

DESIGN AND DEVELOPMENT OF AN APPLICATION FOR AN INDIVIDUAL
INSURANCE AGENT

BY

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ABSTRACT

In this report, Insurance Agent System is developed to solve some problems that faced by the users, especially the agent. It has significant effect for them as they need to perform their tasks faster, ease for them to use, and convenient for them. The report also explains about how the problem occurs for the insurance agents and how Insurance Agent System can solve the problem effectively. There are 8 modules implemented to improve the existing system. Seven out of eight modules are used to solve the existing problems. Another one module is a special module that considered as a new idea. Therefore, the agents can easily handle their jobs by using Insurance Agent System.

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Chapter 1 Introduction

1.1 Project Title

- Design and Development of an Application for an Individual Insurance Agent

1.2 Motivation and Problem Statement

- Existing Insurance Agency System is not easily to register an account as an agent and not easily to login the system.
 - Agent needs to request for an account by sending a form letter and submit it to the insurance companies, and then login with their particular ID number. Some of the agent are also not well in memorizing, so they unable to remember the longer ID number.
- Existing Insurance Agency System does not notify the customer when their insurance is opened to a new or renewed.
 - The customer does not know their insurance is being opened or not, this may cause some cheating cases, which may also affect the customers' trust towards the agent. For instance, an agent takes the money from a customer without open the insurance to them.
- Existing Insurance Agency System does not allow the agent and customer to view back their details in a list.
 - The agent cannot views back their last time details such as cover note and quotation that they had opened last time.

- Existing Insurance Agency System is sending the reminder of insurance date that is expire soon by letter to their customer, and does not remind the agent for bank-in payment after the insurance money is collected from customer.
 - When the customer's vehicle insurance expire date is on next week, the letter will arrive to recipient lately about 1-2 days after the date expired. The existing system will not remind the busy agent when the bank-in date is near to expire, therefore some of the agents have been in black-list due to they does not bank-in the collected money.

- Existing Insurance Agency System does not auto input the customer's details and vehicle details.
 - The agent must take some times to key in the customer's details and vehicle details manually by themselves.

- Existing Insurance Agency System is only can print by agent and view in hardcopy after printed.
 - The agent needs goes to the print page to print, and then just can view it after printed.

- Existing Insurance Agency System cannot amend their privacy information easily such as username, password, address, email, and telephone number.
 - The agent cannot changes the password immediately when it is leak out to hacker.

- Existing Insurance Agency System needs to quote all information with all names, birthday, ID no., address and phone number to know the price of insurance.
 - Very troublesome to key in the all inputs, it takes a very long time to done it and need redo when typo error happen.

1.3 Project Scope

This project will develop and deliver an enhanced and effective insurance agency system. The system will give the user to ease of use and more convenience. It can be helpful in the agent's thinking, action and planning to be successful like the owner of company.

1.4 Project Objective

- To study what is the current practice / product in the market.
- To develop an Individual uses Insurance Agency System prototype for managing his/her own record which consists of the following modules/functions:
 - Module 1:
 - To develop a Login module, which allows the user to login with the customize username and protect the user's customer privacy data from leak out.

 - Module 2:
 - To algorithm an Auto Notification Service module, which able to notify the customer when their insurance was opened.

 - Module 3:
 - To produce a Data Management Table - UI Interface module, which can provide an easy way to manage the customer details.

 - Module 4:
 - To algorithm a Reminder module, which can remind the agent to submit the amount of insurance payments to Company and remind the customer about the date of their insurance cover that is coming soon expire.

 - Module 5:
 - To develop a Searching and Auto Input module, which allows them to search the details and auto input in shorter time by customer IC number and Vehicle Number.

- **Module 6**
 - To develop a Printing module, which can print out the result in PDF file that can be downloaded and printed into hard copy.

- **Module 7**
 - To develop a Settings module, which allows the user to set their details such as name, email, telephone, and address.

- **Module 8 (New Special Module):**
 - To develop a Quotation module, which allows the agent to quote an insurance price in a shorter time. And so far, all the insurance companies have not had this function yet.

1.5 Project Innovation and Contribution

- To employ a login method that can type in simple username and be more secure for system. To protect the user's customer details.
 - The login method allows the user to set a username that is easy memorize for them. Besides, it is also allowed the user to store and manage the customer's insurance, and also can gain other benefits such as reminder and notification to a specific user.

- To improve the notification module that enable to notify the customer when their insurance was opened.
 - It will notify the customer when insurance was opened. By using this module, it can avoid the cheating cases such as customer just directly pays the money for open insurance, but they do not know whether their insurance is really opened or not.

- To improve the data management view from coding to table with UI Interface. Information or details view UI Interface can save much time for agent to view the data.
 - The user can easily view the details nicely and will not looked messy.

- To improve the reminder method from letter to e-mail, so it can directly remind both agent and customers. It remind also the agent to submit the payment due within expire date period. This module can also solve the financial problem of company because email is free of charge.
 - When the customer's insurance deadline is before 15 days, it will automatically generate the email and notify the customer. When agent payment due submission date is near, the pop up message reminder will keep remind the agent until it is submitted.

- To employ the searching and auto input module, which can allow the agent to search the customer and auto input the information in shorter period used in open insurance.
 - The agent can fast auto input by searching the details of customer and it can reduce the time of type the information one by one.

- To employ printing module that can allows the agent to print in PDF view from result of Cover Note and Quotation.
 - This allow the agent to view, download and print the PDF to hard copy. Customer can also view back the PDF and print out the report according by policy number.

- To employ settings that allows the agent to amend the profile details for themselves such as email, name, username, and password.
 - This allows the user to get more customization on their details for comfortable and flexible purpose, therefore the user no needs contact with the system provider to amend their details.

- To employ quotation that allows the agent to calculate the price briefly with less input and less time.
 - Take a shorter time to input the information and its outcome with the price of insurance.

1.6 Background Introduction

Insurance can be known as a premium or a form of risk management that giving monetary compensation to another entity for the cost of potential loss incurred (Pareto n.d.). Insurance can be sort in many forms such as life insurance, long-term care insurance, and burglary insurance and others. Insurance is also a kind of protection or a safety for human because we feel a need of security to lower down the risky. Thus, insurance allows individuals, business, and other entities to protect their significant financial losses at a reasonably affordable rate due to unexpected disasters. For example, if you are the main contribution of income in your family, there is significant loss and financial hardship when you died. At this time, the insurance makes sense in which monthly premium will replace your income to survive your family life. Therefore, as your life situation changes, you will need insurance. Thus, an insurance agent takes place to help you with an annual insurance review.

Insurance agents are licensed in conducting the business on behalf of insurance companies. They usually operate with insurer under the term of an agent agreement, and help the insurer to manage their insurance process. The insurer-agent relationship can be operated in many different forms, such as independent, exclusive, insurer-employed and self-employed (The Role of Insurance Intermediaries n.d.). For instance, agents are independent when they work with more than one small insurance company, and agents are exclusive when they are selling one business line for each of several companies or represent one insurance company in one geographic area.

Insurance agents are playing a vital role in insurance industry. They provide financial advisory services and customer support to the customers. Whenever customers ask for the best insurance products or services, the insurance agents must deliver the customers' desired insurance products or services that suit their requirements. And, when the customers talk to an agent, they will get insight on coverage that best suit their needs and they feel their investments are best protected too. Insurance agent also helps in promoting and selling insurance products and services to its customers. For example, a life insurance agent can not only sell the life insurance policy, they also can sell or promote general insurance such as health insurance, disability insurance or other financial packages like mutual funds and other securities to the customers (Role and Responsibilities 2014).

Chapter 2 Literature Review

2.1 Literature review

2.1.1 Login Module

Login module is the most important module to users because it can identify an agent and allow the agent to save the data such as customer insurance history and payment information and other interactions (Yvonne 2015). It can also easy to be managed by the system, in which the particular customer, vehicle, and insurance are belong to which agent. Therefore, the agent will not get messy in managing the data. Moreover, it puts also the user details as watermark at the bottom of cover note and quotation, so the customer can find back his or her particular agent.

The image shows a screenshot of the UTAR Portal login interface. On the left, under the heading "UTAR Portal", there are two input fields: "Login ID :" and "Password :". Below these fields is a blue "SIGN IN" button. To the right of the login fields is a vertical dashed line, followed by a "Related Links" section. This section contains a list of links: "Alumni Portal", "Web-based Learning Environment" (with an external link icon), "Course Registration" (with an external link icon), "Quick View to Examination Result (Perak Campus)", and "Quick View to Examination Result (Sungai Long Campus)". Below the login fields, there is a small envelope icon and a text block: "On password related enquiry, please email (via your UTAR email account whenever possible) to info@utar.edu.my with necessary details (e.g. full name, some descriptions on the case) for further assistance."

Figure 2.1 Login from UTAR Portal (UTAR Portal 2014)

Figure 2.1 above shows an example of login form in UTAR Portal. The purposes to login the UTAR Portal are want to get the latest announcement, latest schedule, email, and final exam result. Therefore, if there is no have login module, it is hard to identify the particular student and disseminate the latest information to them.

2.1.2 Notification Service for the insurance System using Electronic Mail Message (EMM)

The notification to the recipient is very important because it can notify the recipient about any important notices, so they will not miss up on them. Frequently now most of people have own individual electronic mailbox to receive the message such as announcement, reminder, notification, and advertisement. For the company, a successful organization should have to interact and communicate with different audiences such as customers, employees, partners and suppliers by sending the e-mail (Ibrahim A.S.M et al 2009).

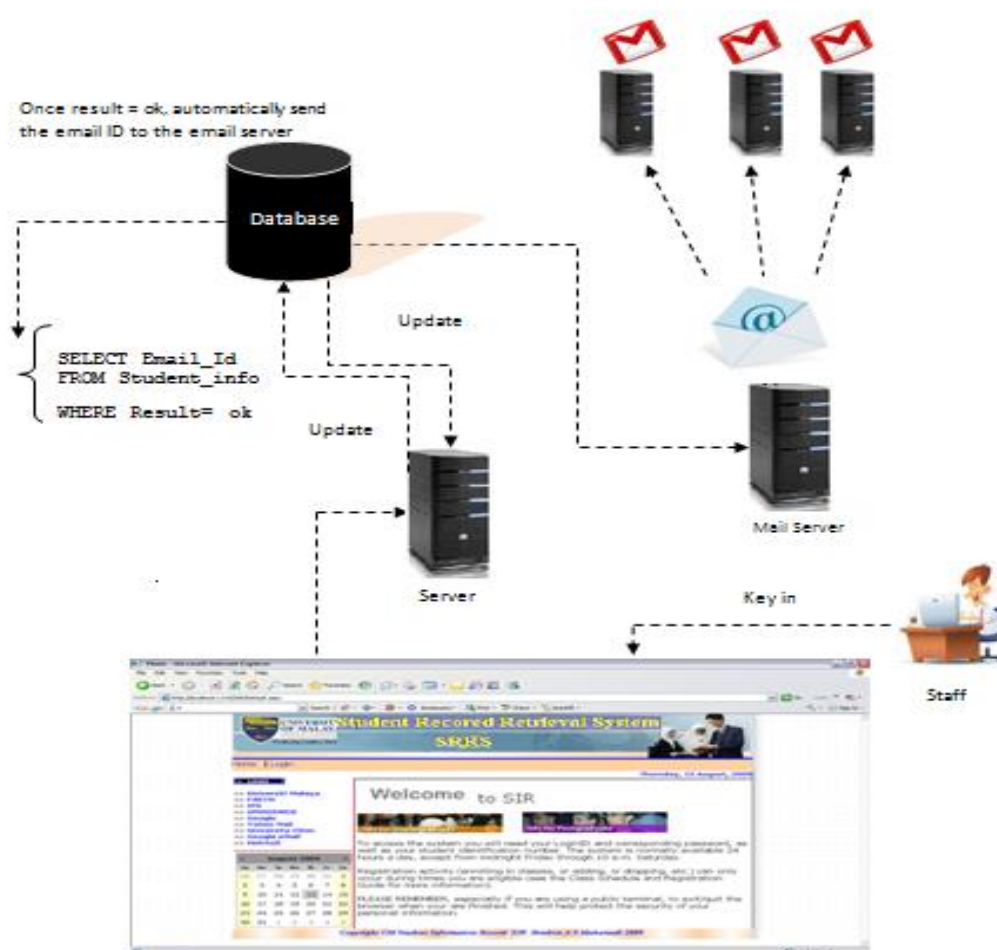


Figure 2.2 System Module for send email (Ibrahim A.S.M et al 2009)

The explanation from Figure 2.2 above is after done the process in website, the server will check the condition in database. Once result is shown okay, the database will automatically send to mail server, and then mail to the particular person.

This module in this insurance system can provide more convenience ways to the company and also the customers. This is because it will automatically send the notification in form of electronic mail to the customer. For example, when the customer's insurance is renewed or new, the system will automatic generate the email notification to notify the customer. Therefore, the customer will get the notice from their message about their insurance, which may also can reduce the scam for business.

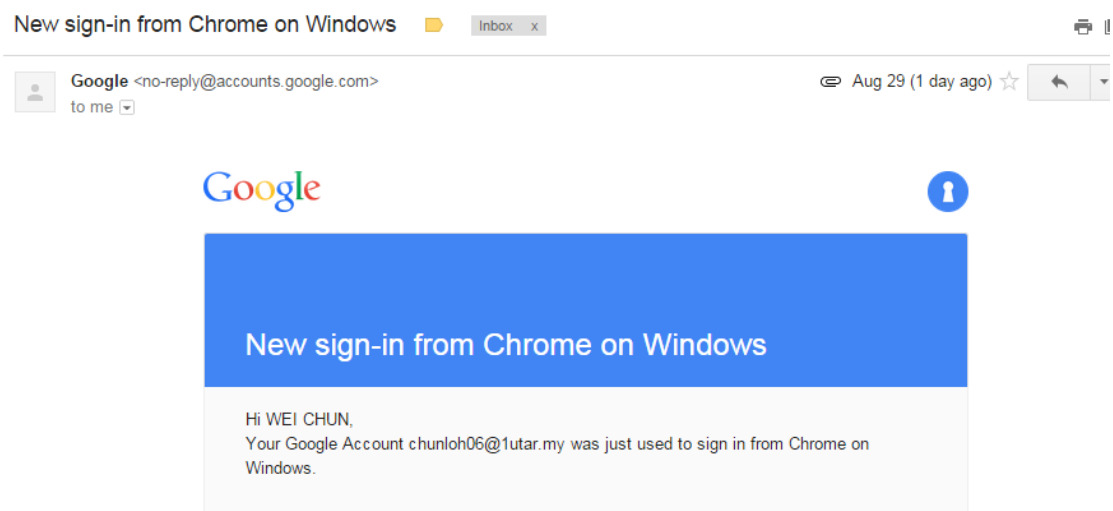


Figure 2.3 UTAR Portal Reminder (UTAR Portal 2014)

The example shown in Figure 2.3 above is about the Google has notify its user that he or she is new sign-in in another computer. So, the user will get attention on his or her account is being hacked or not. This has shown that the notification module is very important for e-commerce.

2.1.3 Data Management Table

Data Management Table is a best way to the users who are the agent, to help them to view the data easily by UI Interface view. Compare to the coding-based, the user must hire someone who has MySQL skill to manage the report. The benefits of this function is it is portable, in which it can be managed in anyway and not just in the office or working place. In addition, it is also allows the user to manage the data easily in table view. Therefore, users with zero technical skill can also have a look the data with no SQL coding.

Manage Aviation Trainer Table

ID	TrainerID	First Name	Last Name	Flying Hours	Age	Gender	Position	Update	Delete
1	T1000	sam	david	5000	38	male	leftenan	Update	Delete
2	T2000	nancy	sally	12000	23	female	captain	Update	Delete
3	T3000	abu	kassim	15000	45	male	major	Update	Delete
4	T4000	dev	anand	10000	35	male	major	Update	Delete
7	T5000	chong	wei	8000	41	male	captain	Update	Delete

Figure 2.4 Data Management Table (Anbuselvan 2015)

```

r@bardolino:~
File Edit View Terminal Tabs Help
[r@bardolino ~]$ mysql -h csmysql.cs.cf.ac.uk -u exampleuser -p sample
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 821 to server version: 5.0.21

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql>

```

Figure 2.5 MySQL Command (Robert, E 2014)

The Figure 2.4 above shows that the table view of data management is used to view the data without any technical skills needed. The Figure 2.5 shows there is need of database language with technical skill such as DDL, DML, DQL, DCL, and DTL. The advantage in using this module is easily to view compared to coding-based above

in Figure 2.5. Moreover, whenever the users are at somewhere, they still can access the web application to view it, and get history and details of data.

2.1.4 Reminder Module

The reminder is much different with notification, and it is very useful to the user compared with notification, because it can remind the user daily or it will remind the user about any important task when they opened the web application. The difference between reminder and notification is reminder keeps reminds the user until the task is completed, whereas notification just notify the user about the latest message once time. Therefore, it is easier to motivate or push the user to achieve something.

The reminder is to remind the agent about the submission of payment due of customers' insurance that need to pay to the insurance company, because the money payment is kept by the agent. Besides, it is also reminds both agent and customers about customers' insurance date is expire soon. There is only the way to reduce any miss out to submit the payment and not miss out the insurance date (John M.G et al 2014).

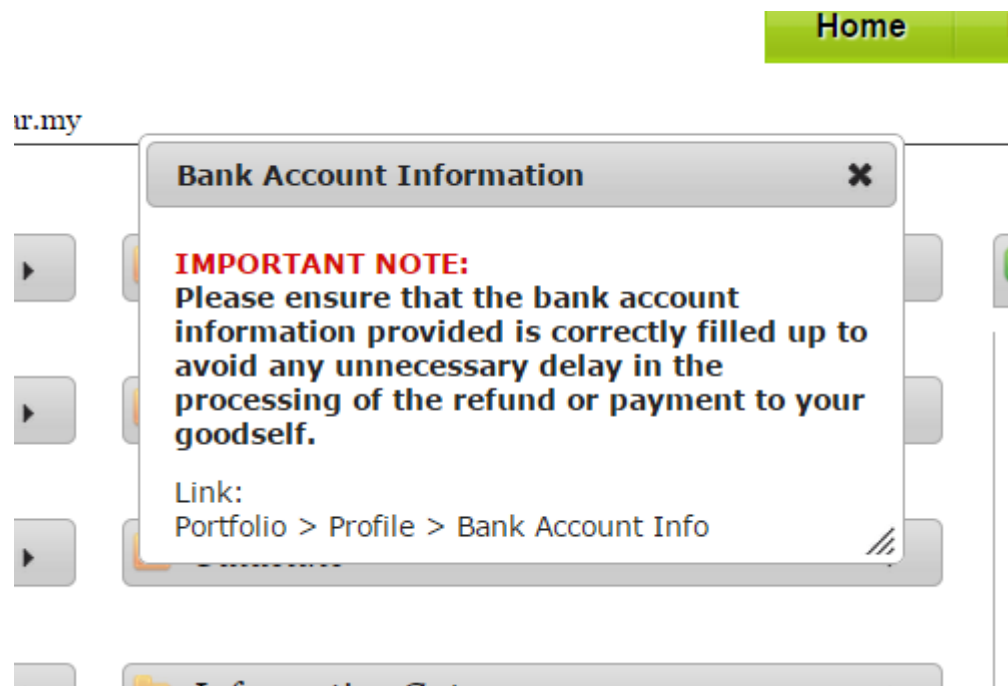


Figure 2.6 UTAR Portal Reminder (UTAR Portal 2014)

Figure 2.6 above illustrates the reminder used by UTAR and it is also apply to insurance system in similar concept to notify the agent to submit the payment due. Figure 2.6 above is an example of the reminder of UTAR Portal, in which to remind

the students to fill in their account number in order for UTAR can be easily to refund. In addition, the students cannot ignore this important reminder as they will keep face it when they opened UTAR portal every time until they fill in their account number completely.

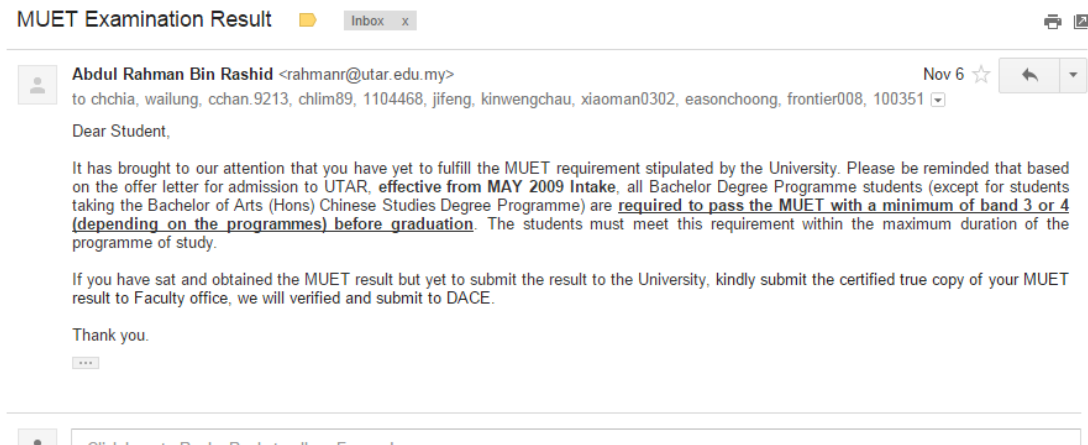


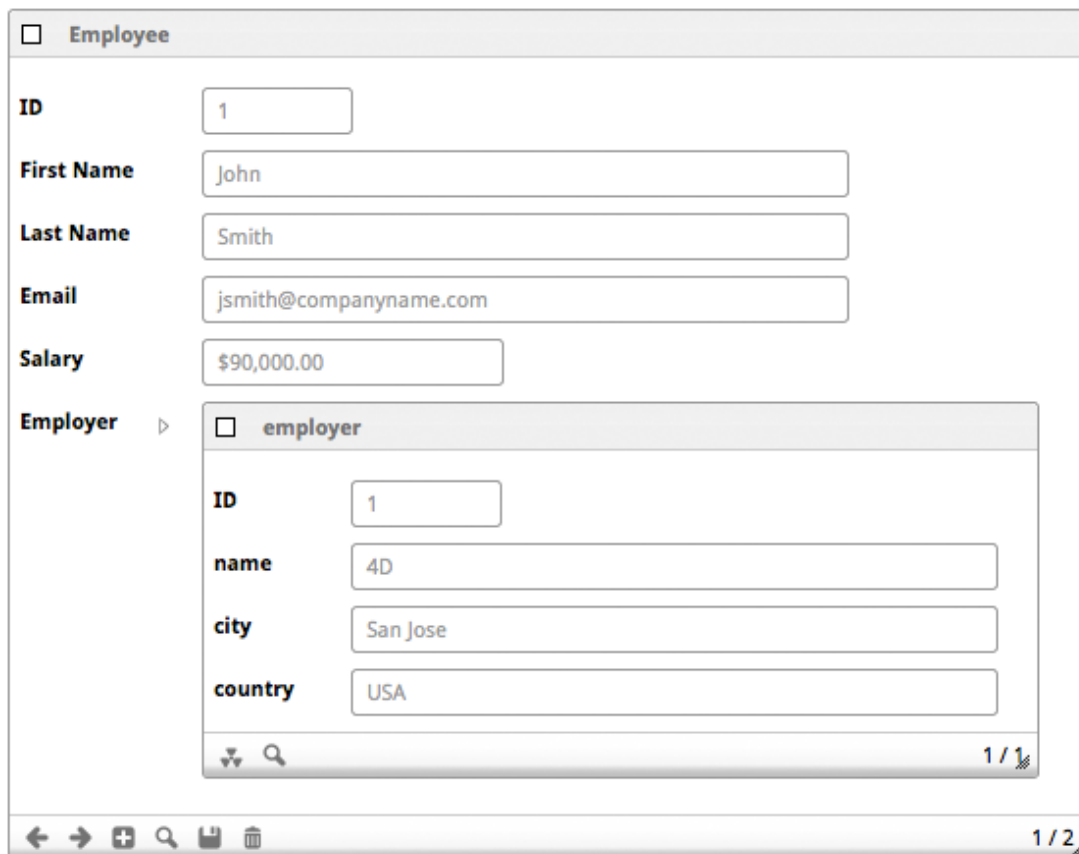
Figure 2.7 Notifications from UTAR mail (UTAR Portal 2014)

Figure 2.7 above is also one of the example to illustrate the reminder of UTAR through electronic mail message, which also implies the similar concept in insurance system. Figure 2.7 shows about the reminder of MUET message. It reminds all of the students to submit their MUET result to FGO, but some do not submit yet. So the UTAR mail server will multicast who are not submitting the MUET result yet, and then that particular students will submit their result soon once they received the notification from UTAR mail.

