
        Next
    End If
End Sub

    Private Sub ActiveColor()
    If strStatus = "จองอยู่" Then
        xLB.BackColor = Color.Yellow
        xLB.ForeColor = Color.Black
    End If
    If strStatus = "ว่าง" Then
        xLB.BackColor = Color.Green
        xLB.ForeColor = Color.White
```

```
    End If
    If strStatus = "มีคนเช่า" Then
        xLB.BackColor = Color.Blue
        xLB.ForeColor = Color.White
    End If
End Sub

    Private Sub SetColorLabel()
    Select Case SetColorRoom
        Case "201"
            xLB = Me.lb201
        Case "202"
            xLB = Me.lb202
        Case "203"
            xLB = Me.lb203
        Case "204"
            xLB = Me.lb204
        Case "205"
            xLB = Me.lb205
        Case "206"
            xLB = Me.lb206
        Case "207"
            xLB = Me.lb207
        Case "208"
            xLB = Me.lb208
        Case "209"
            xLB = Me.lb209
        Case "210"
            xLB = Me.lb210
        Case "301"
            xLB = Me.lb301
        Case "302"
```

```
    xLB = Me.lb302
Case "303"
    xLB = Me.lb303
Case "304"
    xLB = Me.lb304
Case "305"
    xLB = Me.lb305
Case "306"
    xLB = Me.lb306
Case "307"
    xLB = Me.lb307
Case "308"
    xLB = Me.lb308
Case "309"
    xLB = Me.lb309
Case "310"
    xLB = Me.lb310
Case "401"
    xLB = Me.lb401
Case "402"
    xLB = Me.lb402
Case "403"
    xLB = Me.lb403
Case "404"
    xLB = Me.lb404
Case "405"
    xLB = Me.lb405
Case "406"
    xLB = Me.lb406
Case "407"
    xLB = Me.lb407
Case "408"
```

```
            xLB = Me.lb408
        Case "409"
            xLB = Me.lb409
        Case "410"
            xLB = Me.lb410
    End Select

            ActiveColor()
End Sub

    Private Sub mainmenu_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles
Me.Load
        ListStatusOfRoom()
    End Sub

    Private Sub Select_DisplayForm()
        If xLB.BackColor = Color.Green Then greenroom.Show()
        If xLB.BackColor = Color.Yellow Then yellowroom2.Show()
        If xLB.BackColor = Color.Blue Then blueroom.Show()
    End Sub

Private Sub lb201_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb201.Click
    xLB = lb201
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb202_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb202.Click
    xLB = lb202
    vrgRoom.RoomNo = xLB.Text
```

```
    Select_DisplayForm()
End Sub

Private Sub lb203_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb203.Click
    xLB = lb203
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb204_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb204.Click
    xLB = lb204
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb205_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb205.Click
    xLB = lb205
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb206_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb206.Click
    xLB = lb206
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub
```

```
Private Sub lb207_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb207.Click
    xLB = lb207
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb208_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb208.Click
    xLB = lb208
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb209_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb209.Click
    xLB = lb209
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb210_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb210.Click
    xLB = lb210
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb301_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb301.Click
    xLB = lb301
    vrgRoom.RoomNo = xLB.Text
```

```
    Select_DisplayForm()
End Sub

Private Sub lb302_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb302.Click
    xLB = lb302
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb303_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb303.Click
    xLB = lb303
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb304_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb304.Click
    xLB = lb304
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb305_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb305.Click
    xLB = lb305
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub
```

```
Private Sub lb306_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb306.Click
    xLB = lb306
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb307_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb307.Click
    xLB = lb307
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb308_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb308.Click
    xLB = lb308
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb309_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb309.Click
    xLB = lb309
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb310_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb310.Click
    xLB = lb310
    vrgRoom.RoomNo = xLB.Text
```

```
    Select_DisplayForm()
End Sub

Private Sub lb401_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb401.Click
    xLB = lb401
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb402_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb402.Click
    xLB = lb402
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb403_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb403.Click
    xLB = lb403
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb404_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb404.Click
    xLB = lb404
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub
```

```
Private Sub lb405_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb405.Click
    xLB = lb405
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb406_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb406.Click
    xLB = lb406
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb407_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb407.Click
    xLB = lb407
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb408_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb408.Click
    xLB = lb408
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub lb409_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb409.Click
    xLB = lb409
    vrgRoom.RoomNo = xLB.Text
```

```
    Select_DisplayForm()
End Sub

Private Sub lb410_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
lb410.Click
    xLB = lb410
    vrgRoom.RoomNo = xLB.Text
    Select_DisplayForm()
End Sub

Private Sub mnuDataRoom_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles mnuDataRoom.Click
        strFromForm = "002"
        Me.Hide()
        rptmonthyear.Show()
End Sub

Private Sub DelTestData_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
DelTestData.Click
        Form1.Show()
    End Sub

Private Sub PicBx_bgmain_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles PicBx_bgmain.Click

End Sub
End Class
```

~~~~~~

Greenroom.vb

```
Public Class greenroom
```
~~~~~~

```
Private Sub greenroom_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load

        SQLcom = " SELECT     Room.Room_No, Room_type.rmfee, Room_type.wpunit,
Room_type.epunit, Room_type.description, Room_type.air"
    SQLcom += " FROM         (Room INNER JOIN Room_type ON Room.Type_ID =
Room_type.Type_ID) "
    SQLcom += " WHERE     Room.Room_No = '" & vrgRoom.RoomNo & "' "
    '
    xCreateTable = "DisplayGreenRoom"

    If GetDataFromSQLcommand() = True Then
        Me.roomno.Text = ds.Tables(xCreateTable).Rows(0).Item("Room_No").ToString
            Me.lbr1.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("rmfee"), "Standard")
        Me.lbr2.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("wpunit"), "Standard")
        Me.lbr3.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("epunit"), "Standard")
        Me.description.Text = ds.Tables(xCreateTable).Rows(0).Item("description").ToString & "  " &
ds.Tables(xCreateTable).Rows(0).Item("Air").ToString
    End If
End Sub

Private Sub btExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
btExit.Click
        Me.Close()
End Sub
End Class
```

~~~~~~

blueroom.vb

```
Public Class blueroom

    Private Sub blueroom_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
```
~~~~~~

```
    Try
        '
        SQLcom = " SELECT     Room_Rent.Room_No, Room_Rent.Rent_ID, Customer.Cus_ID,
Customer.name, Customer.lastname, Customer.idcardno, Customer.tel, Customer.Cimage, "
        SQLcom += " Room_Rent.chkin, Room_Rent.rstatus FROM (Room_Rent INNER JOIN
Customer ON Room_Rent.Cus_ID = Customer.Cus_ID) "
        SQLcom += " WHERE     Room_Rent.Room_No = '" & vrgRoom.RoomNo & "'  AND
Room_Rent.rstatus = 'มีคนเช่า' "
        '
        xCreateTable = "SearchRoomType"

        If GetDataFromSQLcommand() = True Then
            '
            Me.roomno.Text = ds.Tables(xCreateTable).Rows(0).Item("Room_No").ToString
            Me.rentno.Text = "RT-" & Format(ds.Tables(xCreateTable).Rows(0).Item("Rent_ID"), "000")
' สัญญาเช่าเลขที่
            ' แสดงเลขที่สมาชิก
            vrgCustomer.CusID = ds.Tables(xCreateTable).Rows(0).Item("Cus_ID")
            Me.cid.Text = "C-" & Format(vrgCustomer.CusID, "000")   ' กำหนดรูปแบบการแสดงผล

            Me.txName.Text = ds.Tables(xCreateTable).Rows(0).Item("name").ToString
            Me.txSurName.Text = ds.Tables(xCreateTable).Rows(0).Item("lastname").ToString
            Me.mskIDCardNo.Text = ds.Tables(xCreateTable).Rows(0).Item("idcardno").ToString
            Me.txTel.Text = ds.Tables(xCreateTable).Rows(0).Item("tel").ToString
            Me.chkindate.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("chkin").ToString, "Long
Date")
            '
            strPathImage = ds.Tables(xCreateTable).Rows(0).Item("Cimage").ToString
            PictureBox1.ImageLocation = strPathImage    ' Display Image From Database
            '
        End If
```

```
    Catch ex As Exception
            strPathImage = Nothing
            PictureBox1.ImageLocation = strPathImage    ' Display Image From Database
    End Try
End Sub

    Private Sub btExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
btExit.Click
        Me.Close()
End Sub

Private Sub _CurrentData()
    With vrgCustomer
        '.CusID = cid.Text    ' เลขประจำตัวผู้เช่า
        .Name = txName.Text
        .LastName = Me.txSurName.Text
        .idCardNo = mskIDCardNo.Text
        .Address = Nothing
        .Tel = txTel.Text
        .CImage = strPathImage
    End With
End Sub

Private Sub btEditData_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
btEditData.Click

    If MsgBox("กรุณายืนยันการเปลี่ยนแปลงข้อมูล..!", MsgBoxStyle.Question + 4) = MsgBoxResult.No
Then Exit Sub
    '
    _CurrentData()    ' ทำหน้าที่ส่งค่าให้กับตัวแปร และหากมีเงื่อนไขการบันทึกข้อมูลของตัวแปรแต่ละตัว
    UpdateDataTable(xTableName.Customer)
    MsgBox("การแก้ไขข้อมูล เสร็จสมบูรณ์", MsgBoxStyle.Information)
```