So, this module applies in insurance system can remind the customers and agents when the insurance date is expire soon. Therefore, they can renew the insurance before expire date.

2.1.5 Searching and Auto input Module

Nowadays searching and auto input module is becoming more important to web based system because it can save a lot of time to re-input for a same person. This is a good solution to overcome the problem of more inputs in the form. The function of this module is to allow the user input the details and search inside the database, then it will auto input the last time information to particular column fields. Moreover, when the input sent to the database, the database is going to match with the input. When they had been matched, the output will auto input to particular column fields. Therefore, searching and auto input module is to help the user to save their time and be more convenience to use.



The image shows a web form interface for an 'Employee' record. The form is titled 'Employee' and contains several input fields. The 'ID' field contains the value '1'. The 'First Name' field contains 'John', the 'Last Name' field contains 'Smith', and the 'Email' field contains 'jsmith@companyname.com'. The 'Salary' field contains '\$90,000.00'. The 'Employer' field is expanded to show a sub-form titled 'employer'. This sub-form has four fields: 'ID' with '1', 'name' with '4D', 'city' with 'San Jose', and 'country' with 'USA'. At the bottom of the sub-form, there is a search icon and a '1/1' indicator. The main form also has a search icon and a '1/2' indicator at the bottom right. The interface includes navigation arrows and a trash icon at the bottom left.

Figure 2.8 search and auto input (Auto Form 2015)

Figure 2.8 above shows an example of how the user searches the input and gets the auto input to others particular column fields. The user inputs the information in

customer's ID number, then search in database, and the result will auto input to others particular column.

2.1.6 Printing Module

The print is an output of an object that brings many meanings such as print on screen, print on paper, and others. People like to view or save the softcopy rather than save in hardcopy, because it wastes the place or capacity for storing the hardcopy if it is in large quantities. Therefore, PDF file is more suitable and compatible to all machines. It prints the document in an electronic image that can view, save, print into hard copy, or forward to someone else (John 2010).

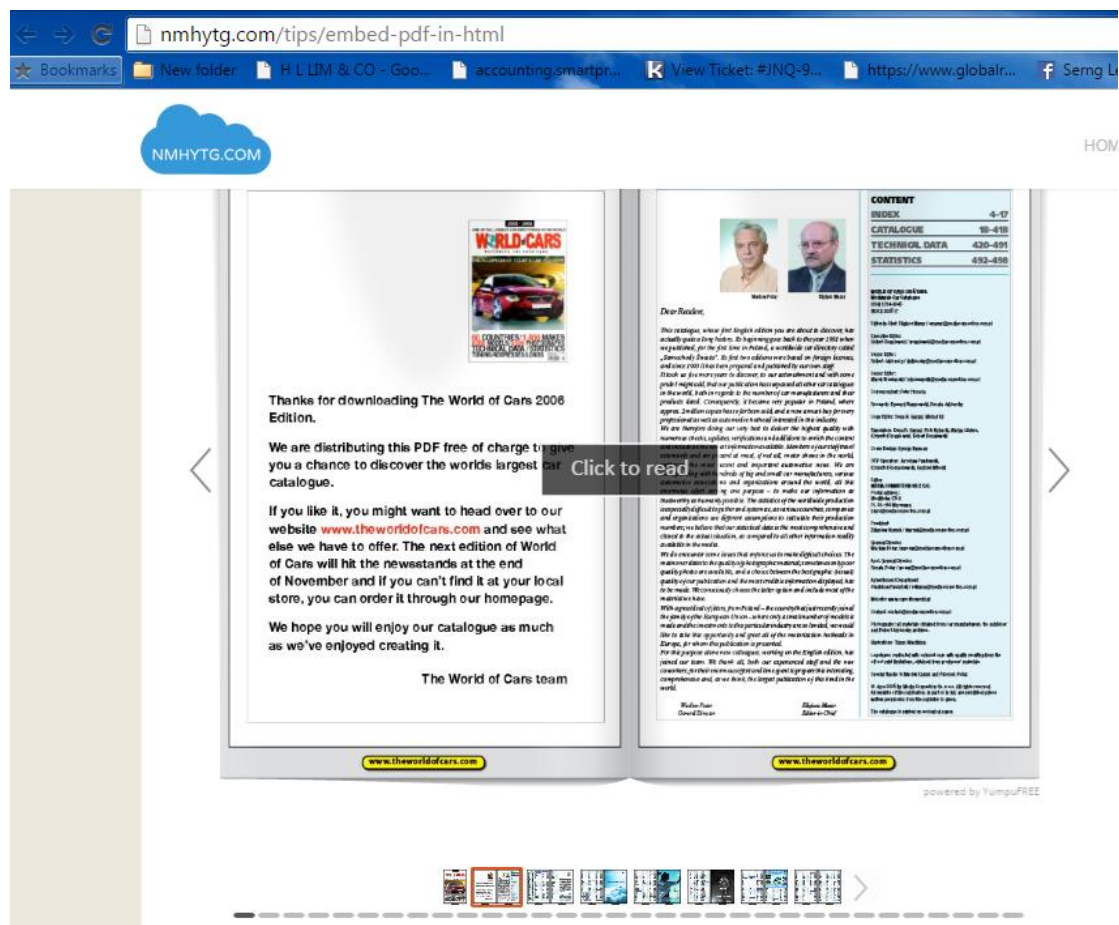


Figure 2.9 PDF embed viewer in HTML (Michael 2015)

Figure 2.9 above shows that the PDF file is viewed in HTML, so the customers no need to download again the file. They can direct view the content of PDF, and it is easier to use and save the place for them. In insurance system, it can be applied in auto

generate the result and direct to view the content of PDF. Thus, they can save in the machine and print on paper when they want to keep it.

2.1.7 Settings Module

Settings is important also for a user, because it can customize the privacy information of the user. In common practices, the user can customize their name, username, password, address, telephone number, and others. User will feel annoy when there is no have settings page.

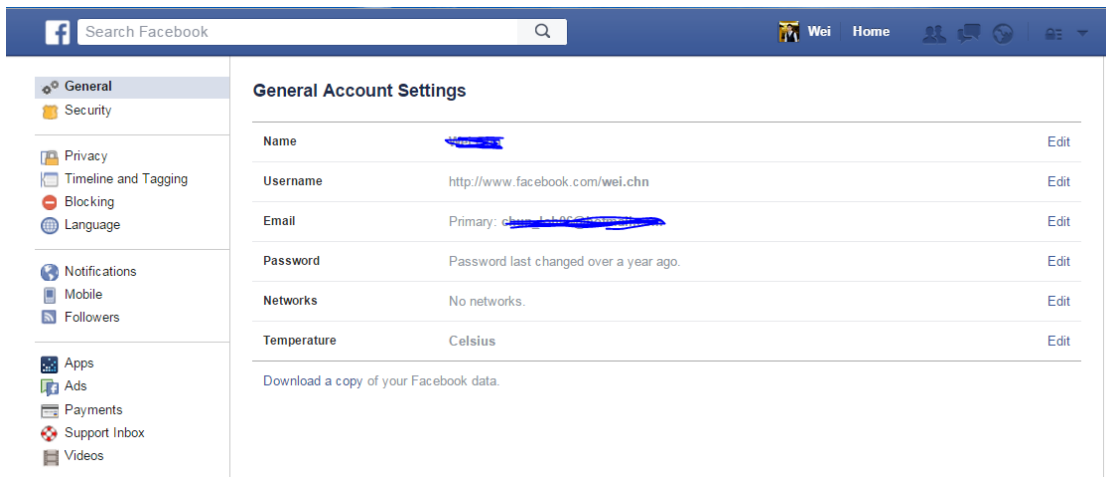


Figure 2.10 Settings in Facebook page (Facebook 2015)

The Figure 2.10 above shows that there is a settings page in Facebook Web, the user can simply change the name, username, password, email, and others, but some of the settings need to verify whether it is unique such as username and email. Therefore, insurance system can also apply with this module, in which the agent can direct change their privacy information without any contacts with the company.

2.1.8 Quotation Module

All the companies have not done the quotation module before, thus many agents complaint that they need to insert all information (input) that take much time to process and take time to log in the system in order to make quotation on it. Therefore, quotation module is very useful in Insurance Agency System because it allows the agent to take a shorter time to quote a numbers of prices that the person can insure.

The screenshot shows a web interface for a car insurance quotation. At the top, there is a progress bar with three steps: 1. 'Edit your quote', 2. 'About the car', and 3. 'Results'. A car icon is shown next to the 'Results' step. The main content area is titled 'About the car' and contains several questions:

- Do you know the registration number of the car?** (with a help icon)
 - Yes: Includes a text input field for 'Enter the registration plate' and a green 'Confirm' button.
 - No: Includes a link 'Help me find the car by make and model'.
- Has the car been modified in any way e.g. alloy wheels, tow bar added etc?** (with a help icon)
 - Yes
 - No
- When did you start driving this car?** (with a help icon)
 - From: A dropdown menu for 'Month' and a text input for 'Enter the year'.
 - I don't have the car yet
- Are you the owner and the registered keeper of the car?** (with a help icon)
 - Yes
 - No

Below these questions is a section titled 'Using the car' with a dropdown menu for 'What do you use the car for?' (currently showing '-- Please Select --') and a question 'Roughly how many miles does the car cover in a year?' (with a help icon).

On the right side, there is a callout box titled 'Find the car' with the text: 'Why do you need to know this? We need your registration so we can find the exact car and help you get a more accurate quote. Don't know your registration? Don't worry, you can find the car here' with a link.

Below the callout box is the 'Norton SECURED' logo, 'powered by Symantec', and a 'Learn more' link. Below that is an 'FAQs' section with links for 'My car is not listed', 'My car details are incorrect', 'What is a modification?', 'I want to insure my vehicle for business cover', and 'Read more FAQs'.

Figure 2.11 Quotation of car insurance (Money Super Market 2014)

Figure 2.11 above shows that the quotation module allows the agents to quote the price of insurance for the car without log in the system. So, the agents can save their time in quoting the price. In this insurance system, it is quoted 3 companies such as AMG, Kurnia, and Zurich at a same time, and also shows the recommendations to customers on which company they should go for in order to gain more benefits.

2.2 Comparison of AMG, Zurich, Kurnia and Individual use Insurance agent system.

		AMG	Kurnia	Zurich	My system
1.	Login Module	Login by ID number	Login by ID number	Login by ID number	Login by username
2.	Notification services by using E-mail	Do not notify.	Notify the customer through SMS.	Do not notify.	Notify the customer through Email.
3.	Data Management Table	Can view all histories of insurance cover note in a particular vehicle.	Can view all histories of insurance cover note in a particular vehicle.	Can view only the previous insurance cover note in a particular vehicle.	Can view all histories of insurance cover note with all vehicles and customers details.
4.	Reminder	Do not remind on submission of payment due. Remind only the agent about the customer's insurance cover period before 2 months of date expire soon.	Remind the agent to submit the payment due by pop-up message. Remind the customer before 1 month of insurance cover period date expire soon through SMS.	Do not remind on submission of payment due. Do not remind customer when insurance cover period date is expire soon.	Remind the agent to submit the payment due by using pop-up message. Remind the customer before 1 month of insurance cover period date expire soon through email.

Table 2.1 Comparison of 3 companies (Part 1 of 3)

		AMG	Kurnia	Zurich	My System
5.	Searching and Auto Input Module	Can search all information even under other agents, and auto input to others particular column fields.	Can search all information even under other agents, and auto input to others particular column fields.	Can search information only under the particular agent, and auto input to others particular column fields.	Can search all information even under other agents, and auto input to others particular column fields.
6.	Printing Module	It allows agent only to view in pdf file in Google Chrome without any support of embed source.	It must go through many steps, then just can reach in re-print page. It allows agent only to view in pdf file in Google Chrome without any support of embed source.	It allows agent only to view in pdf file in Google Chrome without any support of embed source.	It is only 1 step to reprint page. It allows agent and customer to view the history of insurance cover note and quotation in embed source.

Table 2.2 Comparison of 3 companies (Part 2 of 3)

		AMG	Kurnia	Zurich	My System
7.	Settings Module	Must go HQ department to make endorsement, then just can update the privacy information.	Must go HQ department to make endorsement, then just can update the privacy information.	Must go HQ department to make endorsement, then just can update the privacy information.	It is easily to update the user's privacy information without go through the HQ department.
8.	Quotation	Must type all the details, including customer, vehicle, and insurance, then just can know the answer.	Must type all the details, including customer, vehicle, and insurance, then just can know the answer.	Must type all the details, including customer, vehicle, and insurance, then just can know the answer.	Type within 5 column only, then will have outcome with 3 answers with different insurance company, and get the recommendation. They can also view or reprint the quotation result.

Table 2.3 Comparison of 3 companies (Part 3 of 3)

2.3 Fact - findings

This phase is going to interview an agent who is deputy in the insurance company of AMG and Zurich. She has more than 15 years working experienced about the existing system of insurance. She said the insurance system updated was very slow, and maybe the company has this idea, but it is takes much times to implement it. Therefore, the existing system causes her much troublesome when she was new. Moreover, some of companies exist still using hard copy handwriting to renew insurance, this causes the customer has to wait for a week to send it to the company and system of JPJ road tax, then just can open it and make payment.

2.3.1 Data Collection

She has requested some of the functional to combine with the existing system to run perfectly. Table below shows the functional table list, and figures below show the data collected from her about the guides in calculating insurance prices of 3 different companies.

	Functional	Apply for this new system
1	Notification	Yes
2	Quotation	Yes
3	Sorting	No
4	Self-learning	No
5	Reminder	Yes
6	NCD auto check	No
7	Searching module	Yes
8	Data management table – UI interface	Yes
9	Printing module	Yes
10	Settings module	Yes

Table 2.4 Table of Data Collection

Motor - Motorcycle Comprehensive and Third Party

K-brand: Open Third Party New Risk

Kurnia & AM

Age of Vehicle (years)	COMPULSORY ALL-RIDER					THIRD PARTY (New & Renewal)				
	Vehicle Age	Insured's Age	Loading		Maximum Cumulative Loading	Vehicle Age	Insured's Age	Loading		Maximum Cumulative Loading
			2	>2				2	>2	
≤1	0%									150%
2										
3										
4	5%									150%
5										
6										
7	10%	10%	15%	25%	30%					150%
8										
9										
10	15%					100%	25%	50%	100%	150%
11										
12										
13	>15									150%
14										
15										
>15										

Decline A-brand: Increase loading for all insured age

A-brand: Increase loading for all insured age

A-brand: Decline Third party for motorcycle less than or equal to 10 years old

CUBIC CAPACITY	COMPULSORY EXCESS
Up to 100	RM75
101 - 150	RM100
151 - 250	RM150
251 - 500	1% of sum insured (maximum of RM500.00, minimum of RM250.00)
> 500	2.5% of sum insured (maximum of RM1000.00, minimum of RM250.00)

Terms: Subject to Non-Motor/ Personal Lines support

KURNIA
INSURANCE

Figure 2.12 Table list of Loading of Motorcycle Comprehensive and Third Party for AMG and Kurnia Insurance Company

Zurich (guide)

Zurich Insurance Malaysia Berhad (8029-A)
 No. 110, 111 & 112,
 Taman Meleka Seksyen 75000 Melaka.
 Tel: 06-2821220 (G), 06-2626157, 06-2825719 (L)
 Fax: 06-2618380, 06-2847376

UNDERWRITING GUIDE- LOADING AND EXCESS TABLE MOTOR CYCLE COMPREHENSIVE wef 26th Dec 2014				UNDERWRITING GUIDE- LOADING AND EXCESS TABLE MOTOR CYCLE THIRD PARTY wef 26th Dec 2014				
COMPULSORY ALL RIDERS				COMPULSORY ALL RIDERS				
Age of Vehicle	MOTOR CYCLE <i>BELOW</i> 125 CC		MOTOR CYCLE <i>ABOVE</i> 125 CC		MOTORCYCLE BELOW & ABOVE 125CC			
	VEHICLE AGE	Insured's Age	AGE OF VEHICLE	Insured's Age	Age of Vehicle	VEHICLE AGE	Insured's Age	
New	NIL LOADING	Loading on Insured's Age 25 years & below and 75 years & above :- 10% Loading	NIL	Loading on Insured's Age 25 years & below and 75 years & above :- 10% Loading	New	25% LOADING	Loading on Insured's Age below 85 years :- 25% Loading	
1st Year			NIL		5% LOADING			1st Year
2nd Year			10% LOADING		2nd Year			
3rd Year			15% LOADING		3rd Year			
4th Year					4th Year			
5th Year					5th Year			
6th Year					6th Year			
7th Year			7th Year					
8th Year			8th Year					
9th Year			9th Year					
10th Year			10th Year					
11th Years & Above	11th Years & above							
EXCESS: COMPULSORY EXCESS (RM)				EXCESS: Not Applicable				
CAPACITY				Maximum Cumulative Loading				
Up to 100 cc RM75				30%				
101 to 150 cc RM100				150%				
151 to 250 cc RM150				150%				
251 to 500 cc 1% of Sum Insured subject to a maximum of RM5000-				150%				
Above 500 cc 2.5% of Sum Insured subject to a maximum of RM1,0000-				150%				

Car 10 year 30% 15%

Figure 2.13 Table list of Loading of Motorcycle Comprehensive and Third Party for Zurich Insurance Company

Am & Kurnia (guide) 10 May 2014

1. Motor - Private Car Comprehensive

Age of Vehicle (Years)	Vehicle Age	Loading		No. of Claims		Maximum Cumulative Loading	Excess
		Insured's Age 23 Years & below	Insured's Age 24 Years & above	0-2	3-5		
≤1	0%	15% (except for 0 & 1 year old vehicle)	0%	15%	25%	35%	As per Excess Table
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	15%	15%	15%	Refer	Refer	Refer	
12							
13							
14							
15	15%	Refer	Refer	Refer	Refer	Refer	
16							
17							
18							
19							
20							
>20							

A-brand: Open as standard risk

Decline

A-brand: Increase loading

K-brand: simplify excess

EXCESS	
Sum Insured ≤ 500,000	Nil
> 500,000	1% of sum insured

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11

KURNIA

Figure 2.14 Table list of Loading of Private Car Comprehensive for AMG and Kurnia Insurance Company

1

WEST MALAYSIA

Appendix

Motor Tariff 2014 - Premium Schedules

Private Cars

Cubic Capacity Not Exceeding	Comprehensive (RM)	Third Party (RM) (Endorsement No 3(p) must be used)	Act (RM)
1400	261.65	108.45	97.20
1650	292.00	121.50	108.00
2200	323.80	135.90	122.40
3050	355.80	150.30	136.80
4100	385.85	163.35	147.60
4250	416.20	176.40	158.40
4400	448.00	190.80	172.80
Over 4400	478.35	209.85	183.60

Private Motorcycles

Cubic Capacity Not Exceeding	Comprehensive (RM)	Third Party (RM)	Act (RM)
50	72.60	30.80	27.90
100	96.20	36.80	32.65
125	119.80	41.30	37.20
225	139.40	50.70	46.80
350	180.10	64.30	58.20
500	210.10	73.60	67.55
500	239.70	82.60	74.60
Auto Cycles and Mechanically Assisted Pedal Cycles under 50cc	36.90	22.70	18.60
Auto Cycles and Mechanically Assisted Pedal Cycles over 50cc	48.40	22.70	18.60

FAX

15 Feb 2014

00

www.amg.com.my

NCD = 25
30
38.33
~~40~~
45
55

Extra coverage - legal liability - 15% 1400 RM 18.09
- Windscreen - 15%
- All driver

此单限期 14 天, 过期不取定银取消
This receipt valid only 14 days, deposit unreturnable if overdue.
Resit ini sah laku 14 hari, lebas tempoh deposit tidak akan dikembalikan.

2697112
6505

Figure 2.15 Table list of Premium of Motorcycle and Private Car for AMG, Kurnia, and Zurich Insurance Company

Chapter 3 System Analysis and Design

3.1 Methodologies

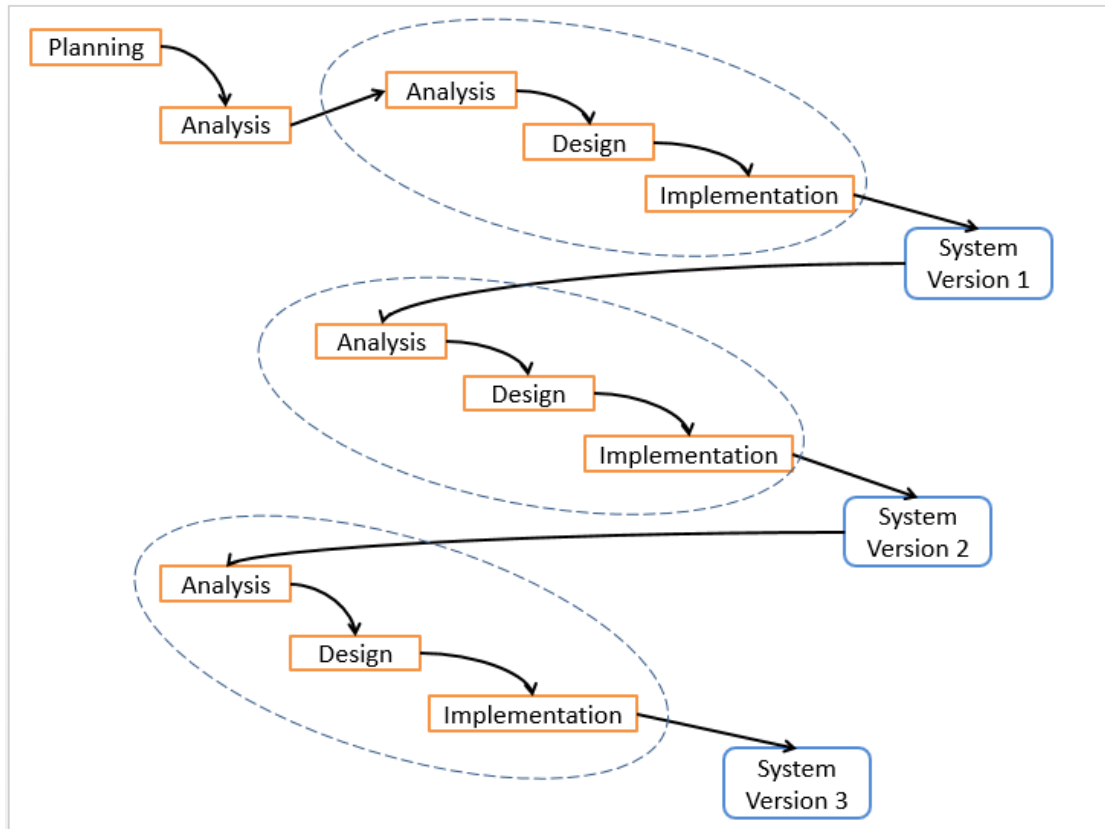


Figure 3.1 Phased Developments

The methodology of the system selected for developing Insurance Agency System is Phased Development. Phased Development breaks the system into a sequence of version. Each version has its own Analysis, Design, Implementation phases which are in a smaller scale compared to the overall system. This method delivers the useful system to the users quickly, however it does not cover all functions yet. The initial of first version is very important to identify the fundamental functions, so analysis of system must be in-depth. For example, when the version 1 has some bugs or errors, it will be debugged on next version until the whole system is satisfied.