```
End Sub
End Class
```

~~~~~~

yellowroom.vb

```
Public Class yellowroom2

Private Sub yellowroom2_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load

    SQLcom = "   SELECT  Reservation.Room_No, Reservation.Rsv_No, Reservation.name,
Reservation.lastname, Reservation.idcardno, Reservation.tel, "
    SQLcom += " reservation.rsvdeposit, reservation.RsvDate, reservation.chkin"
    SQLcom += " FROM      (Reservation INNER JOIN Room ON Reservation.Room_No =
Room.Room_No) "
    SQLcom += " WHERE   Reservation.rsvStatus = 'จองอยู่'  AND  Reservation.Room_No = '" &
vrgRoom.RoomNo & "' "
    '
    xCreateTable = "SearchRoomYellow"

    If GetDataFromSQLcommand() = True Then
        Me.roomno.Text = ds.Tables(xCreateTable).Rows(0).Item("Room_No").ToString
        Me.rsvno.Text = "RSV-" & Format(ds.Tables(xCreateTable).Rows(0).Item("Rsv_No"), "000")
' สัญญาเช่าเลขที่
        Me.cname.Text = ds.Tables(xCreateTable).Rows(0).Item("name").ToString
        Me.sname.Text = ds.Tables(xCreateTable).Rows(0).Item("lastname").ToString
        Me.idcard.Text = ds.Tables(xCreateTable).Rows(0).Item("idcardno").ToString
        Me.tel.Text = ds.Tables(xCreateTable).Rows(0).Item("Tel").ToString
        Me.rsvdep.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("rsvdeposit"), "Standard")
        Me.rsvdate.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("RsvDate").ToString, "Long
Date")
        Me.chkindate.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("chkin").ToString, "Long
Date")
```
~~~~~~

```
    End If
End Sub

Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
End Sub

Private Sub btCancel_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
btCancel.Click

    If MsgBox("กรุณายืนยันการยกเลิกการจองห้องอีกครั้ง..!", MsgBoxStyle.Question + 4) =
MsgBoxResult.Cancel Then Exit Sub
    '
    SQLcom = " UPDATE   Reservation  SET rsvstatus = 'ยกเลิกการจอง' "
    SQLcom += " WHERE    Reservation.rsvstatus = 'จองอยู่'  AND  Reservation.Room_No = '" &
Me.roomno.Text & "' "
    CommandAction()
    SQLcom = " UPDATE   Room  SET rmstatus = 'ว่าง' "
    SQLcom += " WHERE   Room_No = '" & Me.roomno.Text & "' "
    CommandAction()
    Call mainmenu.ListStatusOfRoom()  ' Change Status Picture Room
    '
    Me.Close()
    mainmenu.Show()
End Sub
End Class
```

~~~~~~

Reservation.vb

```
Public Class reservation

    Dim lngRsvNo As Long
```
~~~~~~

```
    Dim _sMode As Byte  ' สำหรับบอกสถานะการบันทึกข้อมูล ว่าอยู่ในโหมดไหน

Private Sub _CurrentData()
        ' Procedure นี้ ทำไว้สำหรับให้ตัวแปรที่เป็นตัวแทนของฟิลด์ต่างๆ ในตาราง Reservation
    ' มีค่าเท่ากับคอนโทรลตัวไหนที่อยู่ในฟอร์มนี้
    vrgReservation.RsvNo = lngRsvNo
    vrgReservation.RoomNo = Me.cb_roomno.Text
    vrgReservation.Name = Me.tx_name.Text
    vrgReservation.LastName = Me.tx_sname.Text
    vrgReservation.idCardNo = Me.mt1.Text
    vrgReservation.Tel = tx_tel.Text
    vrgReservation.rsvdeposit = Me.tx_deposit.Text
    vrgReservation.CheckIn = "#" & ConvDate(Me.dtp) & "#"     ' วันที่จะเข้าพัก
    vrgReservation.RsvDate = "#" & ConvDate(Me.Dtp1) & "#"     ' วันที่จองห้อง
    vrgReservation.rsvStatus = "จองอยู่"
End Sub

    Private Sub reservation_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load

    _sMode = cmdStatus.NewMode    ' จะต้องกำหนดเป็น NewMode ทุกครั้งที่เปิดฟอร์มขึ้น
    Dtp1.Value = Date.Today      ' Display Current Date
    ResetCombo()
    lngRsvNo = GetMaxNumber("Reservation", "Rsv_No") + 1    ' เรียกเลขที่จองล่าสุด แล้วเพิ่มลำดับเข้า
ไปอีก 1
    Me.lb_rsvno.Text = "rsv-" & Format(lngRsvNo, "000")           ' Display Running Number

    End Sub

Private Sub ResetCombo()
    xCreateTable = "LoadRoomReservation"
```

```
    SQLcom = " SELECT  Room_No FROM Room  WHERE rmstatus = 'ว่าง'  GROUP BY Room_No
ORDER BY Room_No "
    GetDataToComboBox(Me.cb_roomno)
End Sub

    Private Sub reset_control()
        dtp.Value = Date.Today
    End Sub

   Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
        mainmenu.Show()
    End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click
        If MsgBox("ยืนยันการบันทึกข้อมูล", MsgBoxStyle.Question + MsgBoxStyle.OkCancel) =
MsgBoxResult.Cancel Then Exit Sub
        _CurrentData()    ' ส่งค่าให้กับตัวแปรก่อน
    If _sMode = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.Reservation)  ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode = cmdStatus.EditMode   ' หลังจากการบันทึกข้อมูลใหม่ลงไปแล้ว ให้เปลี่ยนโหมดเป็น
EditMod
    ElseIf _sMode = cmdStatus.EditMode Then          ' ถ้าเป็น EditMode จะถือเป็นการแก้ไขข้อมูล
        UpdateDataTable(xTableName.Reservation)
    End If
    ChangeStatus_Room(vrgReservation.RoomNo, vrgReservation.rsvStatus)     ' เปลี่ยนแปลงสถานะห้อง
เช่า
    Call mainmenu.ListStatusOfRoom()
End Sub
```

```vb
Private Sub bt_print_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_print.Click
        strPathReport = SelectReport("reserve")
        strReportFormula = "{Query7.Rsv_No} = " & vrgReservation.RsvNo
        frmShowReport.TopMost = True
        frmShowReport.Show()
End Sub

Private Sub Label5_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
Label5.Click
        ResetCombo()
End Sub
End Class
```

~~~~~~

Rentinfo.vb

```vb
Public Class rentinfo
    Dim _sMode As Byte  ' สำหรับบอกสถานะการบันทึกข้อมูล Customer ว่าอยู่ในโหมดไหน
    Dim _sModeRoomRent As Byte  ' สำหรับบอกสถานะการบันทึกข้อมูล RoomRent ว่าอยู่ในโหมดไหน

Private Sub _CurrentDataCustomer()
    vrgCustomer.Name = Me.tx1.Text
    vrgCustomer.LastName = Me.tx2.Text
    vrgCustomer.idCardNo = Me.mskIDCardNo.Text
    vrgCustomer.Address = Me.tx3.Text
    vrgCustomer.Tel = Me.tx4.Text
    vrgCustomer.CImage = strPathImage
End Sub

Private Sub _CurrentDataRoomRent()
    vrgRoomRent.Cus_ID = vrgCustomer.CusID
    vrgRoomRent.Room_no = cbx.Text
```
~~~~~~

```
    vrgRoomRent.CheckIn = "#" & ConvDate(Me.dpt) & "#"
    vrgRoomRent.CheckOut = "Null"
    vrgRoomRent.rStatus = "มีคนเช่า"
    vrgRoomRent.rDeposit = CLng(tx6.Text)
    vrgRoomRent.Duration = CLng(tx5.Text)     ' ระยะเวลาการทำสัญญา
End Sub

    Private Sub rentinfo_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles Me.Load
        dpt.Value = Date.Today
        '
        _sMode = cmdStatus.NewMode
        _sModeRoomRent = cmdStatus.NewMode
        '
        strPathImage = Nothing

    ' { โหลดหมายเลขห้องพัก เฉพาะที่มีสถานะ -- ว่าง -- เท่านั้น
    xCreateTable = "Load2CBX"
    SQLcom = " SELECT  Room_No FROM Room  WHERE rmstatus = 'ว่าง' "
    SQLcom += " or rmstatus = 'จองอยู่' "
    SQLcom += " GROUP BY Room_No ORDER BY Room_No "
    GetDataToComboBox(Me.cbx)
    vrgCustomer.CusID = GetMaxNumber("Customer", "Cus_ID") + 1
    Me.lb2.Text = "C-" & Format(vrgCustomer.CusID, "000")
    vrgRoomRent.Rent_ID = GetMaxNumber("Room_Rent", "Rent_ID") + 1
    Me.lb1.Text = "RT-" & Format(vrgRoomRent.Rent_ID, "000")
    '
    End Sub

    Private Sub btExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
btExit.Click
        Me.Close()
        mainmenu.Show()
```

```
    End Sub

    Private Sub bt_addpic_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_addpic.Click
        With OpenFileDialog1
            .FileName = ""
            .Filter = "JPEG|*.jpg|Gif|*.gif"
            .ShowDialog()
            strpathimage = OpenFileDialog1.FileName
            pbx_cus.ImageLocation = strpathimage
        End With
    End Sub

    Private Sub bt_deletepic_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles bt_deletepic.Click
        strpathimage = ""
        pbx_cus.ImageLocation = strpathimage
    End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click
        If Me.cbx.Text = "" Or tx1.Text = "" Then Exit Sub
        If MsgBox("ยืนยันการบันทึกข้อมูล", MsgBoxStyle.Question + MsgBoxStyle.OkCancel) =
MsgBoxResult.Cancel Then Exit Sub
        Save_Data_Customer()    ' บันทึกข้อมูลลูกค้า
    Save_Data_RoomRent()  ' บันทึกข้อมูลการเช่าห้อง
    ' เปลี่ยนสถานะห้องเช่า ให้เป็นคำว่า "มีคนเช่า"
        ChangeStatus_Room(vrgRoomRent.Room_no, vrgRoomRent.rStatus)
    Call mainmenu.ListStatusOfRoom()  ' Change Status Picture Room
End Sub

Private Sub Save_Data_Customer()
```

```
    _CurrentDataCustomer()
    If _sMode = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.Customer) ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode = cmdStatus.EditMode  ' หลังจากบันทึกข้อมูลใหม่แล้ว ให้เปลี่ยนเป็น EditMode

    ElseIf _sMode = cmdStatus.EditMode Then
        UpdateDataTable(xTableName.Customer)
    End If
End Sub

Private Sub Save_Data_RoomRent()
    _CurrentDataRoomRent()
    If _sModeRoomRent = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.RoomRent) ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sModeRoomRent = cmdStatus.EditMode  ' หลังจากบันทึกข้อมูลใหม่แล้ว ให้เปลี่ยนเป็น EditMode

    ElseIf _sModeRoomRent = cmdStatus.EditMode Then
        UpdateDataTable(xTableName.RoomRent)
    End If
End Sub

Private Sub Label12_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
Label12.Click
        MsgBox(ConvDate(Me.dpt))
End Sub

Private Sub cbx_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles cbx.SelectedIndexChanged
    DisplayRoomType() 'แสดงข้อมูลอัตราค่าบริการแต่ละห้อง
    DisplayReservation()  'แสดงข้อมูลผู้ที่จองห้อง
End Sub
```

```
Private Sub DisplayRoomType()
    ' Reset Control
        Me.lbr1.Text = "0.00"
        Me.lbr2.Text = "0.00"
        Me.lbr3.Text = "0.00"
        SQLcom = " SELECT     Room.Room_No, Room_type.rmfee, Room_type.wpunit,
Room_type.epunit, Room_type.description, Room_type.air"
    SQLcom += " FROM        (Room INNER JOIN Room_type ON Room.Type_ID =
Room_type.Type_ID) "
    SQLcom += " WHERE     Room.Room_No = '" & cbx.Text & "' "
    xCreateTable = "DisplayGreenRoom"

    If GetDataFromSQLcommand() = True Then
            Me.lbr1.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("rmfee"), "Standard")
        Me.lbr2.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("wpunit"), "Standard")
        Me.lbr3.Text = Format(ds.Tables(xCreateTable).Rows(0).Item("epunit"), "Standard")
    End If
End Sub

Private Sub DisplayReservation()
    ' Reset Control แสดงข้อมูลผู้จองห้อง
    tx1.Text = "" : tx2.Text = ""
    mskIDCardNo.Text = ""
    tx3.Text = "" : tx4.Text = ""
    tx5.Text = "0" : tx6.Text = "0"
    SQLcom = " SELECT * From  Reservation Where Room_no ='" & Me.cbx.Text & "' And rsvStatus
='จองอยู่' "
    xCreateTable = "DisplayGreenRoom"
    If GetDataFromSQLcommand() = True Then
        Me.tx1.Text = ds.Tables(xCreateTable).Rows(0).Item("name").ToString
        Me.tx2.Text = ds.Tables(xCreateTable).Rows(0).Item("lastname").ToString
        Me.mskIDCardNo.Text = ds.Tables(xCreateTable).Rows(0).Item("idcardno").ToString
```

```
        Me.tx4.Text = ds.Tables(xCreateTable).Rows(0).Item("tel").ToString
    End If
End Sub

Private Sub Label8_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
Label8.Click
        mskIDCardNo.Text = ""
End Sub

Private Sub bt_print_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_print.Click
    strPathReport = SelectReport("Contract")
    strReportFormula = "{Command1.Rent_ID} = " & vrgRoomRent.Rent_ID
    frmShowReport.TopMost = True
    frmShowReport.Show()
End Sub
End Class
```

~~~~~~

Invoice.vb

```
Public Class invoice
    Dim _sMode As Byte
    Dim _sMode2 As Byte
Private Sub invoice_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
    dtpUdate.Value = Date.Today
    _sMode = 0
    _sMode2 = 0

    vrgInvoice.InvNo = GetMaxNumber("Invoice", "Inv_no") + 1
    Me.lb_invno.Text = "Inv-" & Format(vrgInvoice.InvNo, "000")
```
~~~~~~

```
    ' { โหลดหมายเลขห้องพัก เฉพาะที่มีสถานะ -- มีคนเช่า -- เท่านั้น
    xCreateTable = "LoadRoomInvoice"
    SQLcom = " SELECT  Room_No FROM Room  WHERE rmstatus = 'มีคนเช่า'  GROUP BY
Room_No ORDER BY Room_No "
    GetDataToComboBox(Me.cb_roomno)
End Sub

Private Sub _CurrentDataInvoice()
    With vrgInvoice
        '.RentID = 0
        .InvDate = "#" & ConvDate(Me.dtpUdate) & "#"
        .Total = Me.tx_total.Text
            .InvStatus = "ค้างจ่าย"
        .Comment = tx_cm.Text
    End With
End Sub

Private Sub _CurrentDataUtil()
    With vrgUtilities
        .Util_ID = 1
        .Invno = vrgInvoice.InvNo
        .uDate = "#" & ConvDate(Me.dtpUdate) & "#"
        .wStart = Me.tx_ws.Text
        .eStart = Me.tx_es.Text
        .wtEnd = Me.tx_we.Text
        .eEnd = Me.tx_ee.Text
        .wUsed = tx_wused.Text
        .eUsed = tx_eused.Text
        .wFee = tx_wfee.Text
        .eFee = tx_efee.Text
        .TelFee = tx_telfee.Text
        .Damages = tx_mfee.Text
```

```
        .Total = tx_total.Text
    End With
End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click
        If MsgBox("ยืนยันการบันทึกข้อมูล", MsgBoxStyle.Question + MsgBoxStyle.OkCancel) =
MsgBoxResult.Cancel Then Exit Sub
        Save_Invoice()
    Save_Utilities()
End Sub

Private Sub Save_Invoice()
 ' ปุ่มบันทึกข้อมูล
      _CurrentDataInvoice()    ' ส่งค่าให้กับตัวแปรก่อน
    If _sMode = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.Invoice) ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode = cmdStatus.EditMode   ' หลังจากการบันทึกข้อมูลใหม่ลงไปแล้ว ให้เปลี่ยนโหมดเป็น
EditMod
    ElseIf _sMode = cmdStatus.EditMode Then          ' ถ้าเป็น EditMode จะถือเป็นการแก้ไขข้อมูล
        UpdateDataTable(xTableName.Invoice)
    End If
End Sub

Private Sub Save_Utilities()
 ' ปุ่มบันทึกข้อมูล
      _CurrentDataUtil()    ' ส่งค่าให้กับตัวแปรก่อน
    If _sMode2 = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.Utilities) ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode2 = cmdStatus.EditMode   ' หลังจากการบันทึกข้อมูลใหม่ลงไปแล้ว ให้เปลี่ยนโหมดเป็น
EditMod
    ElseIf _sMode2 = cmdStatus.EditMode Then          ' ถ้าเป็น EditMode จะถือเป็นการแก้ไขข้อมูล
```

```
        UpdateDataTable(xTableName.Utilities)
    End If
End Sub

Private Sub LoadDataRoomType()
    ' แสดงข้อมูลอัตราค่าน้ำค่าไฟ/หน่วย ของแต่ละห้อง ตามรหัสประเภทที่กำหนดไว้
    '~~
        Me.tx_wup.Text = "0"
        Me.tx_eup.Text = "0"
    SQLcom = "SELECT Room_type.wpunit, Room_type.epunit, Room_type.rmfee,
Room_type.monthfee, Room.Room_No"
    SQLcom += " FROM (Room INNER JOIN"
    SQLcom += " Room_type ON Room.Type_ID = Room_type.Type_ID)"
    SQLcom += " WHERE (Room.Room_No = '" & cb_roomno.Text & "')"

    xCreateTable = "DataRoomType"

    If GetDataFromSQLcommand() = True Then
        Me.tx_wup.Text = ds.Tables(xCreateTable).Rows(0).Item("wpunit").ToString
        Me.tx_eup.Text = ds.Tables(xCreateTable).Rows(0).Item("epunit").ToString
        Me.tx_rmfee.Text = ds.Tables(xCreateTable).Rows(0).Item("rmfee").ToString
        Me.tx_mfee.Text = ds.Tables(xCreateTable).Rows(0).Item("monthfee").ToString
    End If
End Sub

Private Sub Show_CustomerName()
    ' แสดงชื่อผู้ทำสัญญาเช่า หลังกดเลือกห้อง
        Me.lb_name.Text = "xxx"
        Me.lb_surname.Text = "xxx"
    SQLcom = " SELECT     Room_Rent.Room_No, Customer.name, Customer.lastname,
Room_Rent.Rent_ID  "
```