3.2 Tools and equipment

- Platform
 - Window 7 home edition

- Programming language
 - PHP
 - HTML
 - CSS
 - JavaScript
 - JQuery
 - AJAX
 - C# (Windows Service)
 - MySQL

- Software involve
 - NetBeans IDE 8.0.2
 - XAMPP (Apache Distribution)
 - Microsoft Visual Studio 2013
 - Oracle MySQL
 - Google Chrome
 - PDF Viewer

3.3 Hardware Requirement

- Minimum:
 - OS: Windows Vista
 - Processor: Pentium 4 2.3GHZ
 - Memory: 256MB RAM
 - Graphics: Intel
 - Browser: Google Chrome, Mozilla Firefox, Internet Explorer 9

- Recommended:
 - OS: 7 / 8 /10
 - Processor: Intel i3
 - Memory: 2GB RAM
 - Graphics: Intel
 - Browser: Google Chrome, Mozilla Firefox

3.4 Gantt Chart

Gantt Chart

























		Task Mode	Task Name	Duration	Start	Finish
1			Planning	40 days	1/12/2015	2/21/2015
2			Find the Supervisor	3 days	1/12/2015	1/15/2015
3			Plan the Project	8 days	1/15/2015	1/23/2015
4			Conduct feasibility analysis	3 days	1/23/2015	1/26/2015
5			Analyze Document	4 days	1/26/2015	1/30/2015
6			Develop Workplan	3 days	1/30/2015	2/2/2015
7			Prioritize Project Request	1 day	2/2/2015	2/3/2015
8			Allocate Resource	9 days	2/3/2015	2/12/2015
9			Prepare System Proposal	7 days	2/12/2015	2/19/2015
10			Submit System Proposal	0 days	2/19/2015	2/19/2015
11			Discuss Proposal with Supervisor	0 days	2/19/2015	2/19/2015
12			Modify System Proposal	2 days	2/19/2015	2/21/2015
13			Analysis	53 days	2/22/2015	4/16/2015
14			Literature Review	11 days	2/22/2015	3/5/2015
15			Analyze Functional Requirements	11 days	2/22/2015	3/5/2015
16			Prepare Documentation	11 days	2/22/2015	3/5/2015
17			Submit Documentation	0 days	3/6/2015	3/6/2015
18			Presentation Final Year Project 1	0 days	4/16/2015	4/16/2015
19			Development of System Version 1	50 days	4/17/2015	6/6/2015
20			Perform details Analysis for Functional Requirement	10 days	4/17/2015	4/27/2015
21			Login Page	5 days	4/17/2015	4/22/2015
22			Auto Generate Notification	4 days	4/22/2015	4/26/2015
23			Data Management Table	1 day	4/26/2015	4/27/2015

Figure 3.2 Gantt Chart (part 1 of 3)






















		Task Mode	Task Name	Duration	Start	Finish
24			Design	19 days	4/28/2015	5/17/2015
25			Create working data model	6 days	4/28/2015	5/4/2015
26			Design the GUI	7 days	5/4/2015	5/11/2015
27			Identifying reusable component	6 days	5/11/2015	5/17/2015
28			Implementation	19 days	5/18/2015	6/6/2015
29			Develop Prototype	7 days	5/18/2015	5/25/2015
30			Test the Prototype	2 days	5/25/2015	5/27/2015
31			Review the System	2 days	5/27/2015	5/29/2015
32			Conduct the troubleshooting	6 days	5/29/2015	6/4/2015
33			Update all Documentation	2 days	6/4/2015	6/6/2015
34			Development of System Version 2	40 days	6/7/2015	7/17/2015
35			Perform details Analysis for Functional Requirement	10 days	6/7/2015	6/17/2015
36			Reminder	4 days	6/7/2015	6/11/2015
37			Searching Module	3 days	6/11/2015	6/14/2015
38			Printing Module	3 days	6/14/2015	6/17/2015
39			Design	14 days	6/18/2015	7/2/2015
40			Create working data model	3 days	6/18/2015	6/21/2015
41			Design the GUI	6 days	6/21/2015	6/27/2015
42			Identifying reusable component	2 days	6/27/2015	6/29/2015
43			Analyze previous version of system	3 days	6/29/2015	7/2/2015

Figure 3.3 Gantt Chart (part 2 of 3)

























		Task Mode	Task Name	Duration	Start	Finish
44			Implementation	14 days	7/3/2015	7/17/2015
45			Develop Prototype	4 days	7/3/2015	7/7/2015
46			Test the Prototype	2 days	7/7/2015	7/9/2015
47			Review the System	2 days	7/9/2015	7/11/2015
48			Conduct the troubleshooting	4 days	7/11/2015	7/15/2015
49			Update all Documentation	2 days	7/15/2015	7/17/2015
50			Development of System Version 3	55 days	7/18/2015	9/11/2015
51			Perform details Analysis for Functional Requirement	10 days	7/18/2015	7/28/2015
52			Settings Module	5 days	7/18/2015	7/23/2015
53			Quotation	5 days	7/23/2015	7/28/2015
54			Design	20 days	7/29/2015	8/18/2015
55			Create working data model	4 days	7/29/2015	8/2/2015
56			Design the GUI	8 days	8/2/2015	8/10/2015
57			Identifying reusable component	2 days	8/10/2015	8/12/2015
58			Analyze previous version of system	6 days	8/12/2015	8/18/2015
59			Implementation	23 days	8/19/2015	9/11/2015
60			Develop Prototype	7 days	8/19/2015	8/26/2015
61			Test the Prototype	4 days	8/26/2015	8/30/2015
62			Review the System	1 day	8/30/2015	8/31/2015
63			Conduct the troubleshooting	6 days	8/31/2015	9/6/2015
64			Finalize all Documentation Involved	4 days	9/6/2015	9/10/2015
65			Hand over final system deliverable	0 days	9/11/2015	9/11/2015
66			Presentation of Final Year Project 2	0 days	9/11/2015	9/11/2015

Figure 3.4 Gantt Chart (part 3 of 3)

Timeline

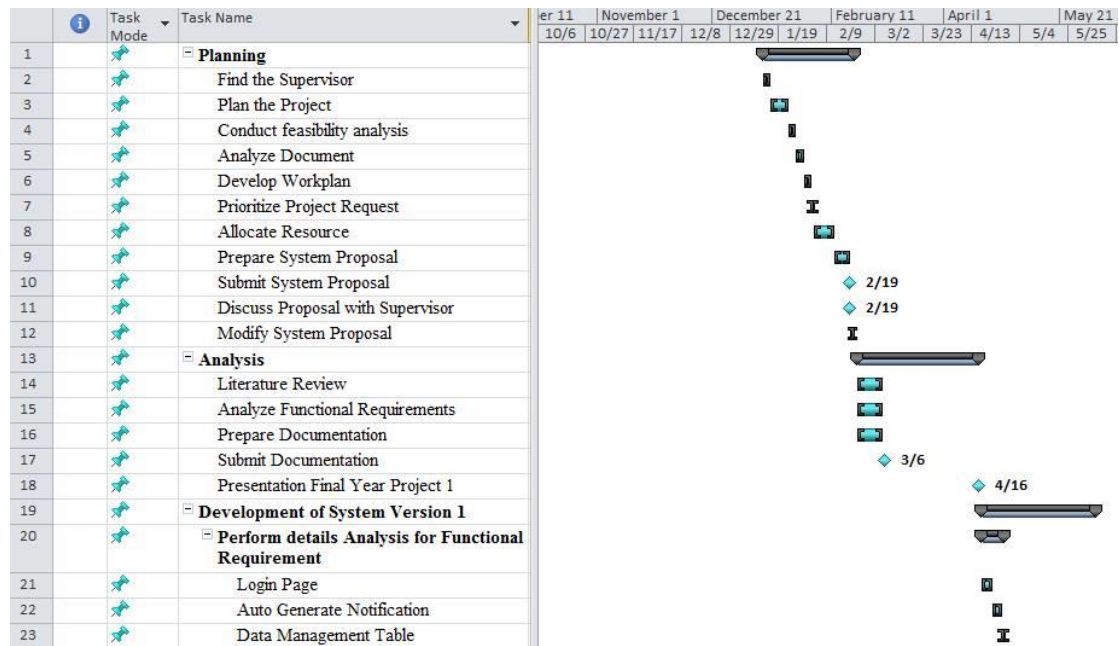


Figure 3.5 Timeline (part 1 of 3)

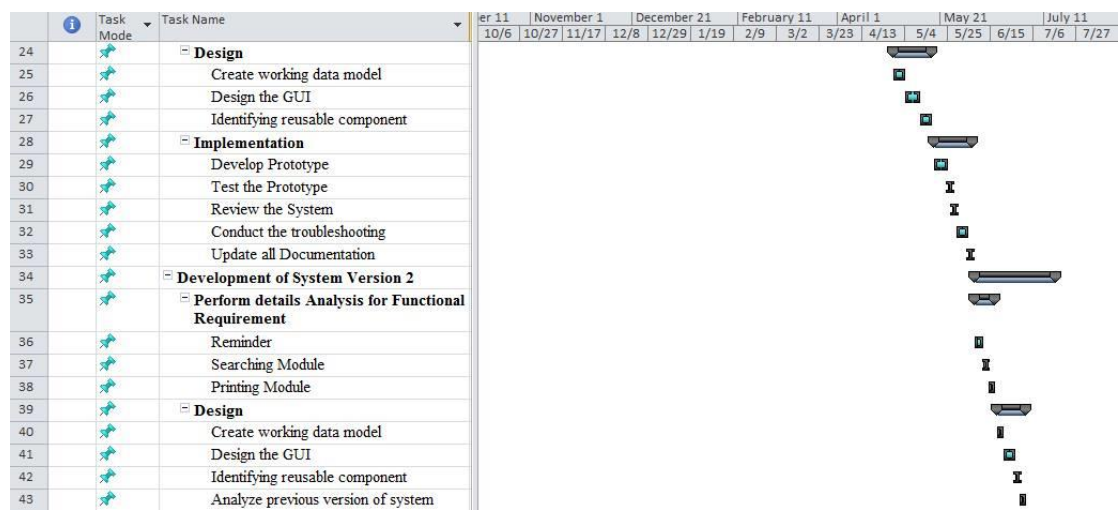


Figure 3.6 Timeline (part 2 of 3)

Chapter 3 System Analysis and Design

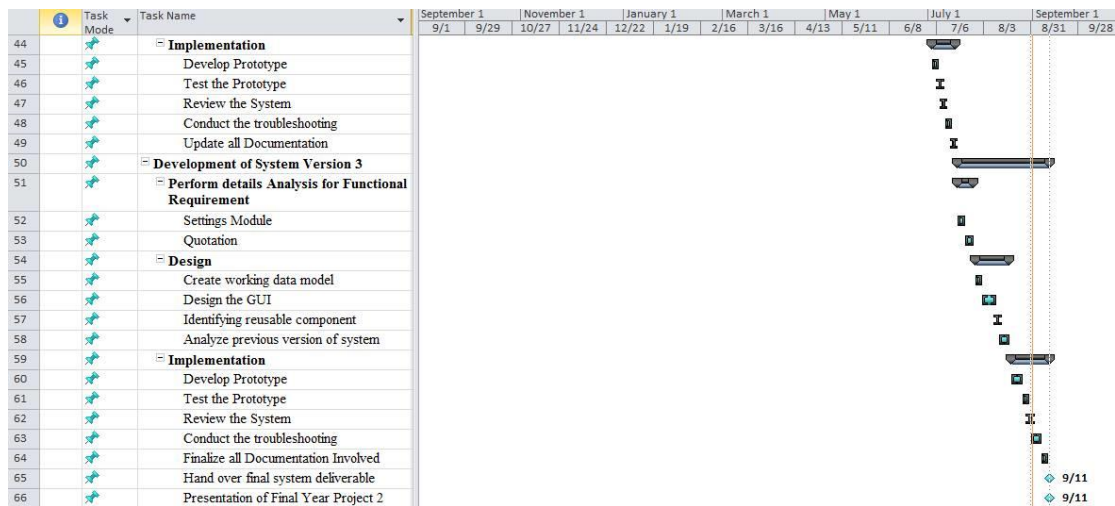


Figure 3.7 Timeline (part 3 of 3)

In Insurance Agency System, there are 5 phases of System Development Life Cycle (SDLC) needed in order to complete the whole project, which are Planning, Analysis, Design, Implementation, and Maintenance. In the Planning phase, user needs to plan the module tasks, identify the problem and its objective. In the Analysis phase, user analyzes the problem and finds the solution to solve the problem. In the Design phase, user has to design the system interface and also coding such as draws a class diagram. In the Implementation phase, user needs to code a system with the development tools in a complete project. Lastly, in the Maintenance phase, user has to improve the stability or fix some bugs in order to enhance the system.

3.5 Design Phase for new system

3.5.1 Functional Hierarchy Chart

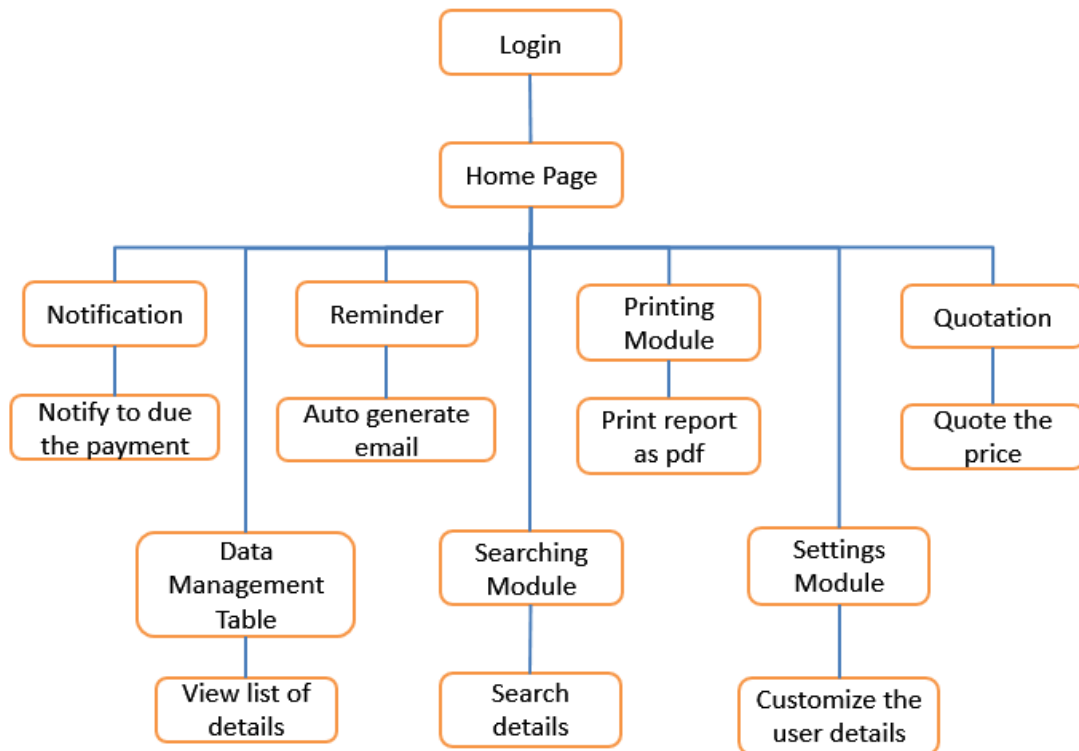


Figure 3.8 Functional Hierarchy Chart

Explanation

In Figure 3.8 the main page of the system is Home Page. Login Module is used to verify the user, and also for security identify user purpose, in which the user must login the system to access it in order to use the modules. There have 6 modules that can be used after the user login, which are Notification, Data Management Table, Reminder, Searching Module, Printing Module and Quotation. The notification will notify the customer when the insurance is opened. This module can avoid the cheating cases, because some of fake agent will not open the insurance after gets the money from customer. Therefore, notification to customer is for secure purpose. Besides, Data Management Table allows the user to view the details of customer, such as Customer details, Vehicle details, and Insurance details. Moreover, Reminder is to auto check the coming insurance before 30 days of expire date of insurance, and generate an email to send out to the user, who are the agent and customer. Another function is searching

module, it allows the user to search the details of customer in database and auto input the field. So, the benefit of this function is easily been used by users as user no need retype the information and can save much time. Reminder module will also notify the user the important things such as banking the customer's paid insurance payment. This function will keep pop up the message and always remind the user until the payment is already due. When this function notice the user, user will not transfer or make payment late and will not get penalty. So, agent and customer have been reminding by the system. The printing module is to print the report such as cover note and quotation into PDF view. In PDF view, it can also save in softcopy and print it out as hardcopy. The settings module allows the user to amend the information such as name, email, address, and telephone number. It is easy to change what the user want to change. The last function is Quotation which is the special module. Quotation is the mostly used by the user and customer. The customer always requests for the price of insurance, therefore this function will help the user to calculate the price of insurance easily.

3.5.2 Block Diagram

1. Login

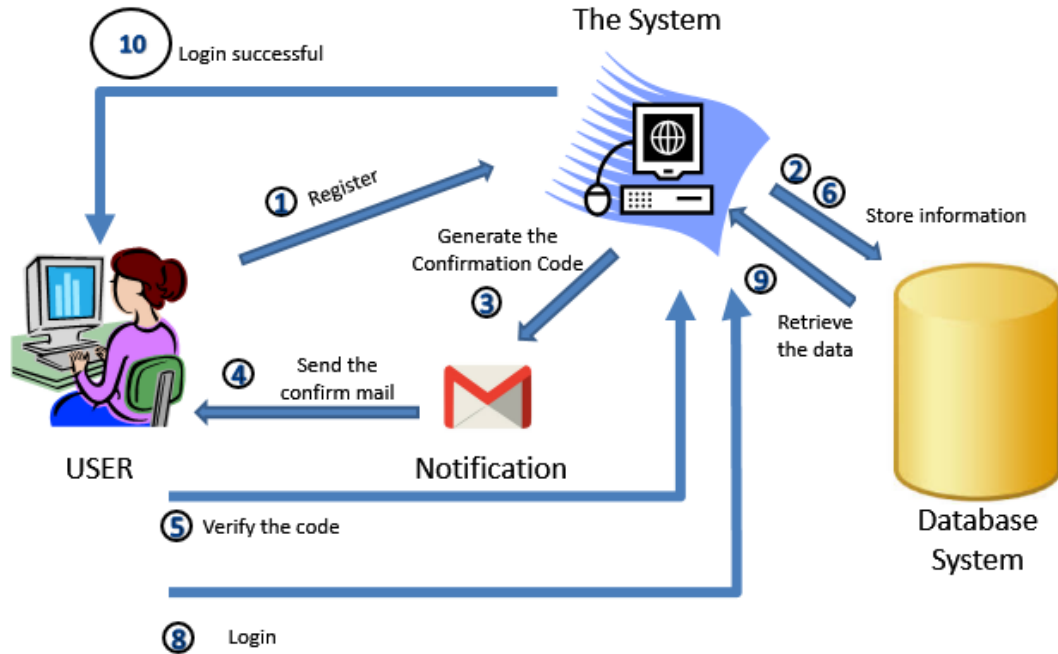


Figure 3.9 Block Diagram of Login Module

Explanation

Firstly, the Agent registers for an account of Individual Insurance Agency System. After all the verification process of the account is done, it will store into database. The system will send the confirmation code to the Agent through Email. So, the Agent will verify the code by clicking the link sent by the system. After verified, the agent is become as one of the user, thus they can login the web based and use the functions.

2. Notification

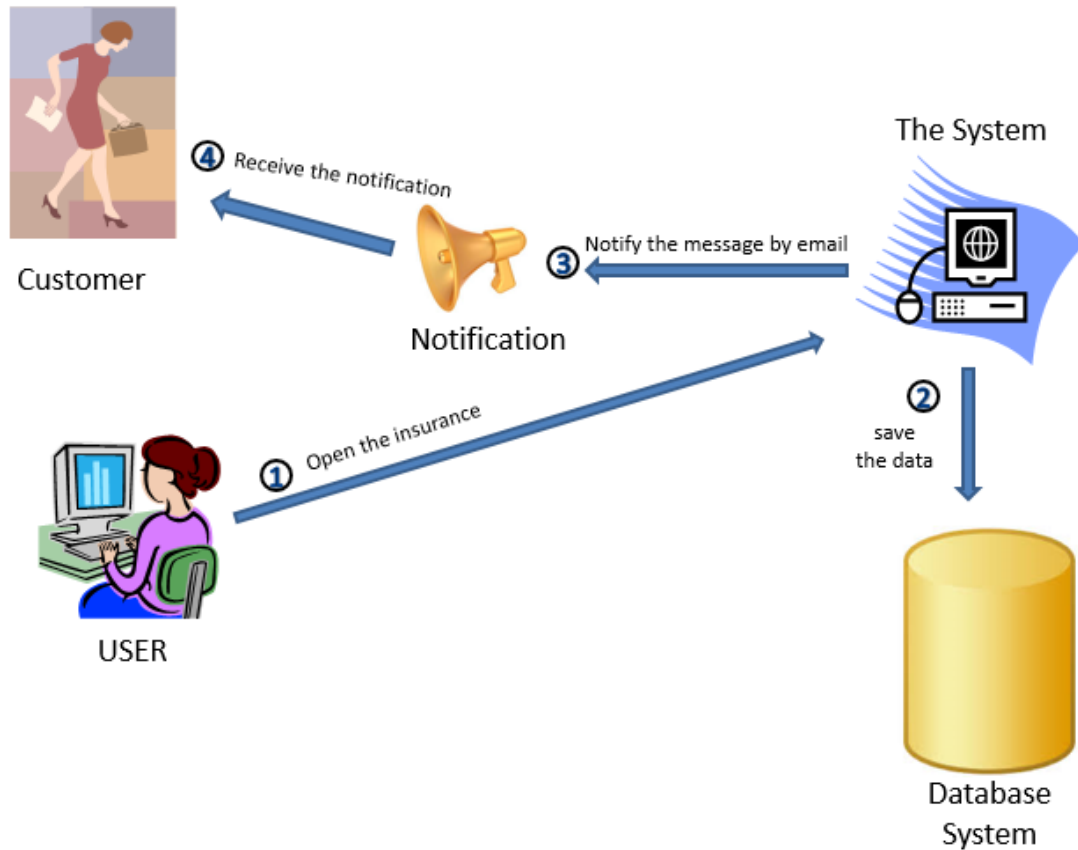


Figure 3.10 Block Diagram of Notification

Explanation

From the Figure 3.10 above, the user is opened the insurance, and then the system will store the value in database. After that, the system will generate an email and notify the customer through email.

3. Report Module

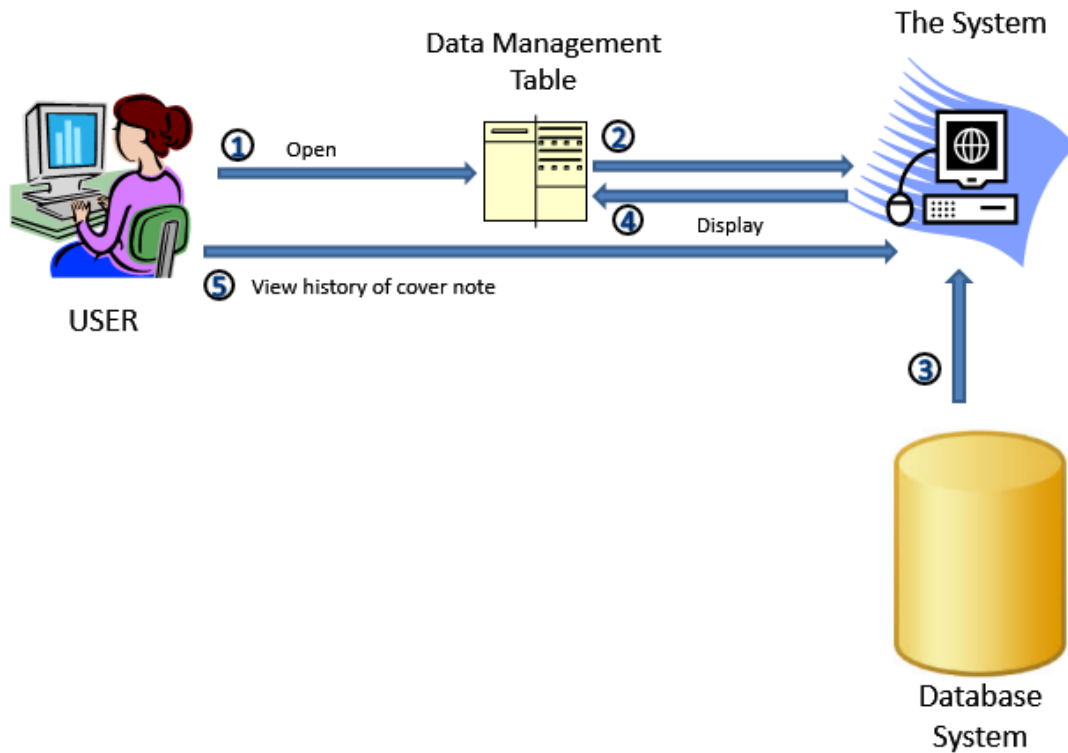


Figure 3.11 Block Diagram of Data Management Table

Explanation

Once the user opens the Data Management Table, the table will request data from database system and displayed into table form. The user can also view back all of the cover note in customer details history.

4. Reminder

(i) Reminder for customer insurance cover period expire soon

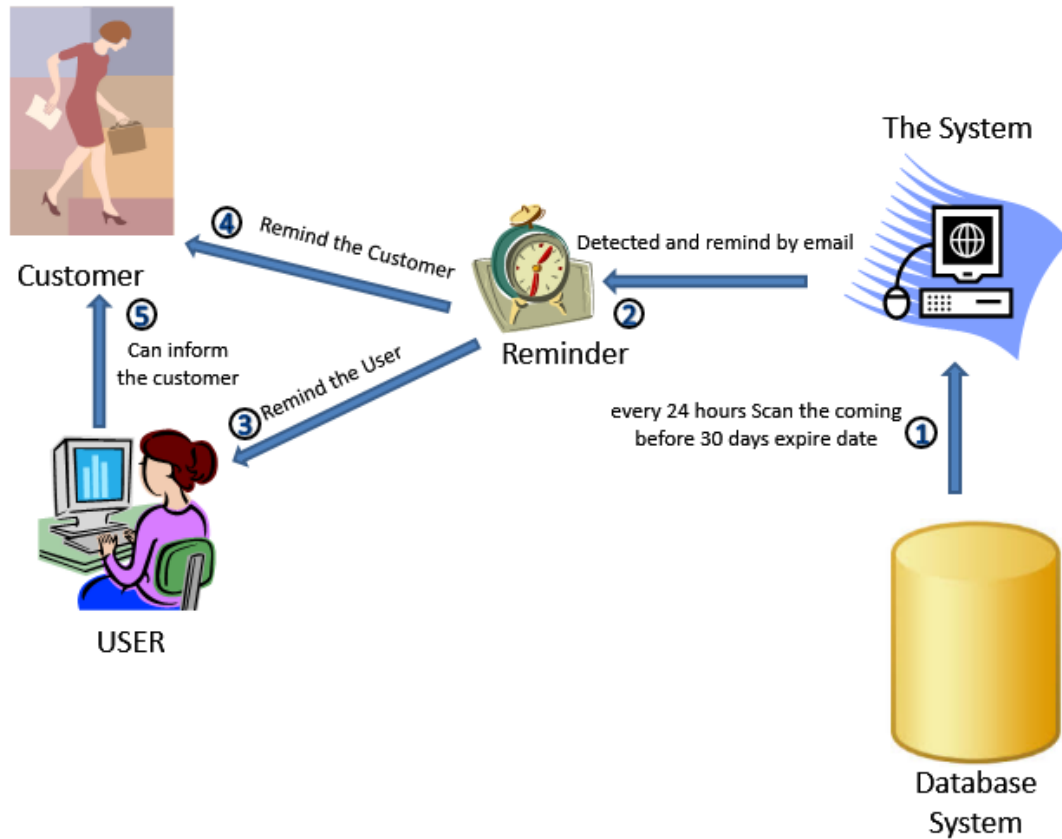


Figure 3.12 Block Diagram of Reminder for customer insurance cover period expire soon

Explanation

Firstly, when the system starts to run every 24 hours, it will check the coming periods before 30 days of expire date of customer’s insurance cover. Secondly, the system will analyze in a list who is nearer to expire date. Thirdly, the system will remind the user and customer that the insurance is near to expire date, and ask them for renew. The system will check and send email to customer once time only, whereas the agent can send multiple times to inform the customer.

(ii) Reminder for agent the submission of payment due

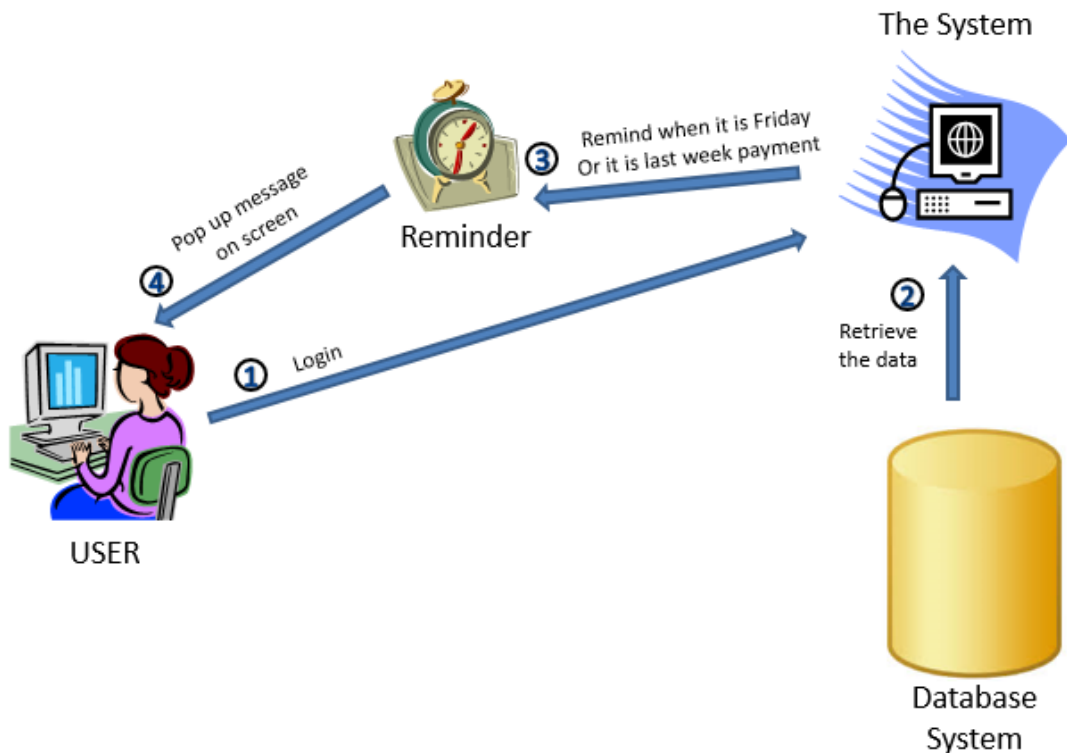


Figure 3.13 Block Diagram of Reminder for agent the submission of payment due

Explanation

From Figure 3.13 above, the user has to login the system. The system will check from database on which it is Friday or last week payment that haven't settle yet, the payments due will be reminded to the agent for faster submit to the insurance company that money paid by customer. When the user has not bank transfer yet, it will keep pop up the message to user until the payment is made completely.

5. Searching and Auto Input Module

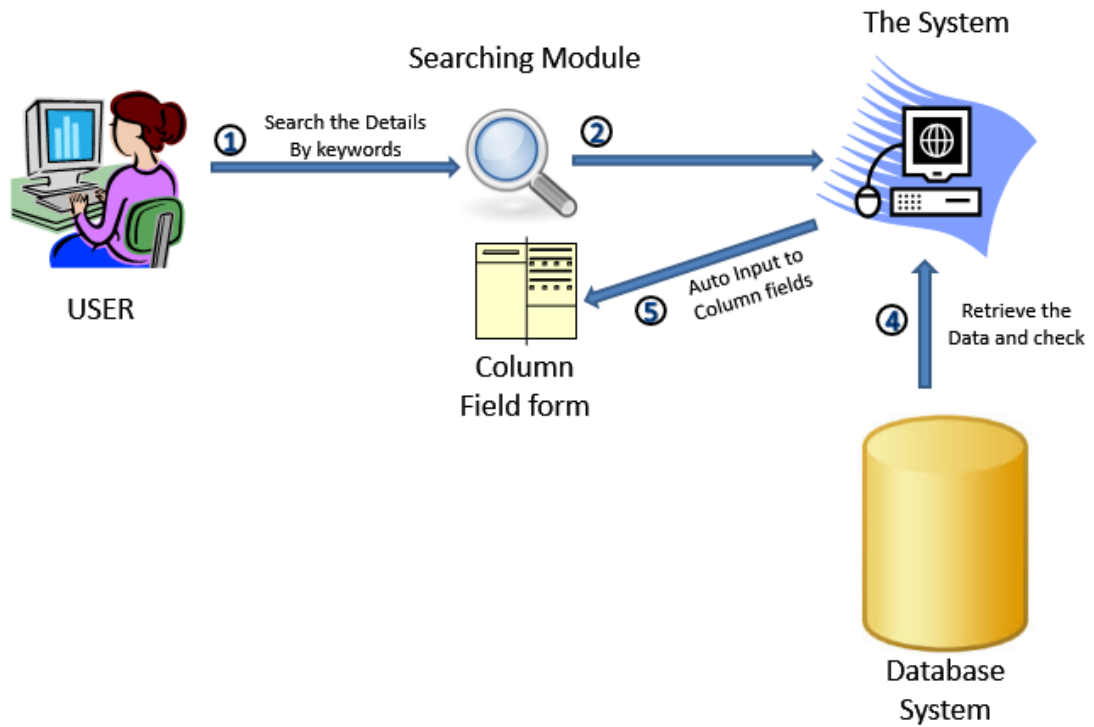


Figure 3.14 Block Diagram of Searching and auto input Module

Explanation

From the Figure 3.14, the user inputs a sentence in the search bar, the system will match the information from database system. After the result comes out, it will show a list of result in table view and return to the user.

6. Printing Module

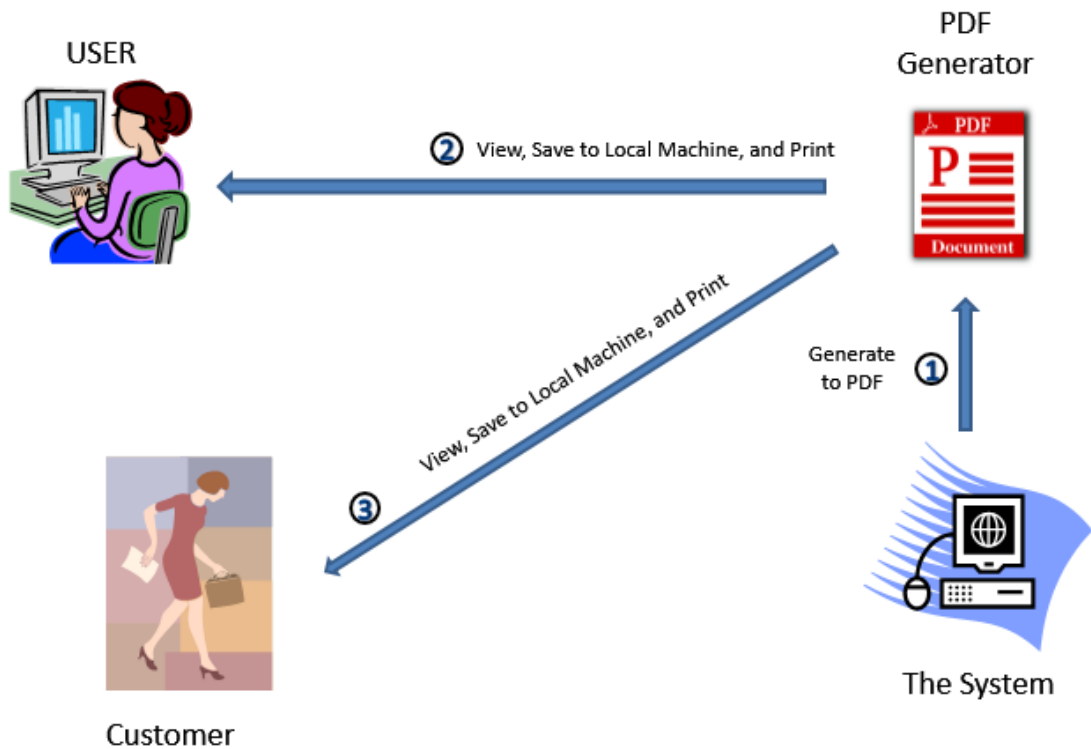


Figure 3.15 Figure Block Diagram of Printing Module

Explanation

From the Figure 3.15, after the agent new or renew the insurance or quotation, the system will auto generate the result in PDF format. Therefore, the agent and customer can view, save to local machine, and print it out.

7. Settings Module

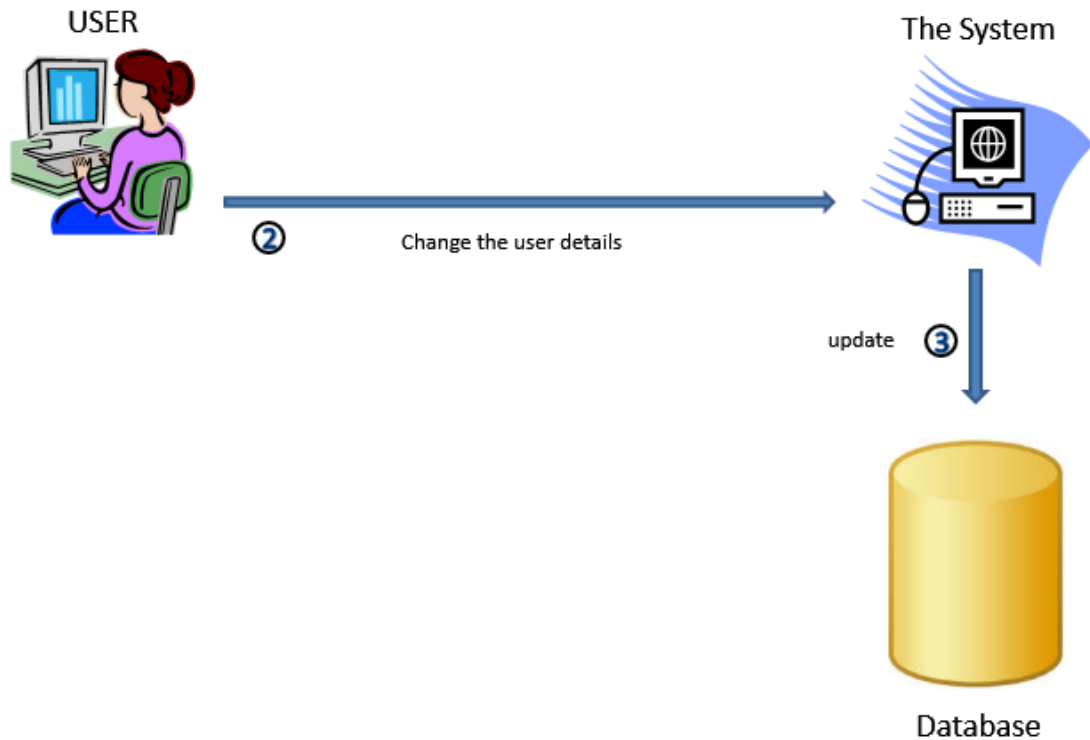


Figure 3.16 Block Diagram of Quotation

Explanation

The agent needs to amend their information when they are changing their information such as telephone number, because they maybe are loss their phone, so need to change a new number. This module can allow the user no need make any contact with the company to change their information.

8. Quotation

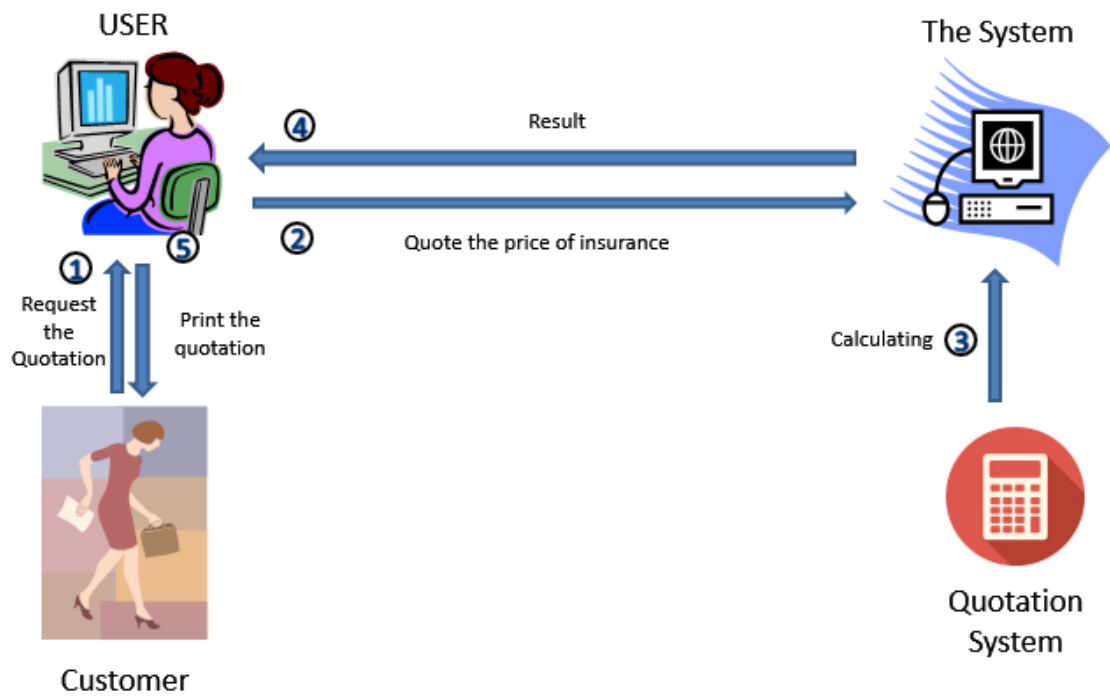


Figure 3.17 Block Diagram of Quotation

Explanation

From the Figure 3.17, the customer requests the price of insurance. The user will quote amount price of insurance to the system. The system will auto calculate out the result and send back to the user. So, user will let the customer knows the final answer and 3 types of insurance companies' prices.