```
    SQLcom += " FROM        (Room_Rent INNER JOIN Customer ON Room_Rent.Cus_ID =
Customer.Cus_ID)  "
    SQLcom += " WHERE     (Room_Rent.Room_No = '" & Me.cb_roomno.Text & "')"

    xCreateTable = "ShowCustomer"

    If GetDataFromSQLcommand() = True Then
        Me.lb_name.Text = ds.Tables(xCreateTable).Rows(0).Item("Name").ToString
        Me.lb_surname.Text = ds.Tables(xCreateTable).Rows(0).Item("Lastname").ToString
        vrgInvoice.RentID = ds.Tables(xCreateTable).Rows(0).Item("Rent_ID")
    End If
End Sub

Private Sub ShowLastWE()
    ' แสดงจำนวนการใช้ น้ำ ไฟ ครั้งล่าสุดของห้องนั้น
SQLcom = " SELECT     TOP 1 Room_Rent.Room_No, Invoice.Inv_no, Invoice.invdate, Utilities.wend,
Utilities.eend , Invoice.invstatus"
SQLcom += " FROM        ((Invoice INNER JOIN Utilities ON Invoice.Inv_no = Utilities.InvNo) INNER
JOIN Room_Rent ON Invoice.Rent_ID = Room_Rent.Rent_ID) "
SQLcom += " WHERE Room_Rent.Room_No = '" & Me.cb_roomno.Text & "' And  Invoice.invstatus =
'จ่ายแล้ว' "
SQLcom += "  ORDER BY Invoice.invdate DESC "
    xCreateTable = "SLWE"
    If GetDataFromSQLcommand() = True Then
        Me.tx_ws.Text = ds.Tables(xCreateTable).Rows(0).Item("wend").ToString
        Me.tx_es.Text = ds.Tables(xCreateTable).Rows(0).Item("eend").ToString
    End If
End Sub

Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
    Me.Close()
```

```
    mainmenu.Show()
End Sub

Private Sub cb_roomno_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles cb_roomno.SelectedIndexChanged
    If Me.cb_roomno.Text = "" Then Exit Sub
    LoadDataRoomType()
    Show_CustomerName()
    ShowLastWE() 'แสดงจำนวนการใช้ น้ำ ไฟ ครั้งล่าสุดของห้องนั้น
End Sub

Private Sub tx_we_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_we.TextChanged, tx_ws.TextChanged
    On Error GoTo OP
    Me.tx_wused.Text = CLng(tx_we.Text) - CLng(tx_ws.Text)
OP:
End Sub

Private Sub tx_ee_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_ee.TextChanged, tx_es.TextChanged
    On Error GoTo OP
    Me.tx_eused.Text = CLng(tx_ee.Text) - CLng(tx_es.Text)
OP:
End Sub

Private Sub tx_wused_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_wused.TextChanged
    On Error GoTo OP
    Me.tx_wfee.Text = CLng(tx_wused.Text) * CLng(tx_wup.Text)
OP:
End Sub
```

```
Private Sub tx_eused_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_eused.TextChanged
    On Error GoTo OP
    Me.tx_efee.Text = CLng(tx_eused.Text) * CLng(tx_eup.Text)
OP:
End Sub

Private Sub bt_total_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_total.Click
    tx_total.Text = Format(CLng(tx_wfee.Text) + CLng(tx_efee.Text) + CLng(tx_telfee.Text) _
    + CLng(tx_rmfee.Text) + CLng(tx_mfee.Text), "#,##0")
End Sub

Private Sub bt_print_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_print.Click
    strPathReport = SelectReport("invform")
    strReportFormula = "{Query3.Inv_No} = " & vrgInvoice.InvNo
    frmShowReport.TopMost = True
    frmShowReport.Show()
End Sub
End Class
```

~~~~~~

Receipt.vb

```
Public Class reciept

    Dim _sMode As Byte
    Dim lngInvoiceNo As Long 'เก็บค่าเลขที่ใบแจ้งหนี้ หลังการเลือกข้อมูลในคอมโบ

Private Sub ResetAllControl()
    tx_ws.Text = "0"
    tx_we.Text = "0"
    tx_wmcount.Text = "0"
```
~~~~~~

```
    tx_wup.Text = "0"
    tx_waterfee.Text = "0"
    tx_es.Text = "0"
    tx_ee.Text = "0"
    tx_emcount.Text = "0"
    tx_eup.Text = "0"
    tx_elecfee.Text = "0"
    tx_telfee.Text = "0"
    tx_rentfee.Text = "0"
    tx_monthfee.Text = "0"
    tx_total.Text = "0"
    tx_countdate.Text = "0"
    'tx_daylate.Text = "0"
    tx_latefee.Text = "0"
    tx_totalwithlate.Text = "0"
End Sub

Private Sub _CurrentData()
    With vrgReceipt
        '.Inv_No = 1        ' อ้างถึงใบแจ้งหนี้เลขที่...
        .rcDate = "#" & ConvDate(Me.dtpRCDate) & "#"
        .Total = CLng(Me.tx_rentfee.Text)
        .Late_fee = CLng(tx_latefee.Text)
        .Total2 = CLng(tx_totalwithlate.Text)
        .Comment = Me.tx_comment.Text

    End With
End Sub

Private Sub Load_RcNo()
        vrgReceipt.Rc_No = GetMaxNumber("Receipt", "Rc_No") + 1
        Me.lb_rcno.Text = "RC-" & Format(vrgReceipt.Rc_No, "000")
```

```
End Sub

Private Sub ShowDetailOfRoom()
        Me.tx_name.Text = "0"
        Me.tx_surname.Text = "0"
        Me.tx_wup.Text = "0"
        Me.tx_eup.Text = "0"
        Me.tx_monthfee.Text = "0"
    ' แสดงรายละอียดเมื่อคลิกเลือกห้อง
    SQLcom = "SELECT     Room_Rent.Room_No, Customer.name, Customer.lastname,
Room_type.wpunit, Room_type.epunit, Room_type.rmfee, Room_type.monthfee, "
    SQLcom += " Room_Rent.rstatus "
    SQLcom += " FROM         (((Room_Rent INNER JOIN"
    SQLcom += " Customer ON Room_Rent.Cus_ID = Customer.Cus_ID) INNER JOIN"
    SQLcom += " Room ON Room_Rent.Room_No = Room.Room_No) INNER JOIN"

    SQLcom += " Room_type ON Room.Type_ID = Room_type.Type_ID)"
    SQLcom += " WHERE     Room_Rent.Room_No = '" & Me.ComboBox1.Text & "' AND
Room_Rent.rstatus = 'มีคนเช่า'"
    xCreateTable = "SearchX"
    If GetDataFromSQLcommand() = True Then
        Me.tx_name.Text = ds.Tables(xCreateTable).Rows(0).Item("name").ToString
        Me.tx_surname.Text = ds.Tables(xCreateTable).Rows(0).Item("lastname").ToString
        Me.tx_wup.Text = ds.Tables(xCreateTable).Rows(0).Item("wpunit").ToString
        Me.tx_eup.Text = ds.Tables(xCreateTable).Rows(0).Item("epunit").ToString
        Me.tx_monthfee.Text = ds.Tables(xCreateTable).Rows(0).Item("monthfee").ToString
        Me.tx_rentfee.Text = ds.Tables(xCreateTable).Rows(0).Item("rmfee").ToString
    End If
End Sub

Private Sub ShowDataInvoice()
    ' แสดงข้อมูลจากใบแจ้งหนี้
```

```
    SQLcom = "    SELECT    Invoice.Inv_no, Room_Rent.Room_No, Utilities.wstart, Utilities.wend,
Utilities.estart, Utilities.eend, Utilities.telfee, Invoice.invstatus,  Invoice.total"
    SQLcom += "   FROM       ((Invoice INNER JOIN Utilities ON Invoice.Inv_no = Utilities.InvNo)
INNER JOIN Room_Rent ON Invoice.Rent_ID = Room_Rent.Rent_ID)"
    SQLcom += "   WHERE    Invoice.invstatus = 'ค้างจ่าย'  AND Room_Rent.Room_No = '" &
Me.ComboBox1.Text & "' "
    xCreateTable = "ShowDataInvoice"
    If GetDataFromSQLcommand() = True Then
        'lngInvoiceNo = ds.Tables(xCreateTable).Rows(0).Item("Inv_no")       ' หมายเลขเอกสารที่อ้างถึง
        vrgReceipt.Inv_No = ds.Tables(xCreateTable).Rows(0).Item("Inv_no")       ' หมายเลขเอกสารที่อ้าง
ถึง
        Me.tx_ws.Text = ds.Tables(xCreateTable).Rows(0).Item("wstart").ToString       ' น้ำเริ่ม
        Me.tx_we.Text = ds.Tables(xCreateTable).Rows(0).Item("wend").ToString
        Me.tx_es.Text = ds.Tables(xCreateTable).Rows(0).Item("estart").ToString       ' ไฟเริ่ม
        Me.tx_ee.Text = ds.Tables(xCreateTable).Rows(0).Item("eend").ToString
        Me.tx_telfee.Text = ds.Tables(xCreateTable).Rows(0).Item("telfee").ToString     ' ค่าโทรศัพท์
        Me.tx_total.Text = ds.Tables(xCreateTable).Rows(0).Item("total").ToString     ' รวมยอดจากใบแจ้ง
หนี้
    End If
End Sub

Private Sub CheckLaste()
    ' ตรวจสอบการชำระล่าช้า
    If dtpRCDate.Value.Day < 6 Then Me.tx_countdate.Text = "0"
    If dtpRCDate.Value.Day > 5 Then Me.tx_countdate.Text = CByte(dtpRCDate.Value.Day) - 5