3.6 UML Diagram

3.6.1 Use-Case Diagram

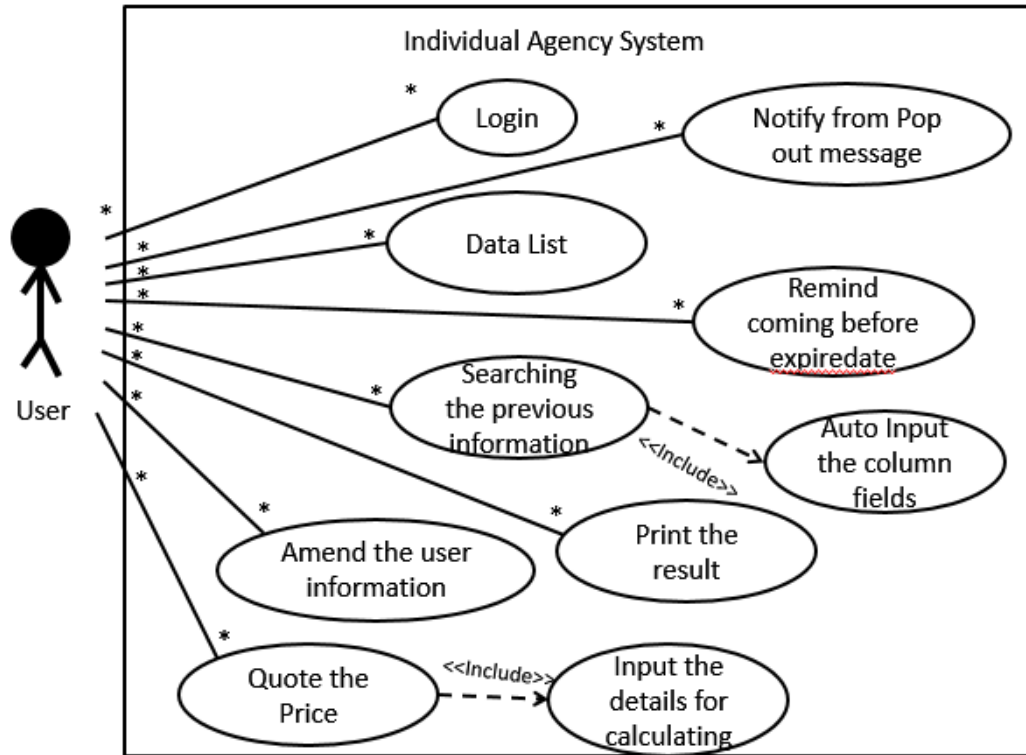


Figure 3.18 Use Case Diagram

3.6.2 Activity Diagram

1. Login

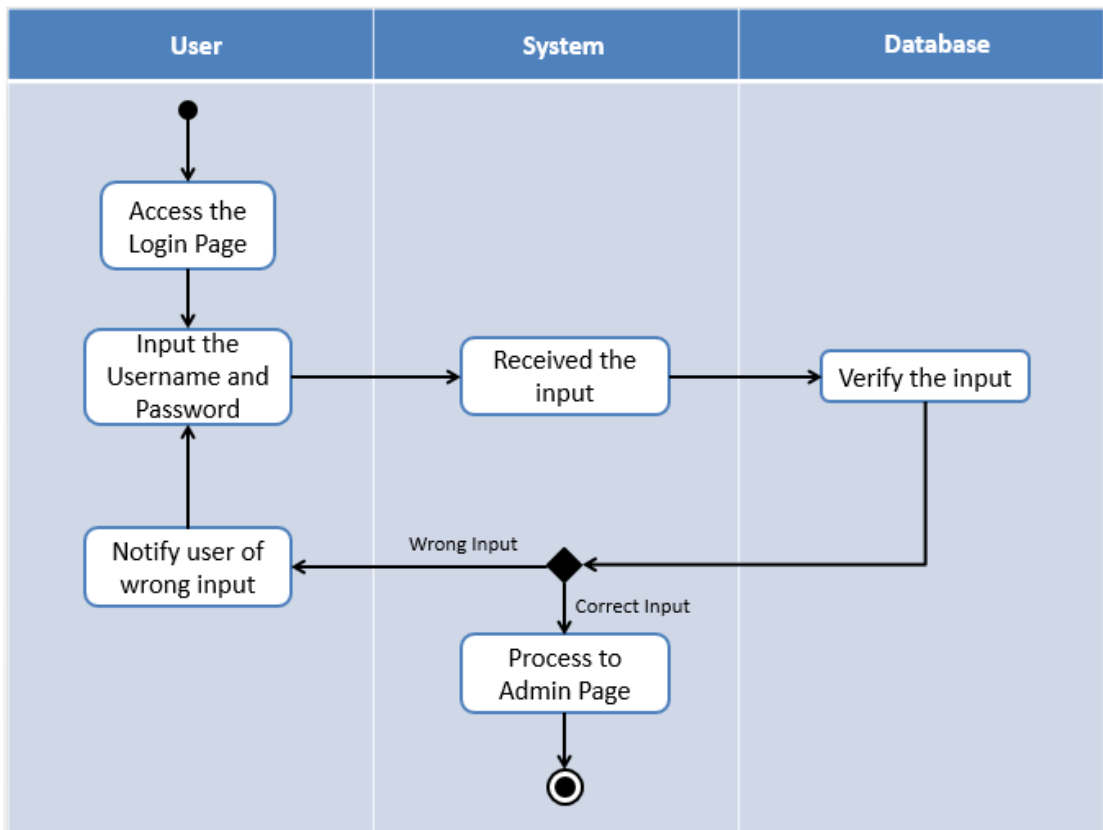


Figure 3.19 Activity Diagram of Login

2. Notify the message

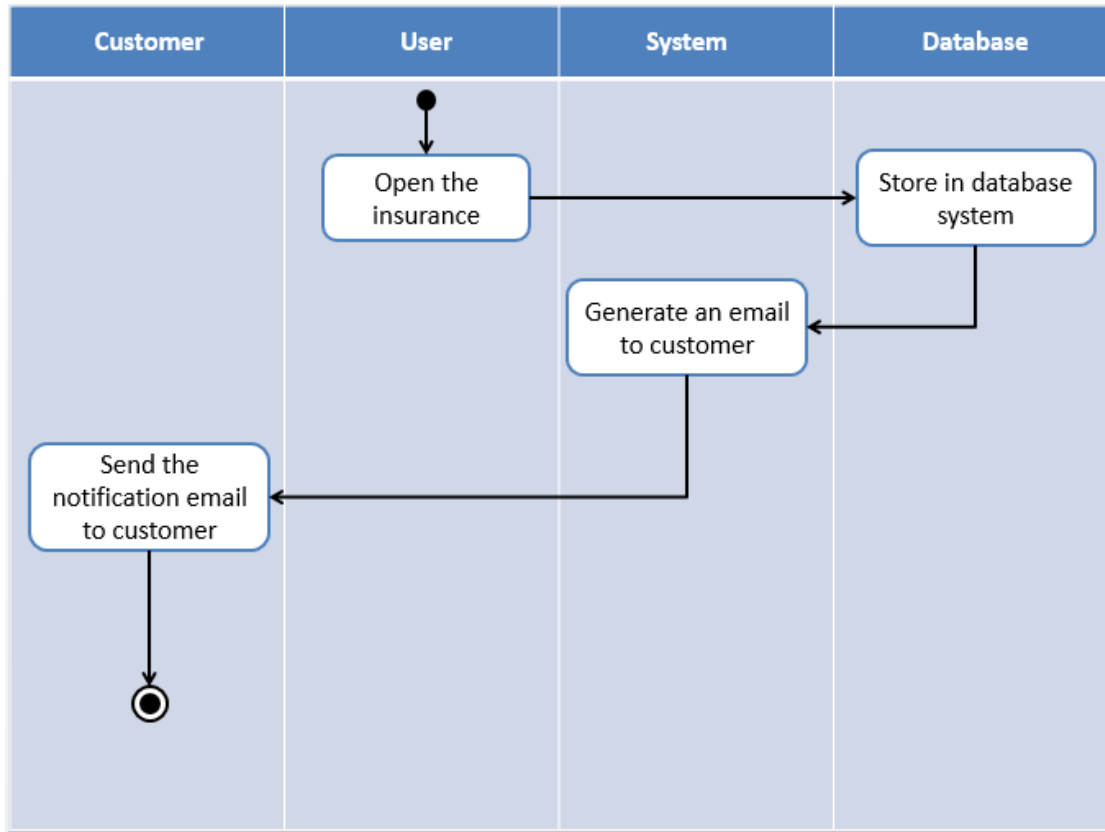


Figure 3.20 Activity Diagram of Notification

3. Manage the Data

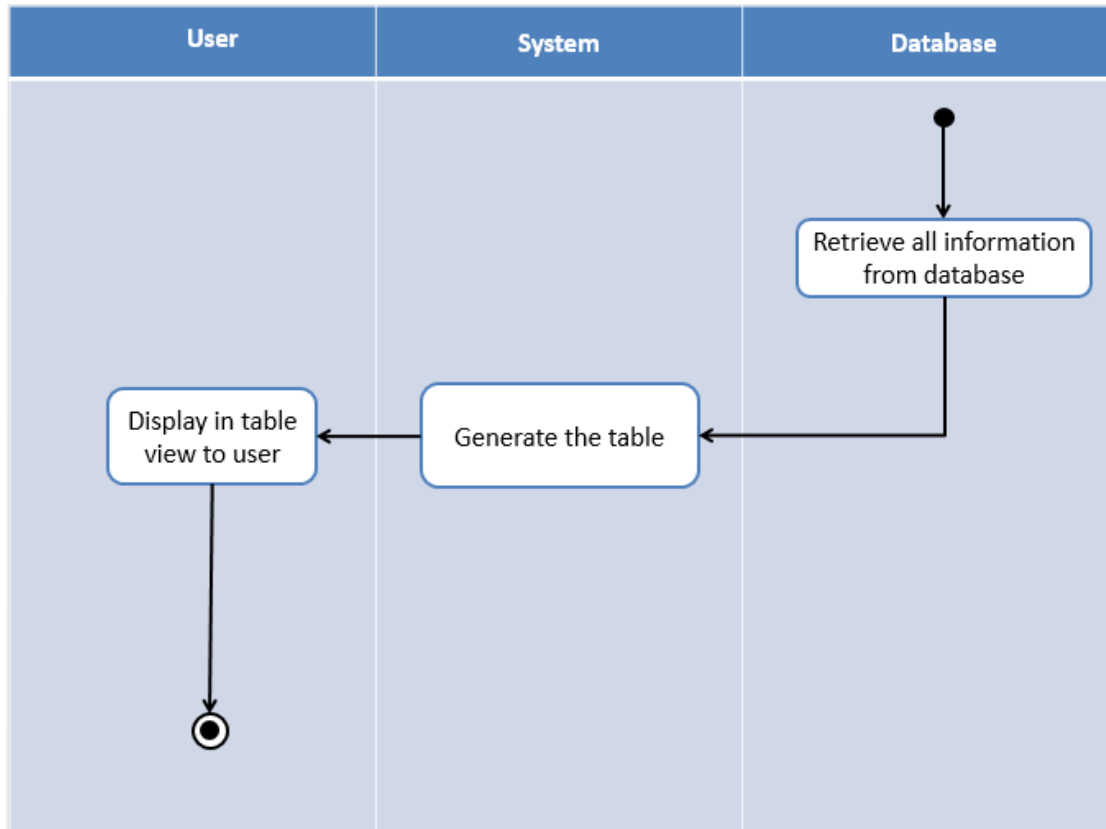


Figure 3.21 Activity Diagram of Data Management Table

4. (i) Remind Customer's insurance cover period expire soon

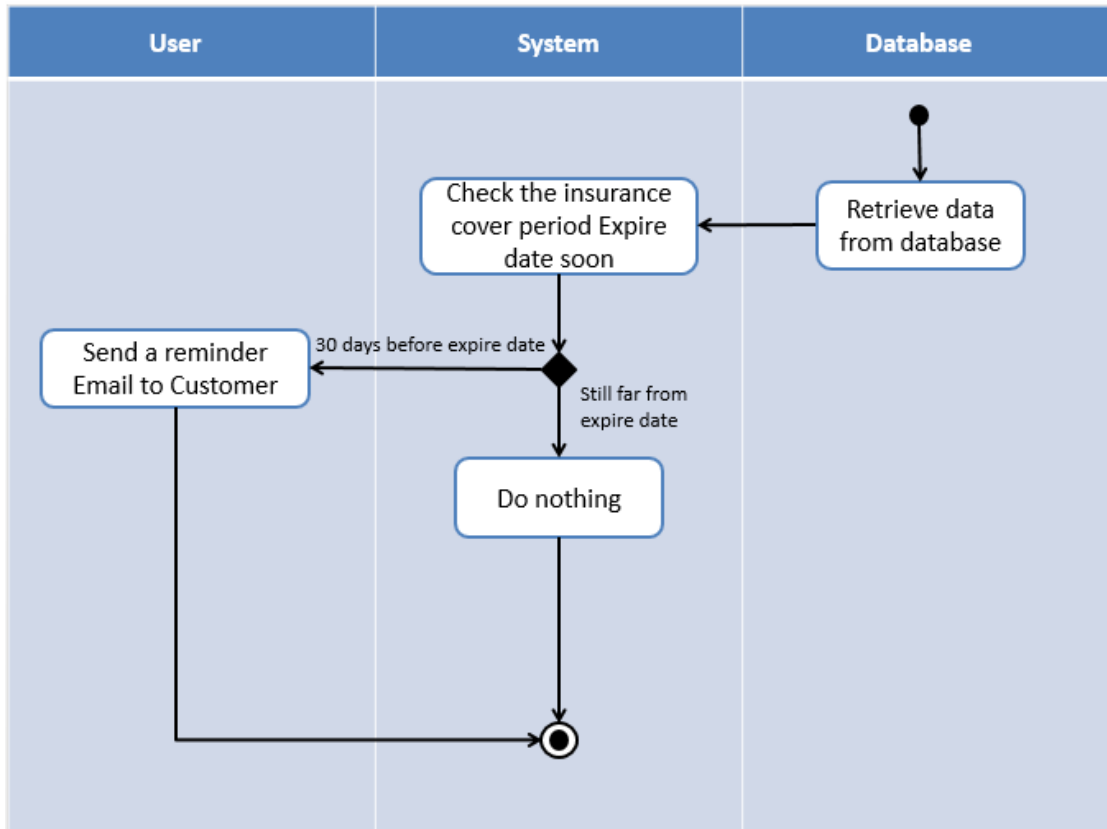


Figure 3.22 Activity Diagram of Reminder for customer insurance cover period expire soon

(ii) Reminder agent need to submit the payment due

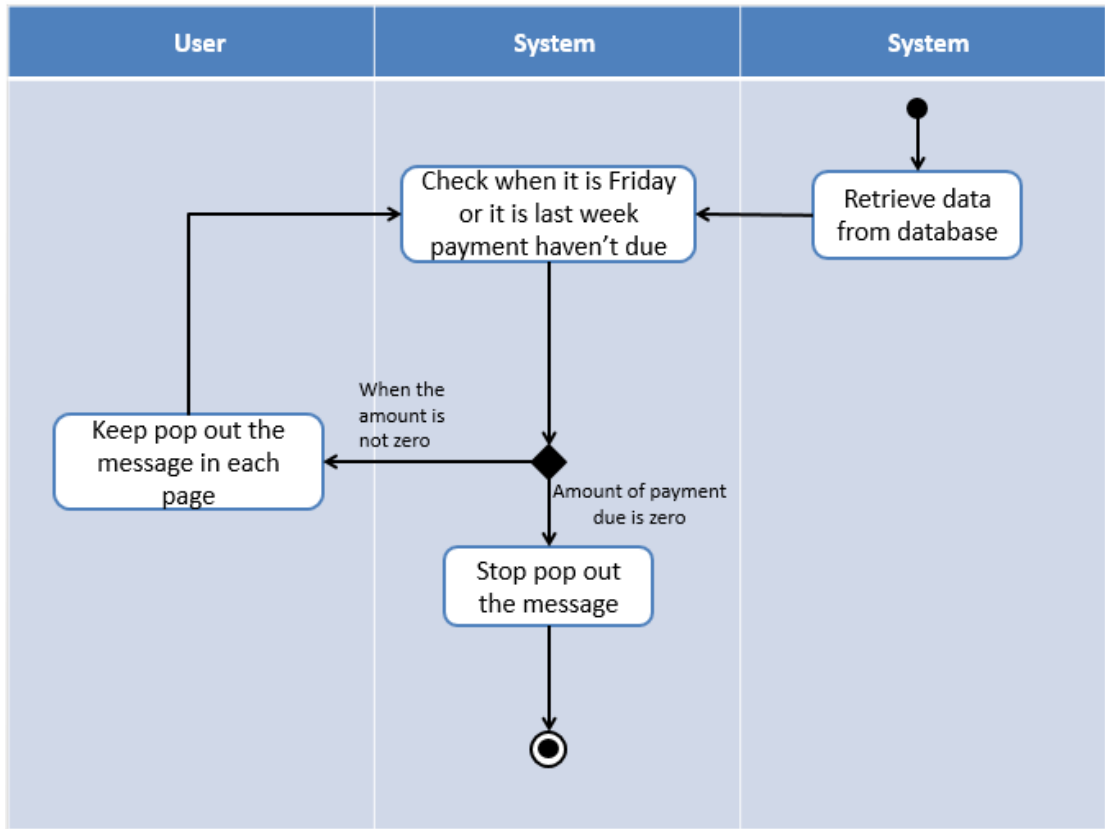


Figure 3.23 Activity Diagram of Reminder for agent the submission of payment due

5. Searching the Details and auto input the fields

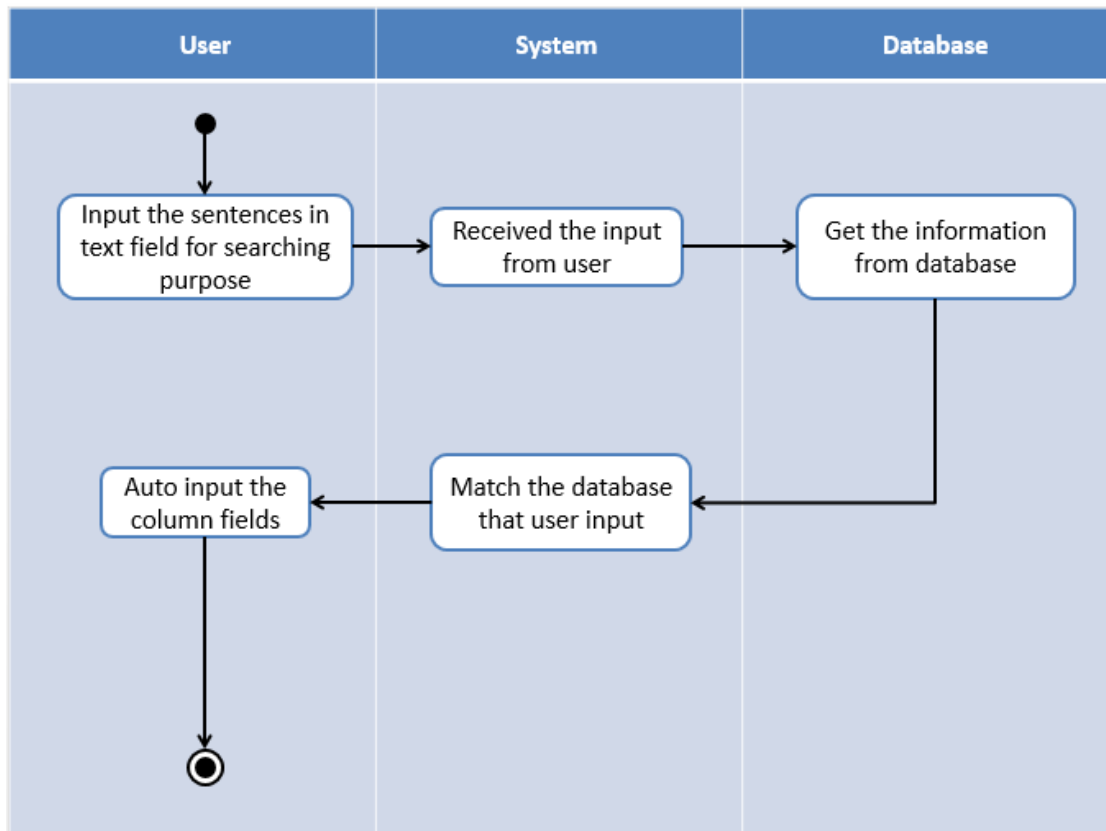


Figure 3.24 Activity Diagram of Searching and auto input module

6. Printing Module

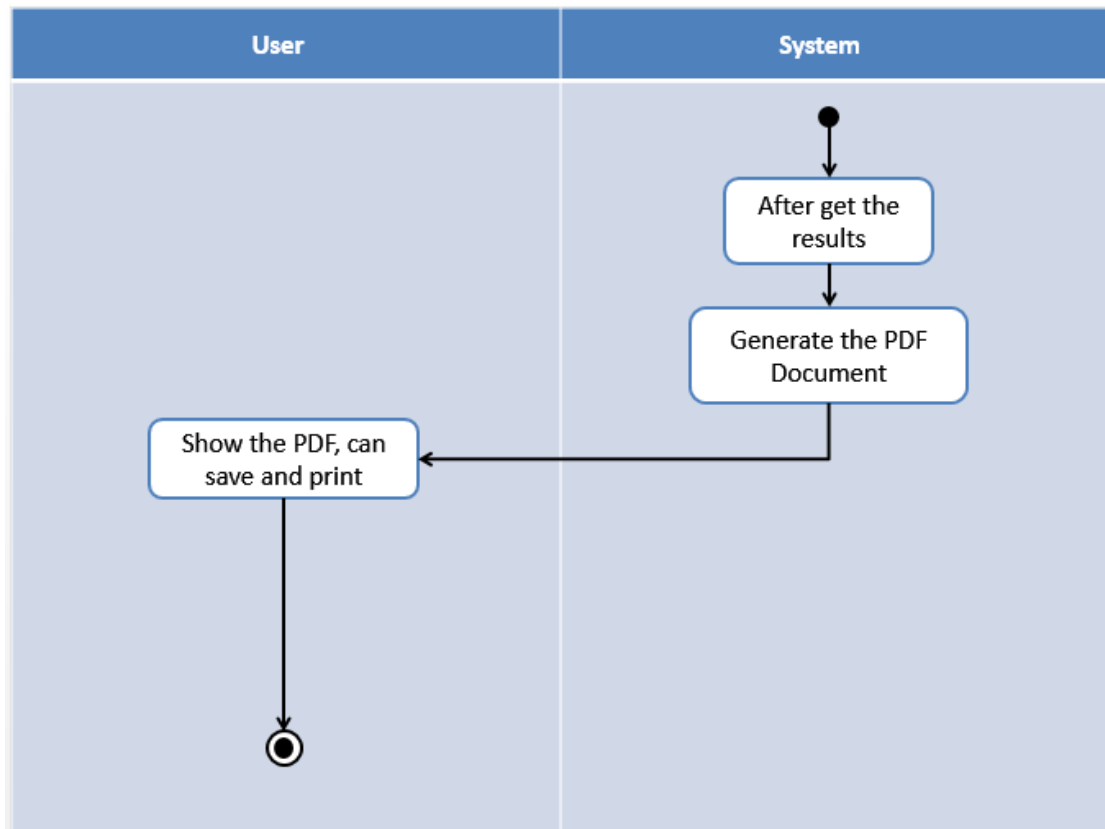


Figure 3.25 Activity Diagram of Printing Module

7. Settings Module

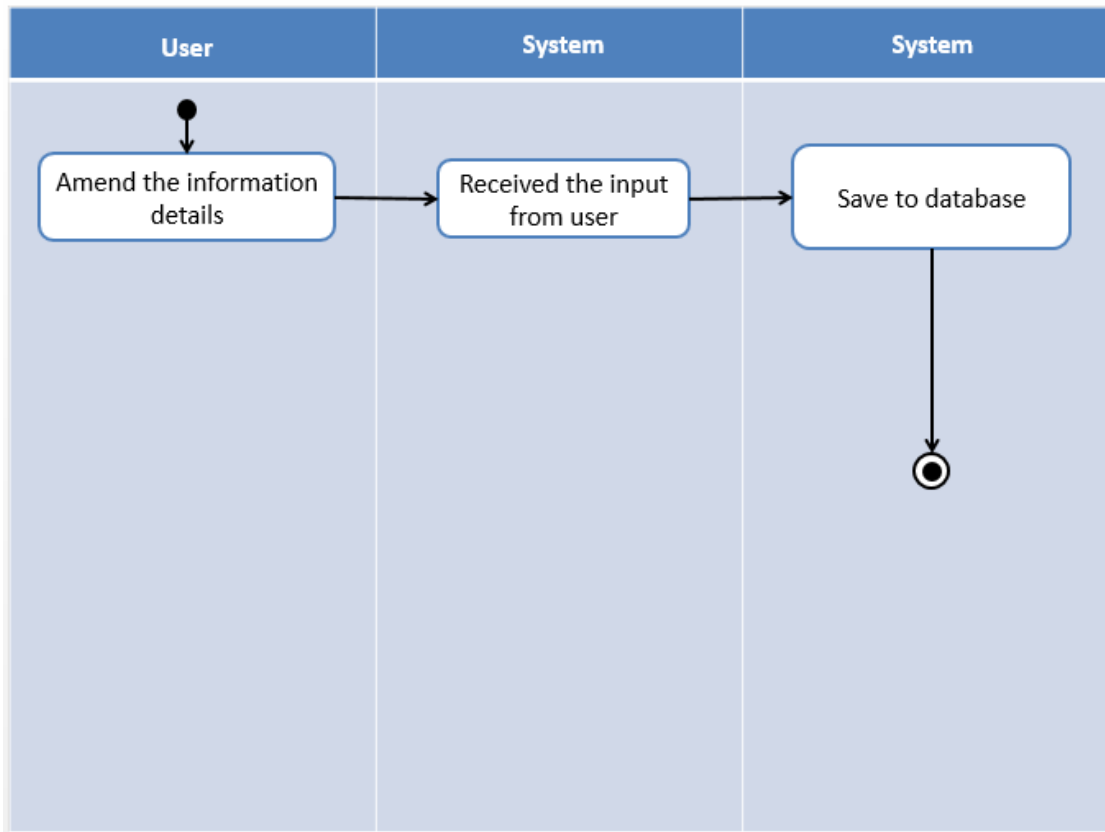


Figure 3.26 Activity Diagram of Settings Module

8. Quote the Price

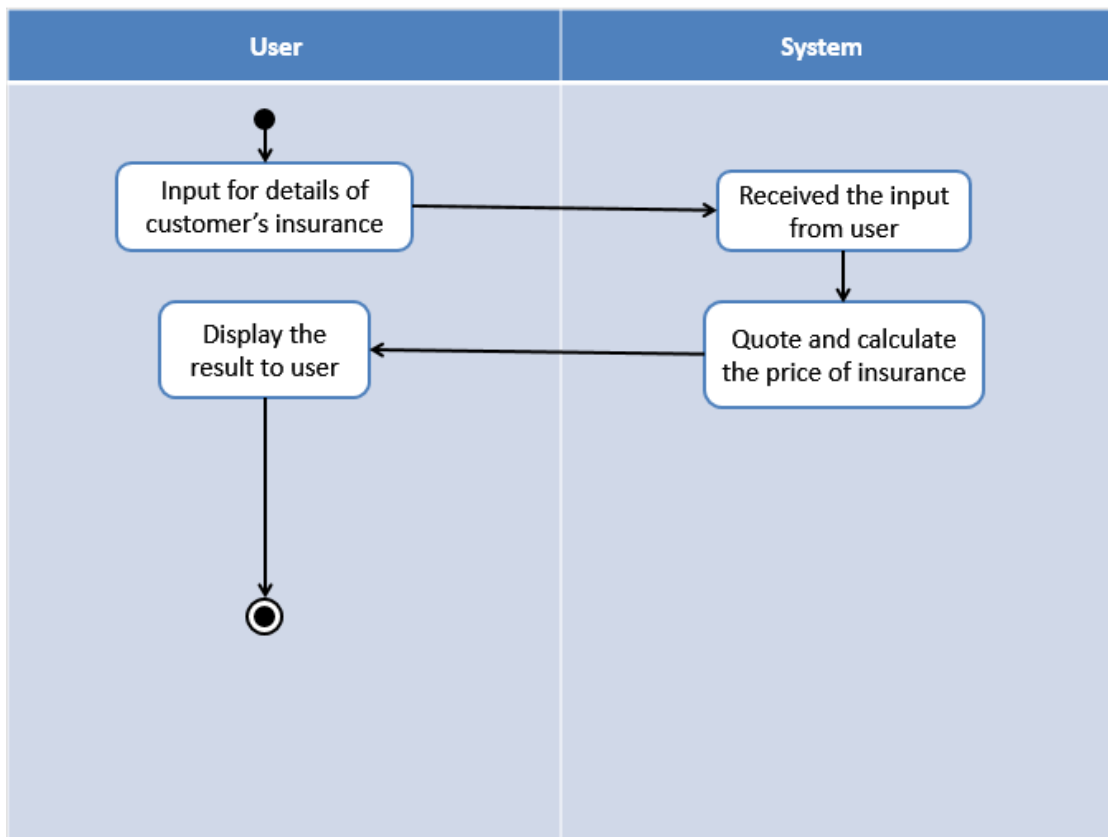


Figure 3.27 Activity Diagram of Quotation

3.7 Database Design

3.7.1 ERD Diagram

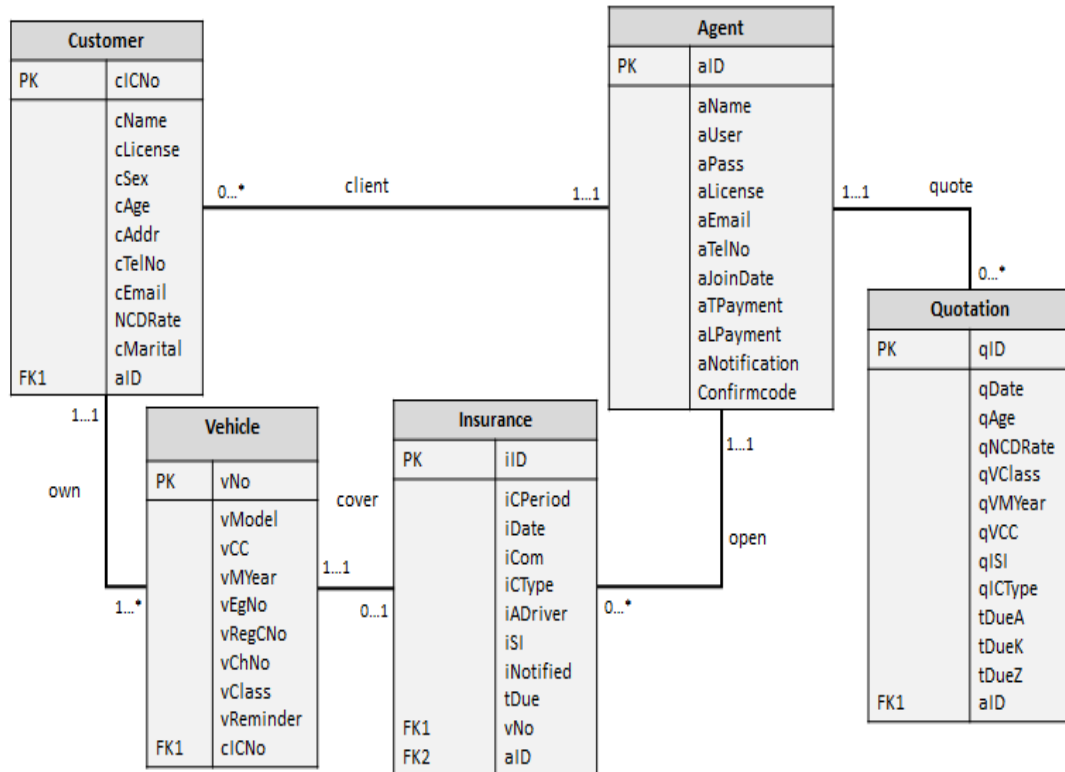


Figure 3.28 ERD Diagram

3.7.2 Description of ERD Diagram

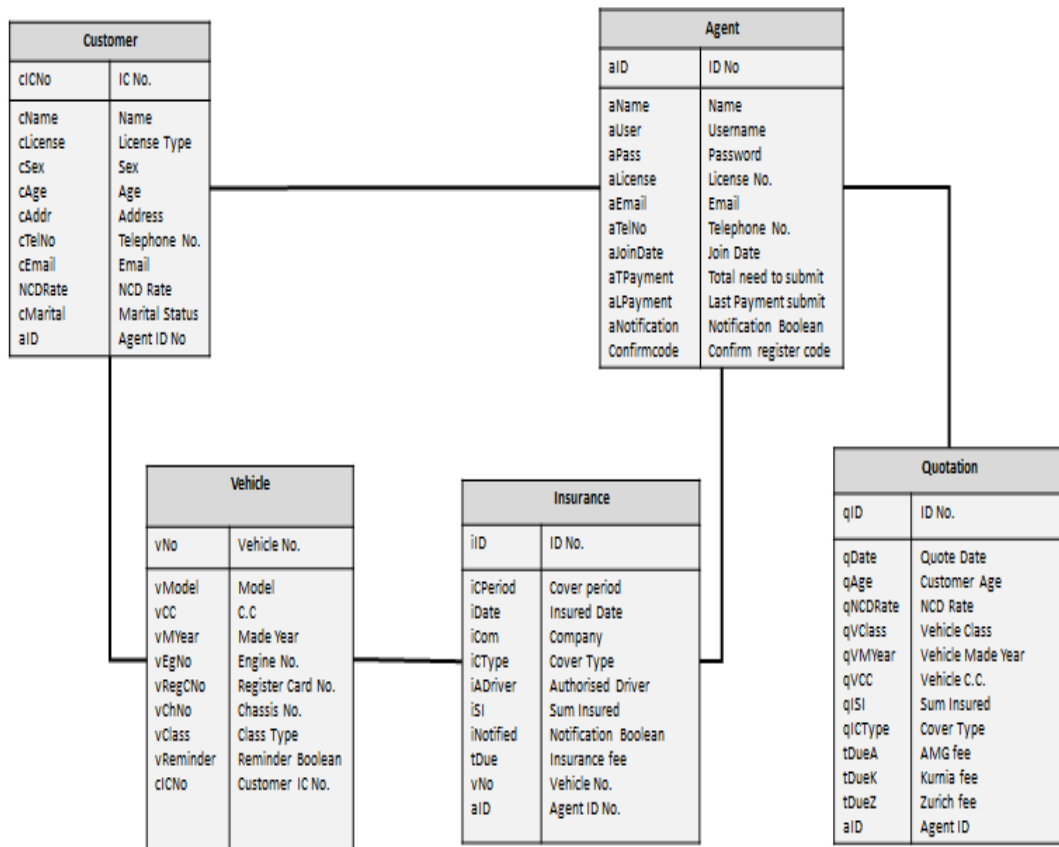


Figure 3.29 Description of ERD Diagram

3.7.3 Object Diagram

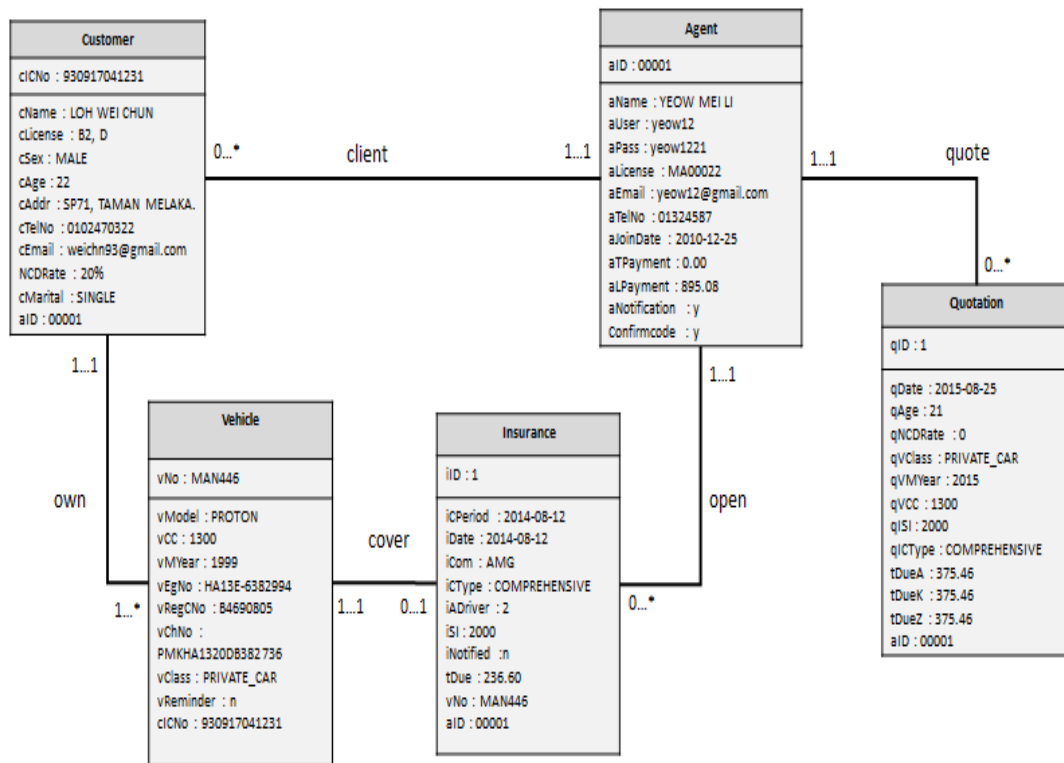


Figure 3.30 Class Diagram of Quotation

3.8 User Interface Design

There are have many interface design for user, because it is save time bring user reach to destination.

Menu Bar

Before Login

After Login



Figure 3.31 Menu Bar

Home Page

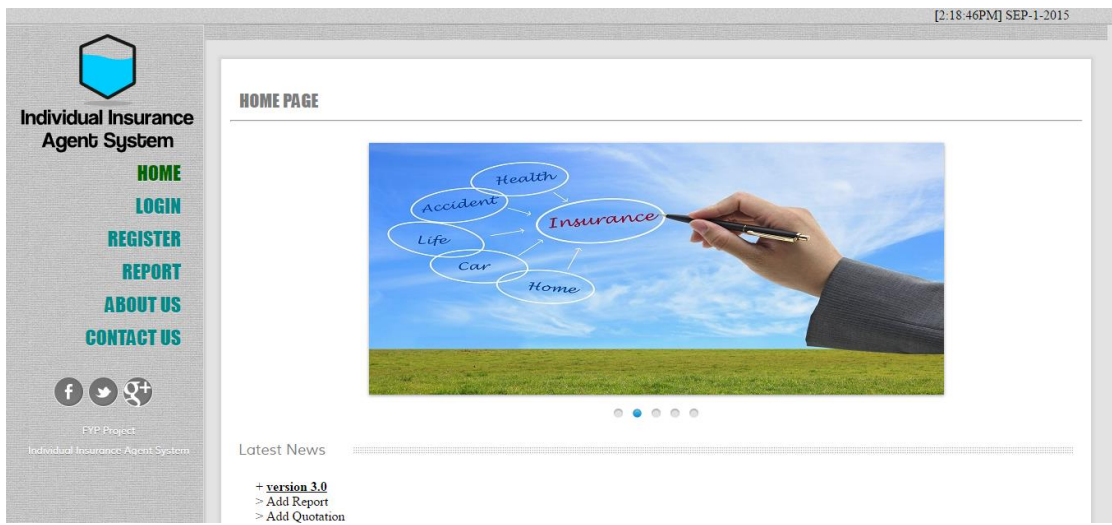


Figure 3.32 Home Page

Login Page

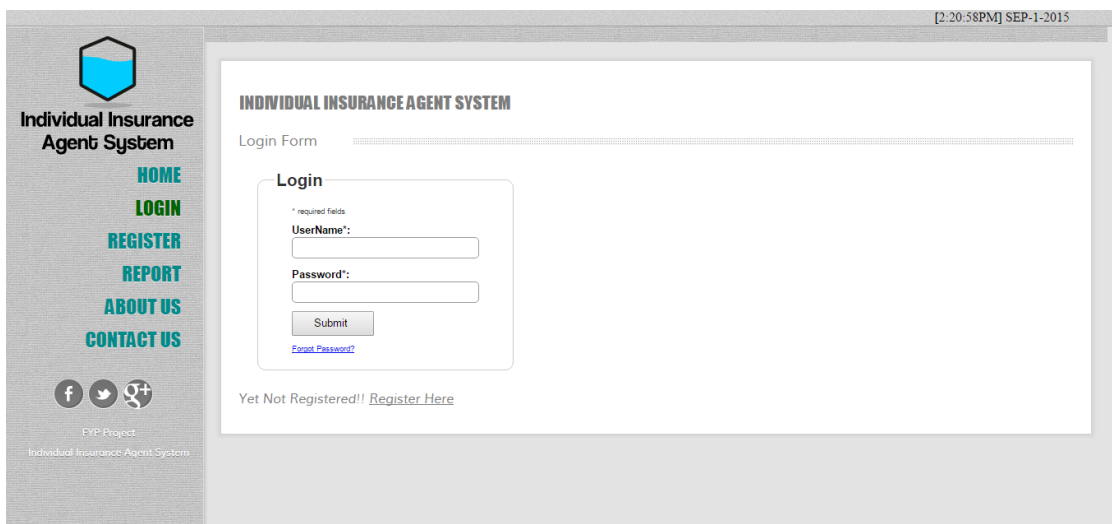
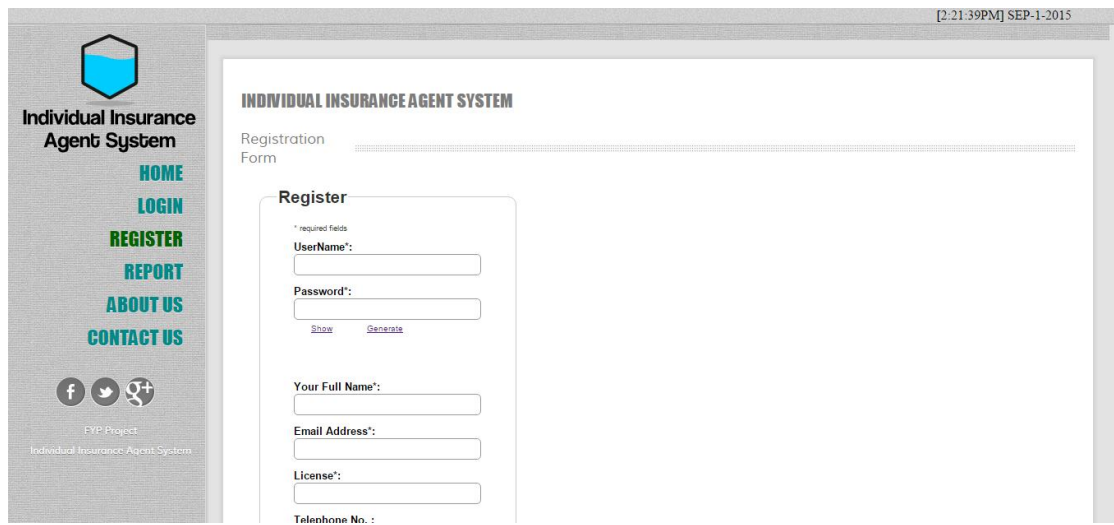


Figure 3.33 Login Page

Register Page



Individual Insurance Agent System

HOME
LOGIN
REGISTER
REPORT
ABOUT US
CONTACT US

Individual Insurance Agent System

Individual Insurance Agent System

Registration Form

Register

* required fields

UserName*:

Password*:

[Show](#) [Generate](#)

Your Full Name*:

Email Address*:

License*:

Telephone No. :

[2:21:39PM] SEP-1-2015

Figure 3.34 Register Page

Confirm Register Page



Confirm registration

Please enter the confirmation code in the box below

* required fields

Confirmation Code*:

Submit

Figure 3.35 Confirm Register Page

Report Page (for customer use)

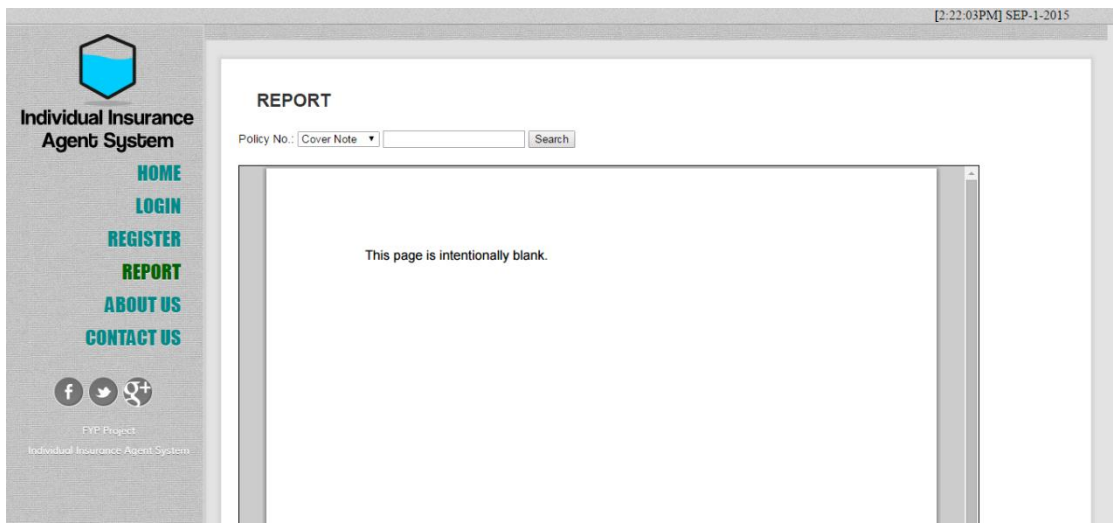


Figure 3.36 Report Page (for customer use)

Contact Us Page

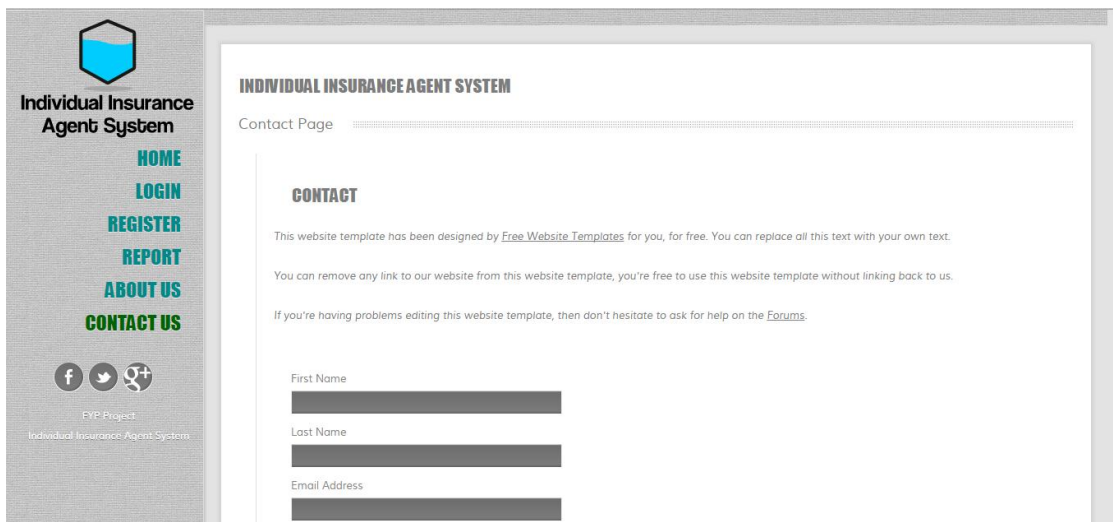


Figure 3.37 Contact Us Page

Index Home Page (After Login)

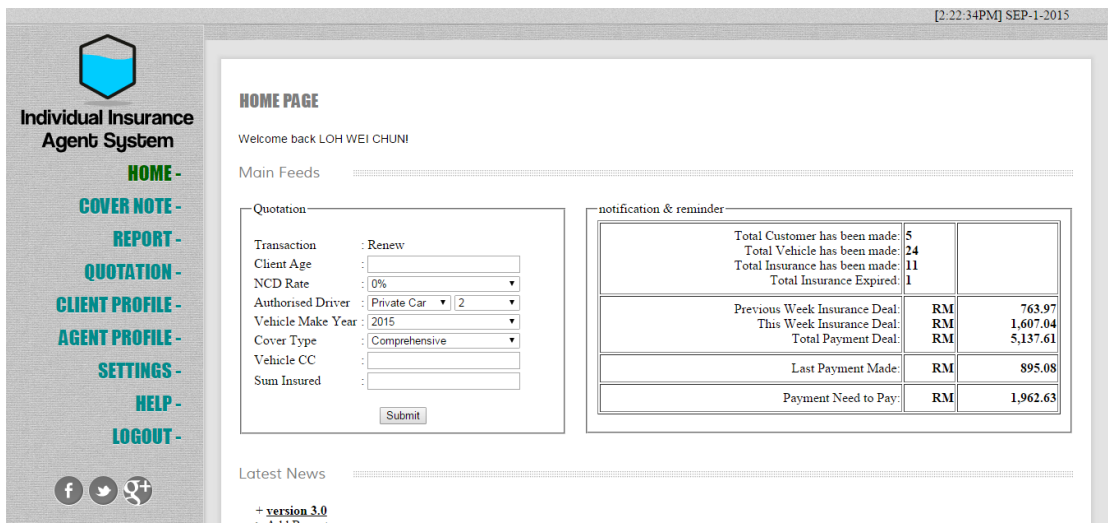


Figure 3.38 Index Home Page (After Login)

Pop up message at every Page

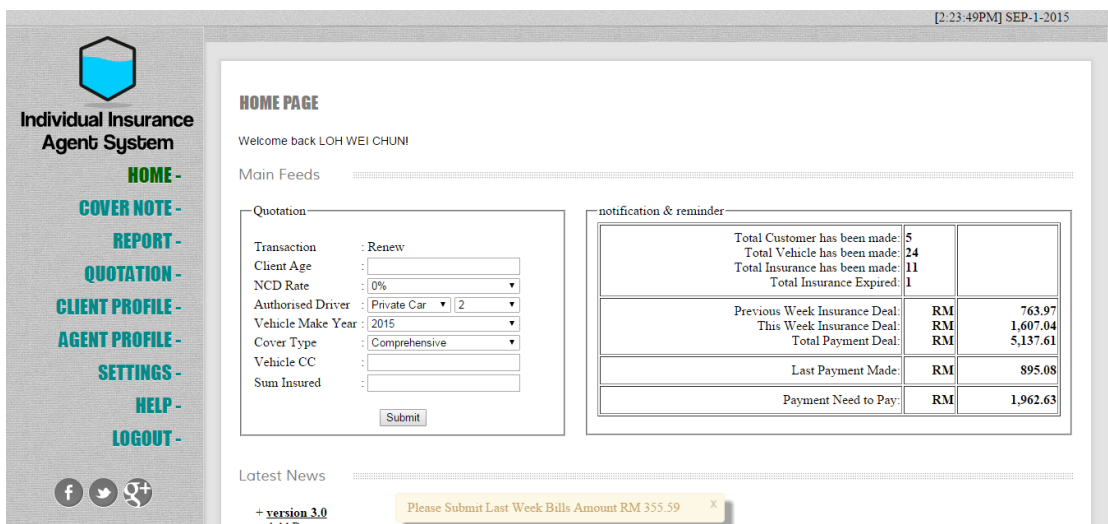


Figure 3.39 Pop up message at every Page

Cover Note Page

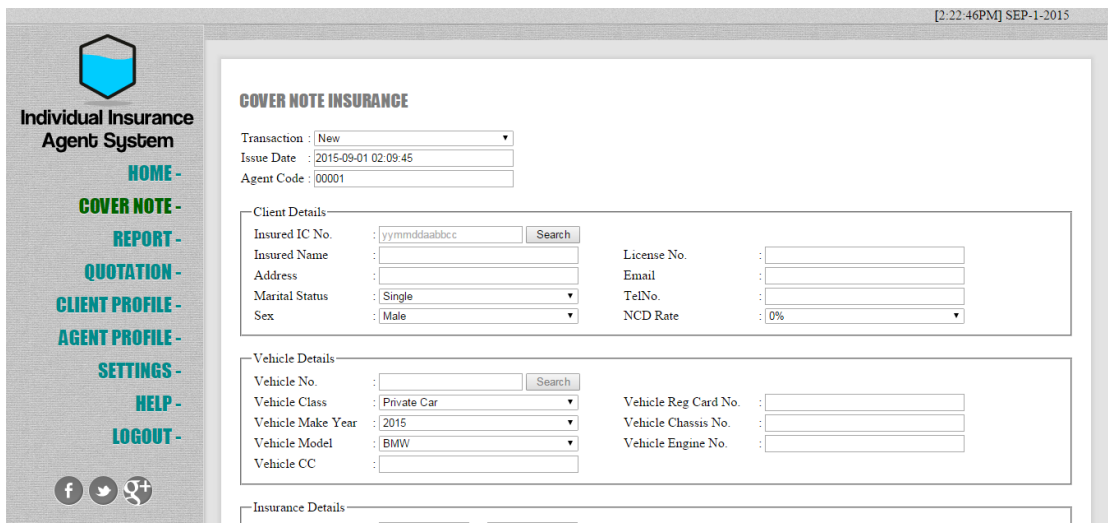


Figure 3.40 Cover Note Page

Report Page (Agent Use)