End Sub

Private Sub reciept_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
        CheckLaste()
        Me.dtpRCDate.Value = Date.Today
```

```
        Load_RcNo()      ' แสดงเลขที่ใบเสร็จล่าสุด
        xCreateTable = "LoadRoomReceipt"
        SQLcom = "SELECT Room_No  FROM Room  Where  rmstatus = 'มีคนเช่า'  ORDER BY
Room_No "
        GetDataToComboBox(Me.ComboBox1)
End Sub

Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
        mainmenu.Show()
End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click

        If MsgBox("ยืนยันการบันทึกข้อมูล", MsgBoxStyle.Question + MsgBoxStyle.OkCancel) =
MsgBoxResult.Cancel Then Exit Sub

        _CurrentData()    ' ส่งค่าให้กับตัวแปรก่อน
    '
    If _sMode = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.Receipt)  ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode = cmdStatus.EditMode   ' หลังจากการบันทึกข้อมูลใหม่ลงไปแล้ว ให้เปลี่ยนโหมดเป็น
EditMod
        '
        ' เปลี่ยนสถานะใบเสร็จ ให้เป็นจ่ายแล้ว
            SQLcom = " Update invoice SET invstatus = 'จ่ายแล้ว'  WHERE  invoice.Inv_no =" &
vrgReceipt.Inv_No
        CommandAction()
    '
    ElseIf _sMode = cmdStatus.EditMode Then          ' ถ้าเป็น EditMode จะถือเป็นการแก้ไขข้อมูล
```

```
        UpdateDataTable(xTableName.Receipt)
    End If
    '
End Sub

Private Sub ComboBox1_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles ComboBox1.SelectedIndexChanged

        On Error Resume Next
        If Me.ComboBox1.Text.Trim = "" Then Exit Sub
        lngInvoiceNo = 0     ' reset variable
        ResetAllControl()

        ShowDetailOfRoom()   ' แสดงอัตราค่าบริการต่างๆ
        ShowDataInvoice()    ' แสดงข้อมูลจากใบแจ้งหนี้
        CheckLaste()

End Sub

    Private Sub bt_total_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_total.Click
        ' คำนวณผลรวมทั้งหมด
        'Dim lngSum As Long = CLng(tx_waterfee.Text) + CLng(tx_elecfee.Text) + CLng(tx_telfee.Text) +
CLng(tx_rentfee.Text) _
        '                           + CLng(tx_monthfee.Text) + CLng(tx_total.Text) + CLng(tx_latefee.Text)
        'Me.tx_totalwithlate.Text = Format(lngSum, "Standard")

        ' คำนวณผลรวมทั้งหมด
        Dim lngSum As Long = CLng(tx_total.Text) + CLng(tx_latefee.Text)
        Me.tx_totalwithlate.Text = Format(lngSum, "Standard")
```

```
    End Sub

Private Sub tx_countdate_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_countdate.TextChanged, tx_daylate.TextChanged
    Try
        ' ประมวลเรื่องค่าปรับ
        Me.tx_latefee.Text = CLng(tx_countdate.Text) * CLng(tx_daylate.Text)

    Catch ex As Exception
        Me.tx_latefee.Text = "0"
    End Try
End Sub

    Private Sub tx_wmcount_TextChanged(ByVal sender As Object, ByVal e As System.EventArgs)
Handles tx_wmcount.TextChanged, tx_wup.TextChanged

        Try     ' คำนวณค่าน้ำ
            Me.tx_waterfee.Text = CLng(tx_wmcount.Text) * CLng(tx_wup.Text)
        Catch ex As Exception
            Me.tx_waterfee.Text = "0"
        End Try
    End Sub

Private Sub tx_emcount_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_emcount.TextChanged, tx_eup.TextChanged
        Try     ' คำนวณค่าไฟ
            Me.tx_elecfee.Text = CLng(tx_emcount.Text) * CLng(tx_eup.Text)
        Catch ex As Exception
            Me.tx_elecfee.Text = "0"
        End Try
End Sub
```

```
Private Sub bt_print_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_print.Click

    strPathReport = SelectReport("receiptform")
    strReportFormula = "{Query5.Rc_No} = " & vrgReceipt.Rc_No
    frmShowReport.TopMost = True
    frmShowReport.Show()
End Sub

Private Sub tx_ws_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_ws.TextChanged, tx_we.TextChanged
    On Error GoTo PW
    ' คำนวณในส่วนของน้ำ
    tx_wmcount.Text = CLng(tx_we.Text) - CLng(tx_ws.Text)
    tx_waterfee.Text = CLng(tx_wmcount.Text) * CLng(tx_wup.Text)
    SumFor_txtotal()
PW:
End Sub

Private Sub tx_es_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles tx_es.TextChanged, tx_ee.TextChanged
    On Error GoTo PW
    ' คำนวณในส่วนของไฟ
    tx_emcount.Text = CLng(tx_ee.Text) - CLng(tx_es.Text)
    tx_elecfee.Text = CLng(tx_emcount.Text) * CLng(tx_eup.Text)
    SumFor_txtotal()
PW:
End Sub

Private Sub SumFor_txtotal()
    On Error Resume Next
```

```
    tx_total.Text = CLng(tx_waterfee.Text) + CLng(tx_elecfee.Text) + CLng(tx_telfee.Text) +
CLng(tx_rentfee.Text) + CLng(tx_monthfee.Text)
End Sub

    Private Sub dtpRCDate_ChangeUICues(ByVal sender As Object, ByVal e As
System.Windows.Forms.UICuesEventArgs) Handles dtpRCDate.ChangeUICues
    End Sub

Private Sub dtpRCDate_ValueChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles dtpRCDate.ValueChanged
        CheckLaste()
End Sub
End Class
```

~~~~~~

Rptmonthyear.vb

```
Public Class rptmonthyear

Private Sub bt_report_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_report.Click

Select Case strFromForm
    Case "001"      ' กดเมนู สรุปรายรับ จากฟอร์ม Mainmenu
        strPathReport = SelectReport("revenue")
        strReportFormula = "{Query9.vMonth} = " & cbMonth.Text & " And  {Query9.vYear} = " &
cbYear.Text
        '
    Case "002"      ' กดเมนู สรุปการใช้น้ำไฟ จากฟอร์ม Mainmenu
        strPathReport = SelectReport("meterused")
        strReportFormula = "{Query4.vMonth} = " & cbMonth.Text & " And  {Query4.vYear} = " &
cbYear.Text
    End Select
    '
```
~~~~~~

```
        frmShowReport.TopMost = True
        frmShowReport.Show()
End Sub

Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
        mainmenu.Show()
End Sub

Private Sub rptmonthyear_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load
        With cbMonth
            .Items.Add("1")
            .Items.Add("2")
            .Items.Add("3")
            .Items.Add("4")
            .Items.Add("5")
            .Items.Add("6")
            .Items.Add("7")
            .Items.Add("8")
            .Items.Add("9")
            .Items.Add("10")
            .Items.Add("11")
            .Items.Add("12")
            .SelectedIndex = 0
        End With

        With cbYear
            .Items.Add("2007")
            .Items.Add("2008")
            .Items.Add("2009")
```

```
            .Items.Add("2010")
            .Items.Add("2011")
            .SelectedIndex = 0
        End With
End Sub
End Class
```

~~~~~~

Checkout.vb

```
Public Class checkout
    Private Sub checkout_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
    lb_date.Text = Date.Today
    Me.dtpCheckOut.Value = Date.Today
    xCreateTable = "LoadRoomCheckOut"
    SQLcom = " SELECT  Room_No FROM Room  WHERE rmstatus = 'มีคนเช่า' GROUP BY Room_No
ORDER BY Room_No "
    GetDataToComboBox(Me.cb_roomno)
    End Sub

Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
    Me.Close()
    Me.Dispose()
    mainmenu.Show()
End Sub

Private Sub cb_roomno_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles cb_roomno.SelectedIndexChanged

    ' ~~~ Create Transaction ~~~ Join Room_Rent - Customer
    xCreateTable = "xSearch"
```
~~~~~~

```
    SQLcom = " SELECT     Room_Rent.Room_No, Customer.name, Customer.lastname,
Room_Rent.chkin, Room_Rent.rdeposit "
    SQLcom += " FROM      (Room_Rent INNER JOIN Customer ON Room_Rent.Cus_ID =
Customer.Cus_ID) "
    SQLcom += " WHERE    Room_Rent.Room_No = '" & Me.cb_roomno.Text & "' And
Room_Rent.rStatus = 'มีคนเช่า' "

    If GetDataFromSQLcommand() = True Then
        Me.tx_name.Text = ds.Tables(xCreateTable).Rows(0).Item("Name").ToString
        Me.tx_surname.Text = ds.Tables(xCreateTable).Rows(0).Item("Lastname").ToString
        Me.tx_deposit.Text = ds.Tables(xCreateTable).Rows(0).Item("rdeposit").ToString
        Me.dtpCheckIn.Value = ds.Tables(xCreateTable).Rows(0).Item("chkin")
    End If
End Sub
Private Sub ChangeStatus_RoomRent()
    '~ เปลี่ยนสถานะเป็น ย้ายออก ที่ตาราง Room_Rent
    ChangeStatus_Room(cb_roomno.Text, "ว่าง")
End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click
    If MsgBox("กรุณายืนยันการย้ายออกอีกครั้ง..!", MsgBoxStyle.Question + 4) = MsgBoxResult.Cancel
Then Exit Sub
    '
    SQLcom = " Update Room_Rent  SET chkout = #" & ConvDate(Me.dtpCheckOut) & "#, rstatus = 'ย้าย
ออก' "
    SQLcom += " WHERE Room_Rent.Room_No = '" & Me.cb_roomno.Text & "' "
    CommandAction()
    '
    ChangeStatus_RoomRent()     ' Change Status at Room Table
    Call mainmenu.ListStatusOfRoom()  ' Change Status Picture in Mainmenu
    Me.Close()
```