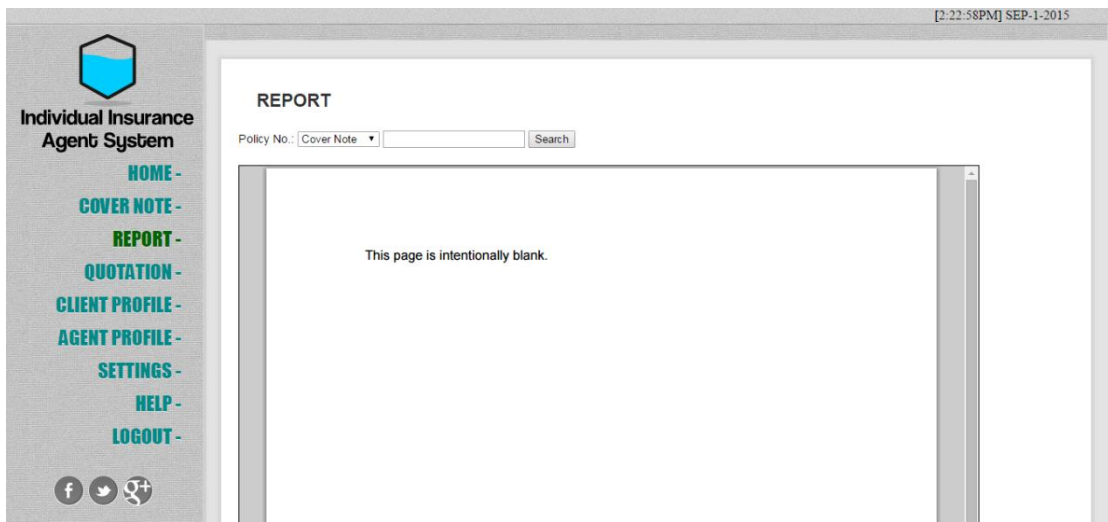


Figure 3.41 Report Page (Agent Use)

Quotation Profile Page

qDate	qVClass	qVMYear	qVCC	qISI	qICType	tDueA	tDueK	tDueZ	qID
2015-08-25	PRIVATE_CAR	2007	150CC	RM 20,000.00	COMPREHENSIVE	RM 758.76	RM 758.76	RM 758.76	33
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	19
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	20
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	21
2015-08-25	PRIVATE_CAR	2015	1300CC	RM 2,000.00	COMPREHENSIVE	RM 375.46	RM 375.46	RM 375.46	22
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	23
2015-08-25	MOTORCYCLE	1995	97CC	RM 3,300.00	THIRD_PARTY	RM 0.00	RM 0.00	RM 226.65	24
2015-08-25	MOTORCYCLE	1995	97CC	RM 3,300.00	COMPREHENSIVE	RM 225.13	RM 225.13	RM 182.10	25
2015-08-25	MOTORCYCLE	1995	97CC	RM 3,300.00	THIRD_PARTY	RM 0.00	RM 0.00	RM 226.65	26

Figure 3.42 Quotation Profile Page

Client Profile Page

Client List			
IC No:	940823045541		
Name:	AMIN		
Address:	123		
Email:	jannice_1994@hotmail.com		
TelNo:	0102470322		
Marital:	SINGLE		
Vehicle / Insurance Details			
Vehicle No:	MCP2281	Class:	PRIVATE_CAR
Model:	BMW	Engine No.:	BBB321
C.C:	150	Register No.:	AAA123
Year of Make:	1995	Chassis No.:	CCC213
Insured Date	Cover Period	Total Due	Insurance ID (PDF)
2014-07-25 01:08:28	From 2014-08-30 To 2015-08-30	266.64	4
2014-08-31 12:08:46	From 2014-08-31 To 2015-08-31	895.08	16
Vehicle / Insurance Details			
Vehicle No:	MCP2282d	Class:	PRIVATE_CAR
Model:	BMW	Engine No.:	bbb321
C.C:	150	Register No.:	aaa123
Year of Make:	1995	Chassis No.:	ccc213

Figure 3.43 Client Profile Page

Agent Profile Page

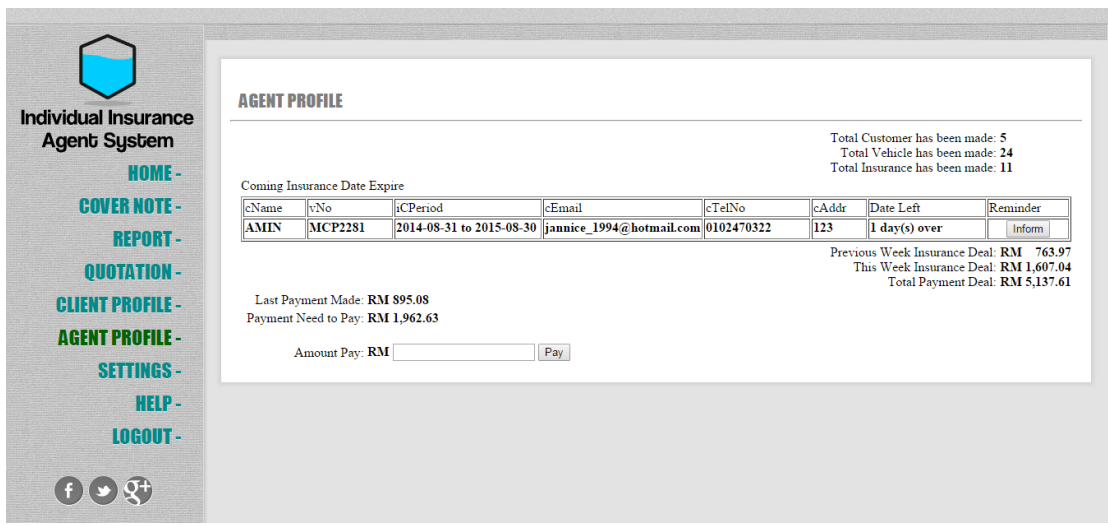


Figure 3.44 Agent Profile Page

Settings Page

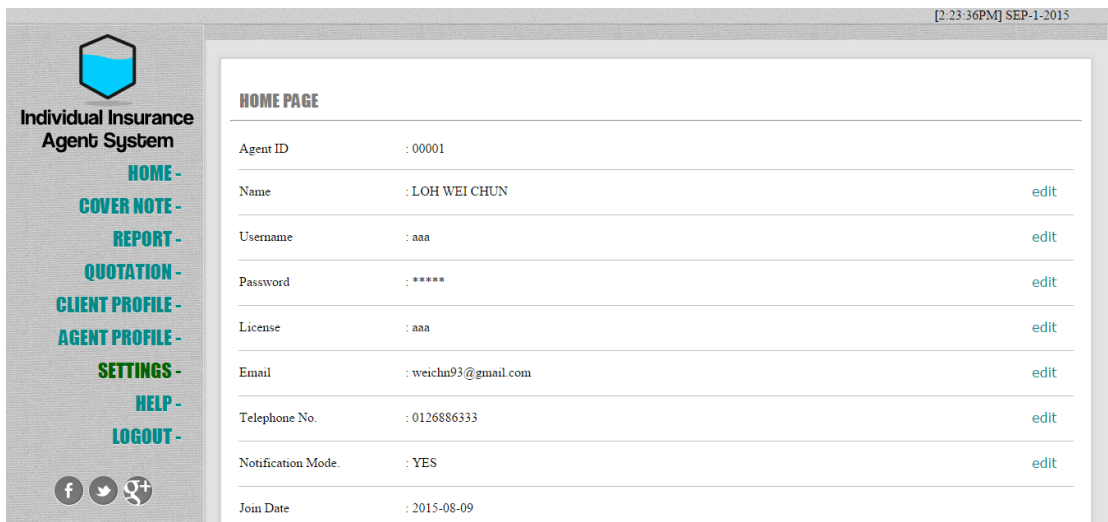


Figure 3.45 Settings Page

Logout Page

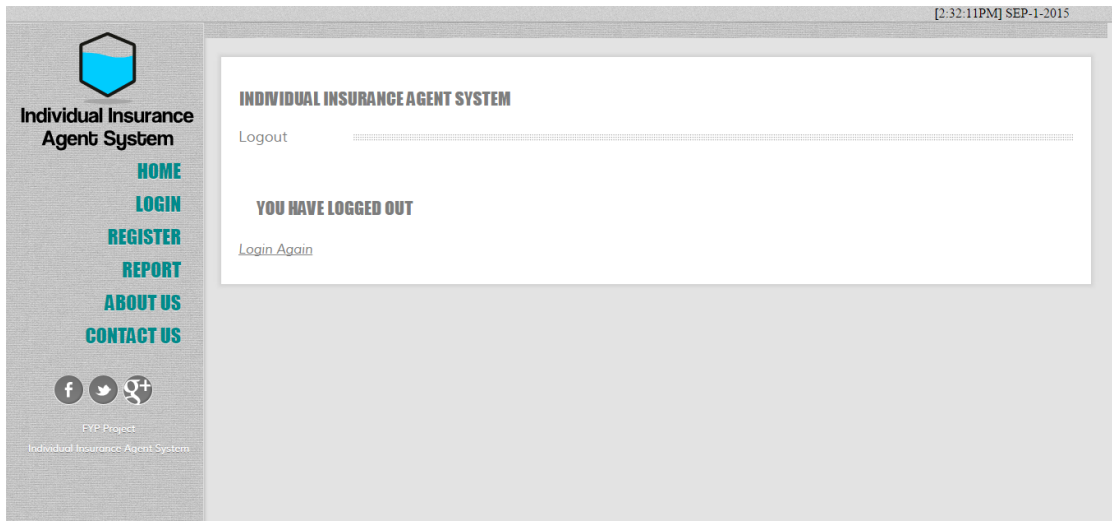


Figure 3.46 Logout Page

Chapter 4 Development and Testing

4.1 Operating Manual

4.1.1 How to register and login to the home page.

1. If you are at Home page, u must go to the register page for register a new account.



Figure 4.1 Home page before login

2. At Register Page, you are required to fill in all inputs and submit it as shown in Figure 4.2 below. (All are required fields, except Telephone No.)

Figure 4.2 Register page

3. After you success to register, the page will forward the link as shown in Figure 4.3 below.

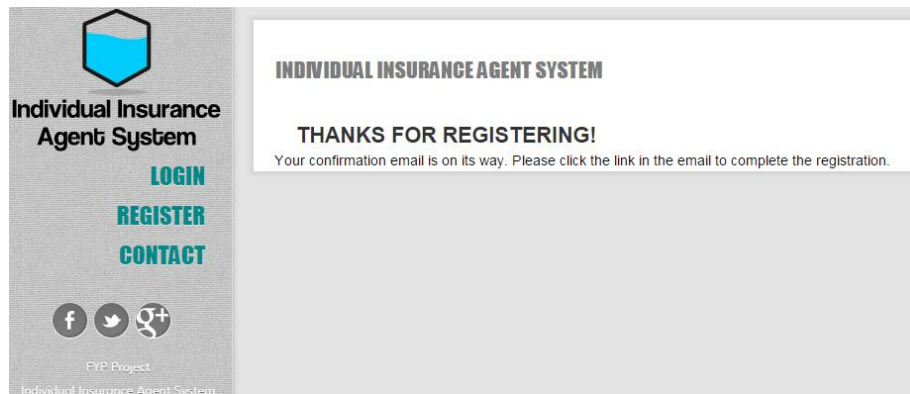


Figure 4.3 Thank you for register page.

4. The server will send you an email for confirmation purpose. Click the link and redirect to complete the register page.

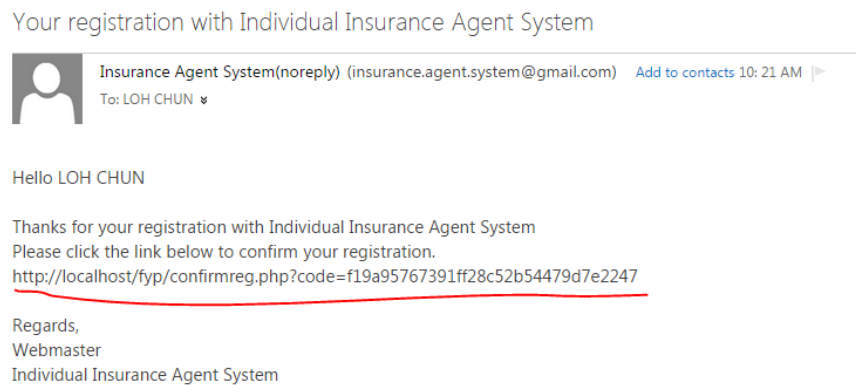


Figure 4.4Send confirmation from email

5. After success in confirmation, it will notify you through email as well. Example of completion email has sent by system in Figure 4.6

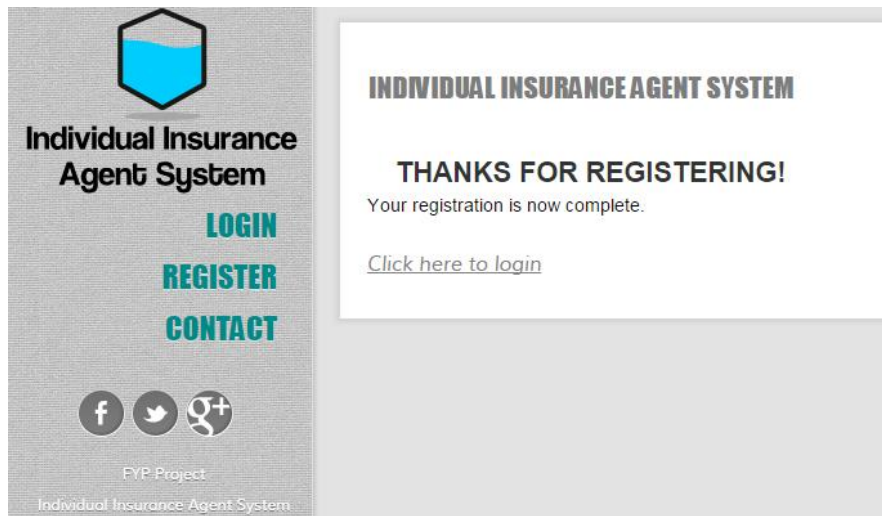


Figure 4.5 Completed the registration

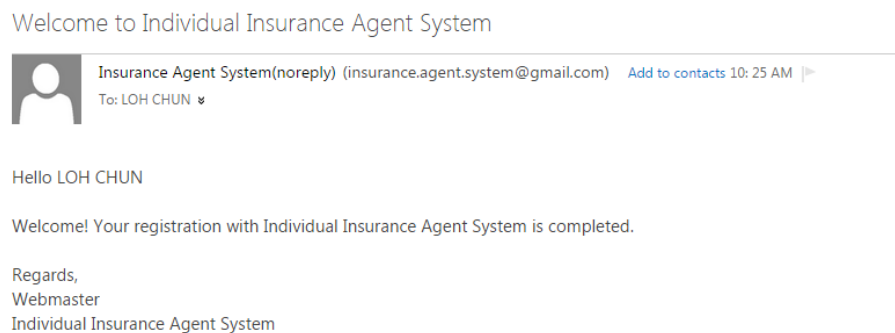


Figure 4.6 Completion email sent from system

6. Login with username and password, after that it will show success to login and redirect to index page.

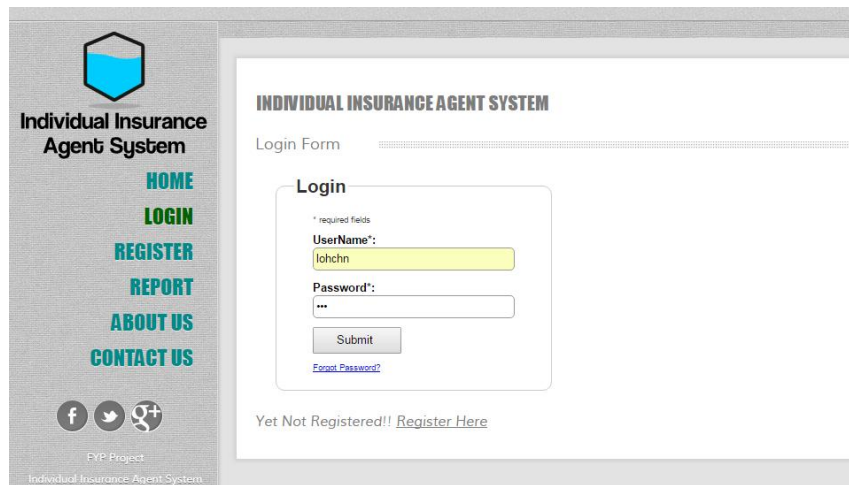


Figure 4.7 Login page

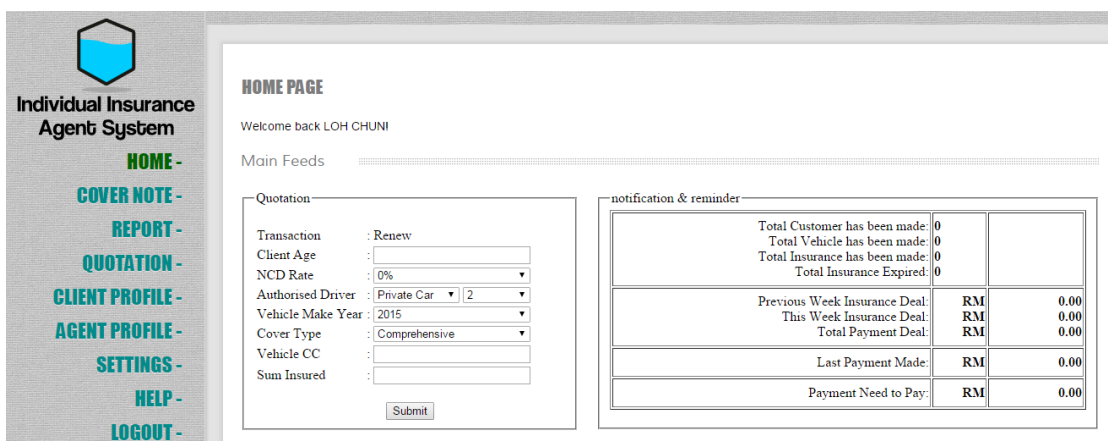


Figure 4.8 index home page after login

4.1.2 How to open a cover note insurance

1. In cover note page, you can have new or renew transaction. After input or fill in all details of user, submit it to server.

Individual Insurance Agent System

HOME -
COVER NOTE -
REPORT -
QUOTATION -
CLIENT PROFILE -
AGENT PROFILE -
SETTINGS -
HELP -
LOGOUT -

FYP Project
Individual Insurance Agent System

COVER NOTE INSURANCE

Transaction : Renew
Issue Date : 2015-09-01 12:09:50
Agent Code : 00001

Client Details

Insured IC No. : 940823045542 Search
Insured Name : TEO CHIA SHIN License No. : 12321
Address : SP71, TAMAN IKS SUNGAI PETAI, 780 Email : weichn93@gmail.com
Marital Status : Single TelNo. : 0102470322
Sex : Female NCD Rate : 25%

Vehicle Details

Vehicle No. : MAN446 Search
Vehicle Class : Private Car Vehicle Reg Card No. : AAA123
Vehicle Make Year : 2015 Vehicle Chassis No. : CCC213
Vehicle Model : BMW Vehicle Engine No. : BBB321
Vehicle CC : 1300

Insurance Details

Cover Period : 2015-09-01 To 2016-08-31
Insurance Company : AMG Authorised Driver : Private Car 2
Cover Type : Comprehensive Sum Insured (RM) :

Submit

Figure 4.9 cover note

Transaction : New

Figure 4.10 New Transaction

Transaction : Renew

Figure 4.11 Renew Transaction

- The search bars at Insured IC No. and Vehicle No. is used to search and auto input the data as shown in Figure 4.12 below.

Client Details			
Insured IC No.	: 940823045542	Search	
Insured Name	: TEO CHIA SHIN	License No.	: 12321
Address	: SP71, TAMAN IKS SUNGAI PETAI, 780	Email	: weichn93@gmail.com
Marital Status	: Single	Tel.No.	: 0102470322
Sex	: Female	NCD Rate	: 25%

Figure 4.12 search and auto input the data

- After success submit to the server, the server will generate a PDF file and shown in report page. If you want to save or print the PDF file, the button is at bottom right.

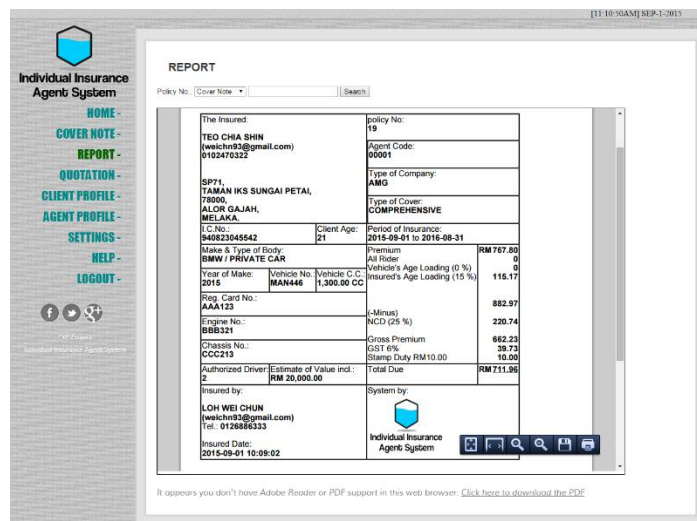


Figure 4.13 Result after cover note has opened



Figure 4.14 New or Renew insurance has been opened sent email to customer

4.1.3 How do customer and I view back a specific previous cover note or quotation in PDF file

1. Go to the report page at both general page and after login page.

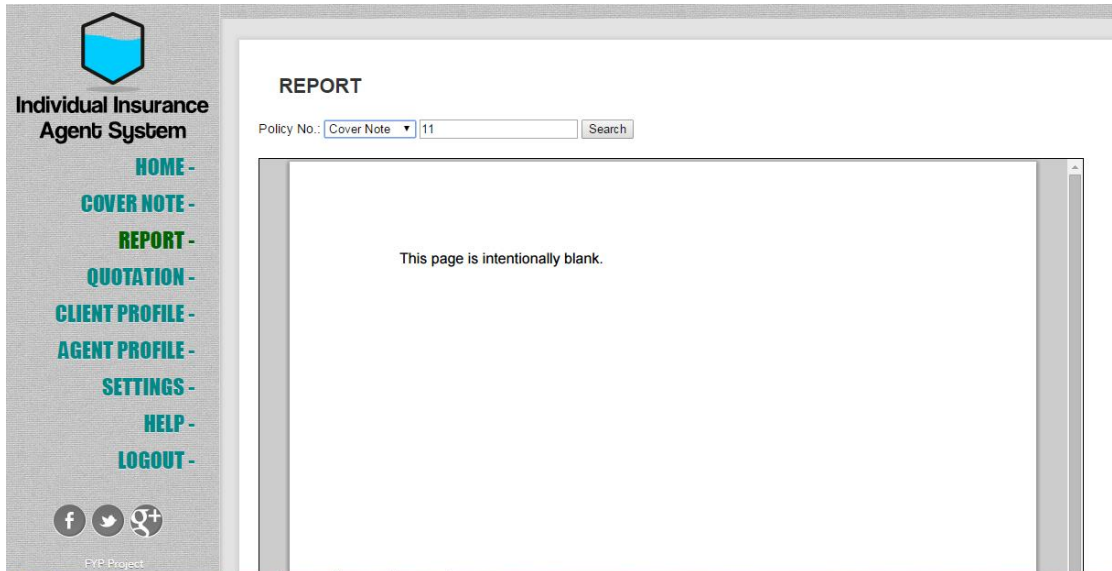


Figure 4.15 Report Page

2. There have 2 types of policies that can search, which are cover note and quotation.

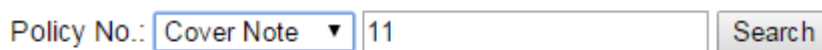


Figure 4.16 Report for Cover Note

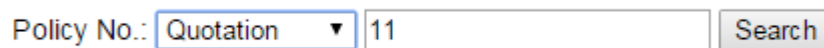


Figure 4.17 Report for Quotation

4.1.4 How to view back all quotation list

1. Go to the quotation page, at right column of table “qID”, by clicking it, then can open the PDF file.

[11:15:38AM] SEP-1-2015

Individual Insurance Agent System

- HOME -
- COVER NOTE -
- REPORT -
- QUOTATION -**
- CLIENT PROFILE -
- AGENT PROFILE -
- SETTINGS -
- HELP -
- LOGOUT -

QUOTATION
Quotation List

qDate	qVClass	qVMYear	qVCC	qISI	qICType	tDueA	tDueK	tDueZ	qID
2015-08-25	PRIVATE_CAR	2007	150CC	RM 20,000.00	COMPREHENSIVE	RM 758.76	RM 758.76	RM 758.76	33
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	19
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	20
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	21
2015-08-25	PRIVATE_CAR	2015	1300CC	RM 2,000.00	COMPREHENSIVE	RM 375.46	RM 375.46	RM 375.46	22
2015-08-25	MOTORCYCLE	2013	97CC	RM 3,300.00	COMPREHENSIVE	RM 199.31	RM 199.31	RM 182.10	23
2015-08-25	MOTORCYCLE	1995	97CC	RM 3,300.00	THIRD_PARTY	RM 0.00	RM 0.00	RM 226.65	24

Figure 4.18 Quotation Page

Individual Agent Insurance System

Insurance Invoice

Estimate Period of Insurance: From 2015-08-25 To 2016-08-24	Type of Cover: COMPREHENSIVE	Quotation No.: 33
Client Age 21	Vehicle Make Year 2007	Agent Code: 00001
Type of Vehicle: PRIVATE_CAR	vehicle CC: 150.00	Sum Insured: RM20,000.00
AMG	KURNIA	ZURICH
Premium All Rider Vehicle's Age Loading (0 %) Insured's Age Loading (15 %)	Premium All Rider Vehicle's Age Loading (0 %) Insured's Age Loading (15 %)	Premium All Rider Vehicle's Age Loading (0 %) Insured's Age Loading (15 %)
RM767.80 0.00 0.00 115.17	RM767.80 0.00 0.00 115.17	RM767.80 0.00 0.00 115.17
882.97	882.97	882.97
(-Minus) NCD (20 %)	(-Minus) NCD (20 %)	(-Minus) NCD (20 %)
176.59	176.59	176.59
Gross Premium GST 6% Stamp Duty RM10.00	Gross Premium GST 6% Stamp Duty RM10.00	Gross Premium GST 6% Stamp Duty RM10.00
706.38 42.38 10.00	706.38 42.38 10.00	706.38 42.38 10.00
Total Due RM758.76	Total Due RM758.76	Total Due RM758.76

Best Recommendation
The AMG, KURNIA, and ZURICH Insurance Companies are more slightly same.
But AMG and KURNIA gain more benefit such as
towing fee is free within 50km area from repair shop.
When the Car is broke, accident and tire punchat, it is free for towing.