```
    mainmenu.Show()
End Sub
End Class
```

~~~~~~

Invstatus.vb

```
Public Class Invstatus
    Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
        mainmenu.Show()
    End Sub

Private Sub Invstatus_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
    Dim strStatus As String
    SQLcom = " SELECT  Invoice.Inv_no, Invoice.invdate, Room_Rent.Room_No, Invoice.invstatus,
Invoice.total "
    SQLcom += " FROM   (Invoice LEFT OUTER JOIN Room_Rent ON Invoice.Rent_ID =
Room_Rent.Rent_ID) "
    SQLcom += " ORDER BY Invoice.Inv_no, Invoice.invdate "
    xCreateTable = "ShowStatusRoom"
    If GetDataFromSQLcommand() = True Then

        For Each row As DataRow In ds.Tables(xCreateTable).Rows
            Dim item1 As New ListViewItem("Inv-" & Format(row("Inv_no"), "000"))   ' First Column
            item1.SubItems.Add(Format(row("invDate"), "Long Date"))
            item1.SubItems.Add(row("Room_No").ToString)
            strStatus = row("invstatus").ToString
            If strStatus = "จ่ายแล้ว" Then
                item1.SubItems.Add("จ่ายแล้ว")
            Else
```
~~~~~~

```
          item1.SubItems.Add("ค้างจ่าย")
        End If

        item1.SubItems.Add(Format(row("total"), "Standard"))
        LV1.Items.AddRange(New ListViewItem() {item1}) '
      Next
  End If
End Sub
End Class
```

~~~~~~

Roomstatus.vb

```
Public Class roomstatus
  Private Sub roomstatus_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load
  SQLcom = " SELECT  Room.Room_No, Room_type.rmfee, Room.rmstatus "
  SQLcom += " FROM   (Room INNER JOIN Room_type ON Room.Type_ID = Room_type.Type_ID)
Order By Room_No"
  xCreateTable = "ShowStatusRoom"
  If GetDataFromSQLcommand() = True Then
      For Each row As DataRow In ds.Tables(xCreateTable).Rows
        Dim item1 As New ListViewItem(row("Room_No").ToString)   ' First Column
        item1.SubItems.Add(Format(row("rmfee"), "Standard"))
        item1.SubItems.Add(row("rmstatus").ToString)
        LV1.Items.AddRange(New ListViewItem() {item1}) '
      Next

  End If
 End Sub

  Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
```
~~~~~~

```
        Me.Close()
        mainmenu.Show()
    End Sub
End Class
```

~~~~~~

Feesetting.vb

```
Public Class feesetting
    Dim _sMode As Byte
    Private Sub bt_exit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_exit.Click
        Me.Close()
        mainmenu.Show()
    End Sub

  Private Sub feesetting_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles
Me.Load
    _sMode = cmdStatus.NewMode  ' ตั้งค่าเริ่มต้นเป็น NewMode
    vrgRoomType.Air = "มีแอร์"    ' Set Default

    With Me.cbType_ID
        .Items.Add("เลือก")
    End With
    ' เรียกข้อมูลประเภทค่าใช้จ่ายทั้งหมด มาแสดงใน ComboBox
    xCreateTable = "tbLoadToCombo9"
    SQLcom = "Select * From Room_Type ORDER BY Type_ID "
    GetDataToComboBox(Me.cbType_ID)
    cbType_ID.SelectedIndex = 0
    End Sub

Private Sub _CurrentDataRoom_Type()
    With vrgRoomType
```
~~~~~~

```
        .TypeID = Me.cbType_ID.Text
        .wpUnit = Me.txWpunit.Text
        .epUnit = Me.txEpunit.Text
        .RMfee = Me.txRmfee.Text
        .Monthfee = Me.txMonthFee.Text
        .Description = Me.txDescription.Text
        ' ส่วนของตัวแปร Air ให้รับค่าจากกดเลือก Redio
    End With
End Sub

Private Sub bt_save_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
bt_save.Click
        If MsgBox("ยืนยันการบันทึกข้อมูล", MsgBoxStyle.Question + MsgBoxStyle.OkCancel) =
MsgBoxResult.Cancel Then Exit Sub

    If Me.cbType_ID.SelectedIndex = 0 Then
        MsgBox("กรุณาเลือกหรือเพิ่มหมายเลขประเภทค่าใช้จ่ายก่อนนะคะ..!", MsgBoxStyle.Information)
        Exit Sub
    End If
    _CurrentDataRoom_Type()    ' ส่งค่าให้กับตัวแปรก่อน
    If _sMode = cmdStatus.NewMode Then
        SaveDataToTable(xTableName.RoomType) ' บันทึกข้อมูลในแต่ละฟิลด์ลงในตาราง
        _sMode = cmdStatus.EditMode   ' หลังจากการบันทึกข้อมูลใหม่ลงไปแล้ว ให้เปลี่ยนโหมดเป็น
EditMod
    '
    ElseIf _sMode = cmdStatus.EditMode Then          ' ถ้าเป็น EditMode จะถือเป็นการแก้ไขข้อมูล
        UpdateDataTable(xTableName.RoomType)
    End If
End Sub
Private Sub ResetAllControl()
    '  Reset Control  ~~~
        Me.txRmfee.Text = "0"
```

```
        Me.txWpunit.Text = "0"
        Me.txEpunit.Text = "0"
        Me.txMonthFee.Text = "0"
    End Sub
    Private Sub cbType_ID_SelectedIndexChanged(ByVal sender As System.Object, ByVal e As
    System.EventArgs) Handles cbType_ID.SelectedIndexChanged

        ResetAllControl()
        '
        If Me.cbType_ID.SelectedIndex = 0 Then
            _sMode = cmdStatus.NewMode
            Exit Sub
        Else
            _sMode = cmdStatus.EditMode
        End If

        xCreateTable = "SearchRoomType"
        SQLcom = "Select * From Room_Type Where Type_ID ='" & Me.cbType_ID.Text & "' "
        If GetDataFromSQLcommand() = True Then
        '
            Me.txRmfee.Text = ds.Tables(xCreateTable).Rows(0).Item("rmfee").ToString
            Me.txWpunit.Text = ds.Tables(xCreateTable).Rows(0).Item("wpunit").ToString
            Me.txEpunit.Text = ds.Tables(xCreateTable).Rows(0).Item("epunit").ToString
            Me.txMonthFee.Text = ds.Tables(xCreateTable).Rows(0).Item("monthfee").ToString
            Me.txDescription.Text = ds.Tables(xCreateTable).Rows(0).Item("Description").ToString
            If ds.Tables(xCreateTable).Rows(0).Item("Air").ToString = "มีแอร์" Then
                Me.rdAir.Checked = True
            Else
                Me.rdNoneAir.Checked = True
            End If
        End If
    End Sub
```

```
   Private Sub txRmfee_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles txRmfee.KeyPress, _
   txWpunit.KeyPress, txEpunit.KeyPress, txMonthFee.KeyPress

   If e.KeyChar < ChrW(48) Or e.KeyChar > ChrW(57) Then e.Handled = True
   If e.KeyChar = ChrW(8) Then e.Handled = False ' Backspace OK
   End Sub

Private Sub rdAir_CheckedChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles rdAir.CheckedChanged
      If rdAir.Checked = True Then vrgRoomType.Air = "มีแอร์"
End Sub

Private Sub rdNoneAir_CheckedChanged(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles rdNoneAir.CheckedChanged
      If rdNoneAir.Checked = True Then vrgRoomType.Air = "ไม่มีแอร์"
End Sub

Private Sub GroupBox1_Enter(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
GroupBox1.Enter

End Sub
End Class
```

~~~~~~

Frmshowreport.vb

```
Imports CrystalDecisions.Shared

Public Class frmShowReport

Private Sub frmShowReport_Load(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles MyBase.Load
```
~~~~~~

```
    On Error Resume Next
    With reportDocument1
     .Refresh()
     .FileName = strPathReport
     .RecordSelectionFormula = strReportFormula
    End With

    With CrystalReportViewer1
       .Refresh()
       .ReportSource = reportDocument1
    End With
    Exit Sub
'Pam:
    'MsgBox("ไม่สามารถแสดงรายงานได้ กรุณาตรวจเช็คไฟล์รายงานของโปรแกรมก่อนนะคะ..!",
MsgBoxStyle.Critical)
End Sub

End Class
```

~~~~~~

Module1.vb

```
Imports System.Data.OleDb

Module Module1

#Region " Variable for Crytal Report "
   Public strPathReport As String
   Public strReportFormula As String
#End Region

#Region " Variable for Control Database "
   Public SQLcom As String
```
~~~~~~

```
    Public strConn As String = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\BeauApartment\BeauDB\DB2.mdb"
    Public Conn As New OleDbConnection(strConn)
    Public da As New OleDbDataAdapter
    Public ds As New DataSet
    'Public vrRoom As Room
#End Region

#Region " VariableGroup of Table Name "
    ' {
    ' กลุ่มตัวแปรนี้ ใช้สำหรับอ้างถึง ตัวแปรฟิลด์ที่อยู่ในตารางต่างๆ
    Public vrgRoom As gRoom
    Public vrgRoomType As gRoomType
    Public vrgCustomer As gCustomer
    Public vrgReservation As gReservation
    Public vrgRoomRent As gRoomRent
    Public vrgUtilities As gUtilities
    Public vrgInvoice As gInvoice
    Public vrgReceipt As gReceipt

    ' }
#End Region

Structure gRoom    ' variable of Table: Room
    Public RoomNo As String    ' Room Number
    Public TypeID As String    ' Type for Room
    Public RmStatus As String    ' Status of Room
End Structure

Structure gRoomType     ' variable of Table: Room_type
    Public TypeID As String    ' Type for Room
    Public wpUnit As Long    ' rate water (5,6,7) Baht
```

```
    Public epUnit As Long    ' rate Electric (8,9,10) Baht
    Public RMfee As Long    ' rent fee per month {3000/2500/2000}
    Public Monthfee As Long    ' Monthly Fee
    Public Description As String    '
    Public Air As String    '

End Structure

Structure gCustomer    ' variable of Table: Customer
    Public CusID As Long    '
    Public Name As String    '
    Public LastName As String    '
    Public idCardNo As String    '
    Public Address As String    '
    Public Tel As String    '
    Public CImage As String    '
End Structure

Structure gReservation    ' variable of Table: Reservation
    Public RsvNo As Long    '
    Public RsvDate As String    ' วันที่จองห้อง
    Public RoomNo As String    '
    Public Name As String    '
    Public LastName As String    '
    Public idCardNo As String    '
    Public Tel As String    '
    Public rsvdeposit As String    '
    Public CheckIn As String    '
    Public rsvStatus As String    '
End Structure

Structure gRoomRent    ' variable of Table: Room_Rent
```

```
    Public Rent_ID As Long
    Public Cus_ID As Long
    Public Room_no As String
    Public CheckIn As String
    Public CheckOut As String
    Public rStatus As String
    Public rDeposit As Long
    Public Duration As Long
End Structure

Structure gUtilities    ' variable of Table: Utilities
    Public Util_ID As Long
    Public Invno As Long
    Public uDate As String
    Public wStart As Long
    Public eStart As Long
    Public wtEnd As Long
    Public eEnd As Long
    Public wUsed As Long
    Public eUsed As Long
    Public wFee As Long
    Public eFee As Long
    Public TelFee As Long
    Public Damages As Long
    Public Total As Long
End Structure

Structure gInvoice    ' variable of Table: Invoice
    Public InvNo As Long
    Public RentID As Long
    Public InvDate As String
    Public Total As Long
```

```
    Public InvStatus As String
    Public Comment As String
End Structure

Structure gReceipt    ' variable of Table: Receipt
    Public Rc_No As Long
    Public Inv_No As Long
    Public rcDate As String
    Public Total As Long
    Public Late_fee As Long
    Public Total2 As Long
    Public Comment As String
End Structure

Public Enum xTableName
    Room
    RoomType
    Customer
    Reservation
    RoomRent
    Utilities
    Invoice
    Receipt
    Login
End Enum

Public Enum cmdStatus
    NewMode
    EditMode
End Enum

#Region " Bow "
```

```
    Public strPathImage As String
    Public strcodecustomer As String
    'Public strpathreport As String
    Public reportformula As String
    Public strreporttitle As String
    Public sttroom As String
    Public xResult As String  ' ใช้รับค่าการประมวลผลของ Function CommandAction()
    Public xCreateTable As String
    Public TB As xTableName      ' variabel Enum
    Public SetColorRoom As String
    Public strFromForm As String  ' บอกสถานะว่าเป็นการคลิกมาจากฟอร์มไหน

#End Region

Public Function SelectReport(ByVal vReportFile As String) As String
    Return "C:\BeauApartment\Report\" & vReportFile & ".rpt"
End Function

Public Sub SaveDataToTable(ByVal ad As Byte)

    Select Case ad
        Case 0    ' บันทึกข้อมูลลงตาราง Room
            SQLcom = " INSERT INTO Room  (Room_No, Type_ID, rmstatus) "
            SQLcom += " VALUES( "
            SQLcom += " '" & vrgRoom.RoomNo & "' ,"
            SQLcom += " '" & vrgRoom.TypeID & "' ,"
            SQLcom += " '" & vrgRoom.RmStatus & "' )"

        Case 1    ' บันทึกข้อมูลลงตาราง Room Type
            SQLcom = " INSERT INTO Room_Type  (Type_ID, wpunit, epunit, rmfee, monthfee,
Description, Air) "
            SQLcom += " VALUES( "
```

```
        SQLcom += " '" & vrgRoomType.TypeID & "' ,"
        SQLcom += vrgRoomType.wpUnit & " ,"
        SQLcom += vrgRoomType.epUnit & " ,"
        SQLcom += vrgRoomType.RMfee & " ,"
        SQLcom += vrgRoomType.Monthfee & " ,"
        SQLcom += " '" & vrgRoomType.Description & "' ,"
        SQLcom += " '" & vrgRoomType.Air & "' )"


    Case 2    ' บันทึกข้อมูลลงตาราง Customer
        SQLcom = " INSERT INTO Customer  (Cus_ID, name, lastname, idcardno, address, tel, Cimage)"
        SQLcom += " VALUES( "
        SQLcom += vrgCustomer.CusID & " ,"
        SQLcom += " '" & vrgCustomer.Name & "' ,"
        SQLcom += " '" & vrgCustomer.LastName & "' ,"
        SQLcom += " '" & vrgCustomer.idCardNo & "' ,"
        SQLcom += " '" & vrgCustomer.Address & "' ,"
        SQLcom += " '" & vrgCustomer.Tel & "' ,"
        SQLcom += " '" & vrgCustomer.CImage & "' )"

    Case 3    ' บันทึกข้อมูลลงตาราง Reservation
        SQLcom = "INSERT INTO Reservation "
        SQLcom += " (Rsv_No, Room_No, name, lastname, idcardno, tel, rsvdeposit, chkin, rsvstatus,
RsvDate)"
        SQLcom += " VALUES( "
        SQLcom += vrgReservation.RsvNo & " ,"
        SQLcom += " '" & vrgReservation.RoomNo & "' ,"
        SQLcom += " '" & vrgReservation.Name & "' ,"
        SQLcom += " '" & vrgReservation.LastName & "' ,"
        SQLcom += " '" & vrgReservation.idCardNo & "' ,"
        SQLcom += " '" & vrgReservation.Tel & "' ,"
        SQLcom += vrgReservation.rsvdeposit & " ,"
```

```
        SQLcom += " " & vrgReservation.CheckIn & " ,"
        SQLcom += " '" & vrgReservation.rsvStatus & "' ,"
        SQLcom += " " & vrgReservation.RsvDate & " )"


    Case 4    ' บันทึกข้อมูลลงตาราง Room Rent
        SQLcom = "INSERT INTO Room_Rent "
        SQLcom += " (Rent_ID, Cus_ID, Room_No, chkin, chkout, rstatus, rdeposit, duration)"
        SQLcom += " VALUES( "
        SQLcom += vrgRoomRent.Rent_ID & " ,"
        SQLcom += vrgRoomRent.Cus_ID & " ,"
        SQLcom += " '" & vrgRoomRent.Room_no & "' ,"
        SQLcom += " " & vrgRoomRent.CheckIn & " ,"
        SQLcom += " " & vrgRoomRent.CheckOut & " ,"
        SQLcom += " '" & vrgRoomRent.rStatus & "' ,"
        SQLcom += vrgRoomRent.rDeposit & " ,"
        SQLcom += vrgRoomRent.Duration & " )"

    Case 5    ' บันทึกข้อมูลลงตาราง Utilities
        SQLcom = "INSERT INTO Utilities "
        SQLcom += " (Util_ID, Invno, udate, wstart, estart, wend, eend, wused, eused, wfee, efee, telfee,
damages, total)"
        SQLcom += " VALUES( "
        SQLcom += vrgUtilities.Util_ID & " ,"
        SQLcom += vrgUtilities.Invno & " ,"
        SQLcom += " " & vrgUtilities.uDate & " ,"
        SQLcom += vrgUtilities.wStart & " ,"
        SQLcom += vrgUtilities.eStart & " ,"
        SQLcom += vrgUtilities.wtEnd & " ,"
        SQLcom += vrgUtilities.eEnd & " ,"
        SQLcom += vrgUtilities.wUsed & " ,"
        SQLcom += vrgUtilities.eUsed & " ,"
```

```
        SQLcom += vrgUtilities.wFee & " ,"
        SQLcom += vrgUtilities.eFee & " ,"
        SQLcom += vrgUtilities.TelFee & " ,"
        SQLcom += vrgUtilities.Damages & " ,"
        SQLcom += vrgUtilities.Total & " )"

    Case 6    ' บันทึกข้อมูลลงตาราง Invoice
        SQLcom = "INSERT INTO Invoice "
        SQLcom += " (Inv_no, Rent_ID, invdate, total, invstatus, comment)"
        SQLcom += " VALUES( "
        SQLcom += vrgInvoice.InvNo & " ,"
        SQLcom += vrgInvoice.RentID & " ,"
        SQLcom += " " & vrgInvoice.InvDate & " ,"
        SQLcom += vrgInvoice.Total & " ,"
        SQLcom += " '" & vrgInvoice.InvStatus & "' ,"
        SQLcom += " '" & vrgInvoice.Comment & "' )"

    Case 7    ' บันทึกข้อมูลลงตาราง Receipt
        SQLcom = "INSERT INTO Receipt "
        SQLcom += " (Rc_No, Inv_No, rcdate, total, latefee, total2, comment)"
        SQLcom += " VALUES( "
        SQLcom += vrgReceipt.Rc_No & " ,"
        SQLcom += vrgReceipt.Inv_No & " ,"
        SQLcom += " " & vrgReceipt.rcDate & " ,"
        SQLcom += vrgReceipt.Total & " ,"
        SQLcom += vrgReceipt.Late_fee & " ,"
        SQLcom += vrgReceipt.Total2 & " ,"
        SQLcom += " '" & vrgReceipt.Comment & "' )"

        '
End Select
'------- Process Transaction -------
```

```
    CommandAction()

End Sub

Public Sub UpdateDataTable(ByVal ud As Byte)
    Select Case ud
        Case 0
            SQLcom = " UPDATE Room SET "
            SQLcom += " Type_ID = '" & vrgRoom.TypeID & "' ,"
            SQLcom += " rmstatus ='" & vrgRoom.RmStatus & "' "
            SQLcom += " Where Room_No = '" & vrgRoom.RoomNo & "' "

        Case 1
            SQLcom = " UPDATE Room_Type SET "
            SQLcom += " wpunit =" & vrgRoomType.wpUnit & " ,"
            SQLcom += " epunit =" & vrgRoomType.epUnit & " ,"
            SQLcom += " rmfee =" & vrgRoomType.RMfee & " ,"
            SQLcom += " monthfee =" & vrgRoomType.Monthfee & " ,"
            SQLcom += " description = '" & vrgRoomType.Description & "' ,"
            SQLcom += " Air = '" & vrgRoomType.Air & "' "
            SQLcom += " Where Type_ID = '" & vrgRoomType.TypeID & "' "

        Case 2
            SQLcom = " UPDATE Customer SET "
            SQLcom += " name ='" & vrgCustomer.Name & "' ,"
            SQLcom += " lastname ='" & vrgCustomer.LastName & "' ,"
            SQLcom += " idcardno ='" & vrgCustomer.idCardNo & "' ,"
            SQLcom += " address ='" & vrgCustomer.Address & "' ,"
            SQLcom += " tel ='" & vrgCustomer.Tel & "' ,"
            SQLcom += " Cimage ='" & vrgCustomer.CImage & "' "
            SQLcom += " Where Cus_ID =" & vrgCustomer.CusID
```

Case 3

```
SQLcom = " UPDATE Reservation SET "
SQLcom += " Room_No ='" & vrgReservation.RoomNo & "' ,"
SQLcom += " Name ='" & vrgReservation.Name & "' ,"
SQLcom += " lastname ='" & vrgReservation.LastName & "' ,"
SQLcom += " idcardno ='" & vrgReservation.idCardNo & "' ,"
SQLcom += " Tel ='" & vrgReservation.Tel & "' ,"
SQLcom += " rsvdeposit =" & vrgReservation.rsvdeposit & " ,"
SQLcom += " chkin = " & vrgReservation.CheckIn & " ,"
SQLcom += " rsvstatus ='" & vrgReservation.rsvStatus & "' ,"
SQLcom += " RsvDate = " & vrgReservation.RsvDate
SQLcom += "  Where Rsv_No =" & vrgReservation.RsvNo
```

Case 4

```
SQLcom = " UPDATE Room_Rent SET "
SQLcom += " Cus_ID =" & vrgRoomRent.Cus_ID & " ,"
SQLcom += " Room_no ='" & vrgRoomRent.Room_no & "' ,"
SQLcom += " Chkin =" & vrgRoomRent.CheckIn & " ,"
SQLcom += " Chkout =" & vrgRoomRent.CheckOut & " ,"
SQLcom += " rstatus ='" & vrgRoomRent.rStatus & "' ,"
SQLcom += " rdeposit =" & vrgRoomRent.rDeposit & " ,"
SQLcom += " duration =" & vrgRoomRent.Duration
SQLcom += "  Where Rent_ID =" & vrgRoomRent.Rent_ID
```

Case 5

```
SQLcom = " UPDATE Utilities SET "
SQLcom += " udate =" & vrgUtilities.uDate & " ,"
SQLcom += " wStart =" & vrgUtilities.wStart & " ,"
SQLcom += " eStart =" & vrgUtilities.eStart & " ,"
SQLcom += " wend =" & vrgUtilities.wtEnd & " ,"
SQLcom += " eend =" & vrgUtilities.eEnd & " ,"
SQLcom += " wused =" & vrgUtilities.wUsed & " ,"
```

```
        SQLcom += " eUsed =" & vrgUtilities.eUsed & " ,"
        SQLcom += " wfee =" & vrgUtilities.wFee & " ,"
        SQLcom += " efee =" & vrgUtilities.eFee & " ,"
        SQLcom += " telfee =" & vrgUtilities.TelFee & " ,"
        SQLcom += " Damages =" & vrgUtilities.Damages & " ,"
        SQLcom += " total =" & vrgUtilities.Total
        SQLcom += " Where Invno =" & vrgUtilities.Invno

    Case 6
        SQLcom = " UPDATE Invoice SET "
        SQLcom += " Rent_ID =" & vrgInvoice.RentID & " ,"
        SQLcom += " invdate =" & vrgInvoice.InvDate & " ,"
        SQLcom += " Total =" & vrgInvoice.Total & " ,"
        SQLcom += " invStatus ='" & vrgInvoice.InvStatus & "' ,"
        SQLcom += " Comment ='" & vrgInvoice.Comment & "' "
        SQLcom += " Where inv_No =" & vrgInvoice.InvNo & " "

    Case 7
        SQLcom = " UPDATE Receipt SET "
        SQLcom += " Inv_No =" & vrgReceipt.Inv_No & " ,"
        SQLcom += " rcdate =" & vrgReceipt.rcDate & " ,"
        SQLcom += " total =" & vrgReceipt.Total & " ,"
        SQLcom += " latefee =" & vrgReceipt.Late_fee & " ,"
        SQLcom += " Total2 =" & vrgReceipt.Total2 & " ,"
        SQLcom += " Comment ='" & vrgReceipt.Comment & "' "
        SQLcom += "  Where Rc_no =" & vrgReceipt.Rc_No

  End Select
  '------- Process Transaction -------
  CommandAction()

End Sub
```

```
Public Sub GetDataToComboBox(ByVal xCB As ComboBox)
    '-------------------------------------------------------------------------------------------------------------------------
------------
    ' ฟังก์ชันนี้ ทำไว้สำหรับโหลดข้อมูลเฉพาะฟิลด์ที่ต้องการ (เพียงฟิลด์เดียว) ลงใน ComboBox
    '-------------------------------------------------------------------------------------------------------------------------
------------
    '
    'xCreateTable = "tbLoadToCombo"
    ds.Clear()
    da = New OleDbDataAdapter(SQLcom, Conn)
    da.Fill(ds, xCreateTable)
    '
    If ds.Tables(xCreateTable).Rows.Count = 0 Then Exit Sub
    '
    For Each row As DataRow In ds.Tables(xCreateTable).Rows
        xCB.Items.Add(row(0).ToString)
    Next

End Sub

Public Function GetDataFromSQLcommand() As Boolean
    ds.Clear()
    da = New OleDbDataAdapter(SQLcom, Conn)
    da.Fill(ds, xCreateTable)
    '
    If ds.Tables(xCreateTable).Rows.Count = 0 Then
        Return False
    Else
        Return True
    End If
```

```
End Function

Public Sub ChangeStatus_Room(ByVal vRoom As String, ByVal vStatus As String)
    SQLcom = " UPDATE  Room  SET  rmstatus = '" & vStatus & "'  WHERE Room_No = '" & vRoom &
"' "
    CommandAction()
End Sub

Public Sub CommandAction()
    '-------------------------------------------------------------------------------------------------------------
-------------
    ' ฟังก์ชันนี้ ทำไว้สำหรับประมวลคำสั่ง Insert, Update และ Delete
    '-------------------------------------------------------------------------------------------------------------
-------------
    '
    Dim myCom As New OleDbCommand(SQLcom, Conn)
    Try
        myCom.ExecuteNonQuery()
    Catch ex As Exception
        MsgBox(ex.Message)

    End Try
    '
End Sub

Public Function GetMaxNumber(ByVal vTable As String, ByVal vField As String) As Long
    '-------------------------------------------------------------------------------------------------------------
-------------
    ' ฟังก์ชันนี้ ทำไว้สำหรับหาค่าสูงสุดในฟิลด์นั้นๆ ซึ่งผลลัพท์ที่ได้จะออกมาเป็นตัวเลขชนิด Long
    '-------------------------------------------------------------------------------------------------------------
-------------
    '
```

```
    SQLcom = " SELECT MAX(" & vField & ") AS Expr1  FROM " & vTable
    Dim myCom As New OleDbCommand(SQLcom, Conn)

    Try
        GetMaxNumber = myCom.ExecuteScalar()
    Catch ex As Exception
        Return 0
    End Try

End Function

Public Function ConvDate(ByVal x As DateTimePicker) As String
    ' For Access MM-DD-YY
    ConvDate = x.Value.Month.ToString & "/" & x.Value.Day.ToString & "/" & x.Value.Year.ToString
  End Function

End Module
```