Figure 4.19 open PDF in Quotation Page

4.1.5 How to view back all customers list

1. At client profile page, it will auto generate a table list for user. Besides, it can also review back the insurance in all periods for a particular vehicle.

CLIENT PROFILE
Client List

Vehicle / Insurance Details			
IC No.	940823045541		
Name	AMIN		
Address	123		
Email	jannice_1994@hotmail.com		
TelNo	0102470322		
Marital	SINGLE		
Vehicle No.:		MCP2281	Class: PRIVATE_CAR
Model:		BMW	Engine No: BBB321
C.C.:		150	Register No: AAA123
Year of Make:		1995	Chassis No: CCC213
Insured Date	Cover Period	Total Due	Insurance ID (PDF)
2014-07-25 01:08:28	From 2014-08-30 To 2015-08-30	266.64	4
2014-08-31 12:08:46	From 2014-08-31 To 2015-08-31	895.08	16
Vehicle / Insurance Details			
Vehicle No.:		MCP2282d	Class: PRIVATE_CAR
Model:		BMW	Engine No: bbb321
C.C.:		150	Register No: aaa123
Year of Make:		1995	Chassis No: ccc213
Insured Date	Cover Period	Total Due	Insurance ID (PDF)

Figure 4.20 Client Profile Page

Insurance Invoice

The Insured:		policy No:	
AMIN (jannice_1994@hotmail.com) 0102470322		16	
123		Agent Code: 00001	
		Type of Company: AMG	
		Type of Cover: COMPREHENSIVE	
I.C.No.:	Client Age:	Period of Insurance:	
940823045541	21	2015-08-26 to 2016-08-25	
Make & Type of Body:		Premium	RM 767.80
BMW / PRIVATE CAR		All Rider	0.00
Year of Make:	Vehicle No.:	Vehicle's Age Loading (30 %)	230.34
1995	MCP2281	Insured's Age Loading (15 %)	115.17
	Vehicle C.C.:		
	150.00 CC		
Reg. Card No.:			1,113.31
AAA123		(-Minus)	
Engine No.:		NCD (25 %)	278.33
BBB321		Gross Premium	834.98
Chassis No.:		GST 6%	50.10
CCC213		Stamp Duty RM10.00	10.00
Authorized Driver:	Estimate of Value incl.:	Total Due	RM 895.08
2	RM 20,000.00		
Insured by:		System by:	
LOH WEI CHUN			

Figure 4.21 open PDF in Client Profile Page

4.1.6 How do I know the customer insurance cover period is expire soon and submit the payment to the company

1. Go to the Agent profile, the table list will tell you which customer insurance is going to expire soon and can inform them with multiple times.
2. You can submit the payment before the payment due is over.
3. You can view the transactions at right side.
4. You can view the total customer, vehicle, and insurance that have been made at right top side.

Individual Insurance Agent System

HOME -
COVER NOTE -
REPORT -
QUOTATION -
CLIENT PROFILE -
AGENT PROFILE -
SETTINGS -
HELP -
LOGOUT -

AGENT PROFILE

Total Customer has been made: 5
Total Vehicle has been made: 24
Total Insurance has been made: 11

Coming Insurance Date Expire

cName	vNo	iCPeriod	cEmail	cTelNo	cAddr	Date Left	Reminder
AMIN	MCP2281	2014-08-31 to 2015-08-30	jannice_1994@hotmail.com	0102470322	123	1 day(s) over	<input type="button" value="Inform"/>

Last Payment Made: RM 895.08
Payment Need to Pay: RM 1,962.63

Amount Pay: RM

Previous Week Insurance Deal: RM 763.97
This Week Insurance Deal: RM 1,607.04
Total Payment Deal: RM 5,137.61

Figure 4.22 Agent Profile Page

4.1.7 How can I amend my information

1. Go to Settings page, you can change the name, username, password, license, email, and telephone number.

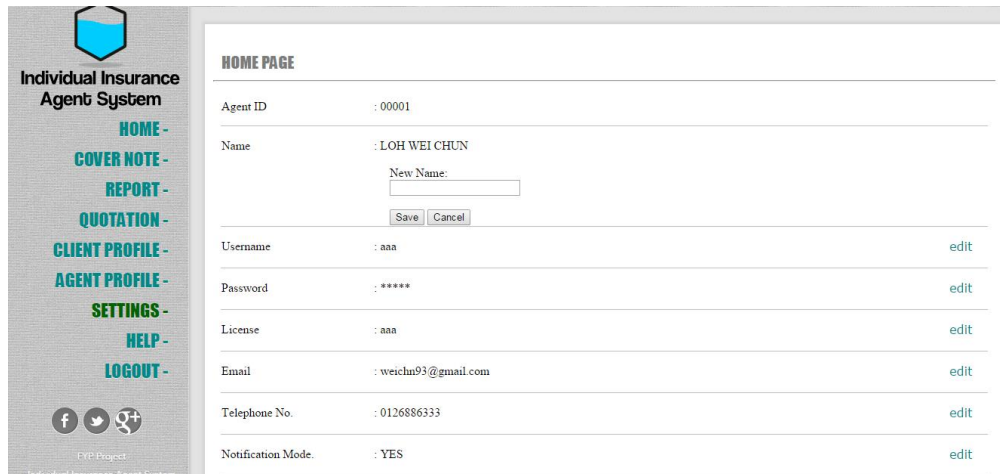


Figure 4.23 Settings Page

4.1.8 When the notification will notice me about submit the payment due

1. If you are miss submit the payment to company, the message will show as Figure below.



Figure 4.24 Pop up Message that last week payment haven't submit

2. If you are haven't submit the payment on Friday, the message will show as Figure below.



Figure 4.25 Pop up Message that on this Friday, Saturday, and Sunday payment haven't submit

4.2 Testing

Black-box Testing

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Login	Set and login the password with alphabets and numbers	Login success	Login success	Pass.
	Set and login the password with periods and symbols like “&”, “%”, and “^”	Login success	Login success	Pass. But it is not a good way for input period and symbols.

Table 4.1 Testing of Login Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Notification	-	After opened the customer's insurance, it will send email to customer	After opened the customer's insurance, it will send email to customer	Pass.

Table 4.2 Testing of Notification Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Data Management Table	-	Show all list of client's information, including customer details, vehicle details, and insurance details. It can also delete the client profile.	Show all list of client's information, including customer details, vehicle details, and insurance details. It cannot delete the client profile.	The actual output same as expected output, but it cannot update or delete the customer details. This is because there is no point to delete the history, and if delete the information, it will get very messy for the system.

Table 4.3 Testing of Data Management Table

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Searching and auto input	No input	No output	No output	Pass. If there is shows a list of customer details when no input, it will become nicer.
	Input with no data inside the database	No output	No output	Pass.

Table 4.4 Testing of Searching and auto input Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Reminder	-	Remind the customer when the insurance expire date before 30 days	Remind the customer when the insurance expire date before 30 days	Pass.
	-	Remind the agent in pop up message when payment due is not submit yet by Friday or it is last week payment due	Remind the agent in pop up message when payment due is not submit yet by Friday or it is last week payment due	Pass.

Table 4.5 Testing of Reminder Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Printing	-	Auto generate into PDF file when insurance was opened	Auto generate into PDF file when insurance was opened	Pass.
	-	Auto generate the quotation result into PDF file	Auto generate the quotation result into PDF file	Pass.

Table 4.6 Testing of Printing Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Settings	Username- same name with previous name	Show error message and not update to the database	Show error message and not update to the database	Pass.
	Password- no input	Show error message that column is empty	Show error message that column is empty	Pass.
	Name, Address, Tel No., and License- input with alphabet, number, and periods	Update to database	Update to database	Pass.

Table 4.7 Testing of Settings Module

Module	Event/Input	Expected Action/Output	Actual Action/Output	Comments/Corrections Made
Quotation	Sum insured-input RM20,000	Calculated.	Calculated.	Pass.
	Sum insured-input RM2,000,000,000,000,000,000	Show the result	Cannot show the result in PDF file. Number is too big and it will over hidden some of the result. Limit from RM 1 to RM 9,999,999.	Pass when set the limitation.

Table 4.8 Testing of Quotation Module

Chapter 5 Conclusion

5.1 Objective Achieved & Problem Solved

There have some advantages in this system compared to system in other companies. The following are the advantages and the objectives have been achieved:

1. Agent can register the account and verify for themselves. Other companies need to submit with registration form and verify in their own company, this will take about few weeks to process it. Thus, the agent can save much of their times.
2. Customer will get notice when there is new or renew insurance has been made. Some of companies will not send notice to customers.
3. Agent can review back the customer details, vehicle and insurance details, and their history too.
4. The system will auto remind the agent about the payment due that haven't submitted via pop up message. Moreover, customer will get remind from an email message when their insurance cover period is 30 days before expire date soon.
5. Agent can view, download, and print the previous insurance cover note and quotation in PDF format. However, other companies can only print the previous insurance cover note.
6. Agent can amend their privacy information such as address, telephone number, password and others. Other companies cannot easily to amend the privacy information as they need to make contact with the company, and then just can change it.

7. Agent can quote the price in a faster and efficient way and get 3 results, and also recommendations. Other companies will not get such quotation, they need go through the steps that same like renew the insurance way such as type in customer details, vehicle details and insurance details, then just can get the result.
8. Each agent's user account has their own unique username and email. Therefore, there is no have duplicate email and username used by unauthorized users.

5.2 Limitation & Problem Faced

There are some of limitations in this system that so far cannot be done. The following are those limitations:

1. There is a limited numbers of agents which only can register up to maximum of 99,999 persons.
2. Cover note and quotation cannot calculate more than 10 digits. In PDF view, it will overflow and some hidden happen.
3. Quotation page can list too longer when there is more than thousands lists.
4. The Client Profile Page will list too long when there is more than hundreds lists.
5. Although there has notify or remind the customer through email, but there is still has some of the customers will overlook their email messages.

5.3 Knowledge Gained

Throughout this FYP, I have gained much qualified knowledge. The knowledge that I have gained are following by:

- I have learnt how to code for window services.
- I have learnt 3 new language such as PHP, jQuery, and Ajax.
- I have learnt how the insurance system run.
- I have learnt how to open a public address.
- I have learnt how to code website to look like a real website.

5.4 Future Enhancement

This system can be upgrade further for future use.

- In future, customer can pay the insurance by themselves.
- The system can apply chatting system to provide a communication tool between customer and agent.
- The system can renew the customer's insurance by using credit card. Therefore customer no need go again the center for renew insurance every year.
- The system can send SMS text message to customer for notify and remind purpose. Most of people are using phones nowadays, so SMS text message can easily arrive to customer.

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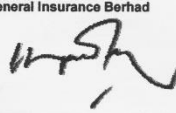
Appendices

Documents Gathered



MOTORCYCLE SCHEDULE / JADUAL MOTOSIKAL
TAX INVOICE

STAMP DUTY PAID
LWFFW5011(EX)WT
REV. B
RTD Code:06
MOTOR CYCLE
M.Y.3
KAT-06-15-0029067

The Insured / Pemegang Polisi NORDIN BIN AYIM BT 21 KG PADANG DEKAT PENGKALAN BALAK 78300 MASJID TANAH		Policy No. / No. Polisi JVD0432475 70-01	
Occupation / Pekerjaan DRIVER		Account No. / No. Akaun M84800-00	
I.C. No. / No. Kad Pengenalan 640523045351		Type of Cover / Jenis Perlindungan COMPREHENSIVE	
Hire Purchase Owner / Pemilik Sewa Beli -		Period of Insurance / Tempoh Insurans From / Dari 00:00:01 AM 05-06-2015 To / Hingga 04-06-2016	
Make & Type of Body / Buatan & Jenis Badan HONDA C100 B / MOTORCYCLE		Premium / Premium All Rider / Semua Penunggang 67.65 Vehicle Age Loading / Tambahan Untuk Usia Kenderaan 0.00 Insured's Age Loading / Tambahan Untuk Usia Pemegang Polisi 20.30 Claims Experience Loading / Tambahan Untuk Pengalaman Tuntutan 0.00 Maximum Cumulative Loading / Tambahan Berganda Maksima 0.00	
Registration No. / No. Pendaftaran MCJ7316	Excess / Lebihan 75.00	Regn. Card No. / No. Kad Pendaftaran B4690805	NCD / Diskaun Tanpa Tuntutan 20.00% Wef / Berkuatkuasa dari 05-06-2015 178.60
Carrying or Seating Capacity Incl. Driver / Muatan Tempat Duduk Termasuk Pemandu 2	Tonnage / C.C./ Watt Tan / Keupayaan Enjin 97.00 CC Year of Manufacture / Tahun Diperbuat 2013	Estimate of Value incl. Accessories and Spare Parts / Nilai Anggaran termasuk aksesori dan alat-alat ganti 3,300.00*	Gross Premium / Premium Kasar 178.60 Service Tax / Cukai Perkhidmatan 0.00 GST / GST 6% SR 10.72 Stamp Duty / Duti Setem 10.00 Act / Akta RM 42.97
Engine/Motor No. / No. Enjin/Motor HA13E-6382994		Trailer / Treler -	
Chassis No. / No. Casis PMKHA1320DB382736		Only The Extensions, Endorsement And / Or Warranties Indicated Below Apply To This Policy. / Hanya Lanjutan, Endorsemen dan / atau Warranti sepertimana yang dinyatakan di bawah ini boleh diguna pakai dalam polisi ini. 30, 94, 107	
Subject to IMPORTANT NOTICE: Your duty as the Owner of the vehicle as attached.		Total Due / Jumlah Berbayar RM 199.32 Total Due (OTC) / Jumlah Berbayar Di Kaunter RM 199.30	
Authorised Driver / Pemandu yang Diberi Kuasa: ALL RIDERS Geographical Area : Malaysia , Republic of Singapore and Negara Brunei Darussalam. / Kawasan Geografi : Malaysia, Republik Singapura dan Negara Brunei Darussalam. Limitations as to Use / Authorised Driver : As described in the Certificate of Insurance. / Had Penggunaan / Pemandu Yang Diberi Kuasa : Seperti yang tercatat dalam Sijil Insurans.			
Replacing Cover Note No./ Gantian No. Nota Perlindungan -		Issued By / Dikeluarkan Oleh : YEOW MEI LI SP71, TAMAN IKS SUNGAI PETAI ALOR GAJAH MELAKA Tel : 06-5568925 Fax :	
Renewal of Policy No./ Pembaharuan No. Polisi -		for / untuk AmGeneral Insurance Berhad	
Date of Proposal or Declaration / Tarikh Cadangan atau Pengisytiharan 03-06-2015		 Authorised Signature / Tandatangan Yang Diberi Kuasa	
Date of Issue / Time / Tarikh Dikeluarkan / Waktu 03-06-2015 08:51:29 AM		408210030615T466	
Note: / Nota: No refund of premium for any cancellation of policy if premium is charged on minimum premium / Tiada bayaran balik premium bagi sebarang pembatalan polisi sekiranya premium yang dikenakan adalah premium minima. 08JHAP8640829-1			
AmGeneral Insurance Berhad (44191-P) A member of the AmBank group Menara Kurnia, No. 9, Jalan PJS 8/9, 46150 Petaling Jaya, P.O. Box 8807, 46792 Petaling Jaya, Selangor Darul Ehsan, Malaysia Tel +603-7875 3333 Fax +603-7875 9933 E-mail corporate@kurnia.com Website www.kurnia.com			
Page 1		(GST Registration No.:000789741568) 03-06-2015 08:51:54 AM	

Motor - Motorcycle Comprehensive and Third Party

K-brand: Open Third Party New Risk

Kunia 2 AM

Age of Vehicle (years)	COMPULSORY ALL-RIDER					THIRD PARTY (New & Renewal)				
	Vehicle Age	Insured's Age	Loading		Maximum Cumulative Loading	Vehicle Age	Insured's Age	Loading		Maximum Cumulative Loading
			No of Claims	> 2				No of Claims	> 2	
≤1	0%									150%
2										
3										
4	5%									150%
5										
6										
7	10%	10%	15%	25%	30%					150%
8										
9										
10	15%					100%	25%	50%	100%	150%
11										
12										
13	>15									150%
14										
15										
>15										

Decline
A-brand: Increase loading for all insured age

A-brand: Increase loading for all insured age

A-brand: Decline Third party for motorcycle less than or equal to 10 years old

CUBIC CAPACITY	COMPULSORY EXCESS
Up to 100	RM75
101 - 150	RM100
151 - 250	RM150
251 - 500	1% of sum insured (maximum of RM500.00, minimum of RM250.00)
> 500	2.5% of sum insured (maximum of RM1000.00, minimum of RM250.00)

Terms: Subject to Non-Motor/ Personal Lines support

KURNIA
INSURANCE

Appendices 2

Zurich (guide)

Zurich Insurance Malaysia Berhad (8029-A)
 No. 110, 111 & 112,
 Taman Meleka 75000 Melaka.
 Tel: 06-2821220 (G), 06-2626157, 06-2825719 (L)
 Fax: 06-2618380, 06-2847376

UNDERWRITING GUIDE- LOADING AND EXCESS TABLE MOTOR CYCLE COMPREHENSIVE wef 26th Dec 2014				UNDERWRITING GUIDE- LOADING AND EXCESS TABLE MOTOR CYCLE THIRD PARTY wef 26th Dec 2014			
COMPULSORY ALL RIDERS				COMPULSORY ALL RIDERS			
Age of Vehicle	MOTOR CYCLE <i>BELOW</i> 125 CC		MOTOR CYCLE <i>ABOVE</i> 125 CC		MOTORCYCLE BELOW & ABOVE 125CC		
	VEHICLE AGE	Insured's Age	AGE OF VEHICLE	Insured's Age	Age of Vehicle	Insured's Age	
New	NIL LOADING	Loading on Insured's Age 25 years & below and 75 years & above :- 10% Loading	NIL LOADING	Loading on Insured's Age 25 years & below and 75 years & above :- 10% Loading	New	Loading on Insured's Age below 85 years :- 25% Loading	
1st Year			5% LOADING		1st Year		25% LOADING
2nd Year			10% LOADING		2nd Year		50% LOADING
3rd Year					3rd Year		
4th Year			15% LOADING		4th Year		75% LOADING
5th Year					5th Year		
6th Year					6th Year		
7th Year			100% LOADING		7th Year		100% LOADING
8th Year					8th Year		
9th Year			Not Applicable		9th Year		Not Applicable
10th Year					10th Year		
11th Years & Above	11th Years & above						
EXCESS: COMPULSORY EXCESS (RM)				EXCESS: Not Applicable			
CAPACITY				Maximum Cumulative Loading			
Up to 100 cc RM75				150%			
101 to 150 cc RM100							
151 to 250 cc RM150							
251 to 500 cc 1% of Sum Insured subject to a maximum of RM5000-							
Above 500 cc 2.5% of Sum Insured subject to a maximum of RM1,0000-							
Maximum Cumulative Loading				30%			

Car 10 year 30% 15%

Appendices 3

Am & kurnia (guide) 10 May 2014

1. Motor - Private Car Comprehensive

Age of Vehicle (Years)	Vehicle Age	Loading		No. of Claims		Maximum Cumulative Loading	Excess
		Insured's Age 23 Years & below	Insured's Age 24 Years & above	0-2	3-5		
≤1	0%	15% (except for 0 & 1 year old vehicle)	0%	15%	25%	35%	As per Excess Table
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	15%	15%	Refer	Refer	Refer	Refer	
12							
13							
14							
15	15%	Refer	Refer	Refer	Refer	Refer	
16							
17							
18							
19							
20							
>20							

A-brand: Open as standard risk

Decline

A-brand: Increase loading

K-brand: simplify excess

EXCESS	
Sum Insured ≤ 500,000	Nil
> 500,000	1% of sum insured

KURNIA

Appendices 4

FAX 00

15 Feb 2014

1

WEST MALAYSIA Appendix

Motor Tariff 2014 - Premium Schedules

Private Cars

Cubic Capacity Not Exceeding	Comprehensive (RM)	Third Party (RM) (Endorsement No 3(p) must be used)	Act (RM)
1400	261.65	108.45	97.20
1650	292.00	121.50	108.00
2200	323.80	135.90	122.40
3050	355.80	150.30	136.80
4100	385.85	163.35	147.60
4250	416.20	176.40	158.40
4400	448.00	190.80	172.80
Over 4400	478.35	209.85	183.60

Private Motorcycles

Cubic Capacity Not Exceeding	Comprehensive (RM)	Third Party (RM)	Act (RM)
50	72.60	30.80	27.90
100	96.20	36.80	32.65
125	119.80	41.30	37.20
225	138.40	50.70	46.80
350	180.10	64.30	58.20
500	210.10	73.60	67.55
500	239.70	82.60	74.60
Auto Cycles and Mechanically Assisted Pedal Cycles under 50cc	36.90	22.70	18.60
Auto Cycles and Mechanically Assisted Pedal Cycles over 50cc	48.40	22.70	18.60

www.motorcarinfo.com.my

28.30076

NCD = 25
 30
 38.33
~~40~~
 45
 55

Extra coverage - legal liability - 15% 1400 RM1509
 - Windscreen - 15%
 - All driver

此单限期 14 天, 过期不取定银取消
 This receipt valid only 14 days, deposit unreturnable if overdue.
 Resit ini sah laku 14 hari, lebas tempoh deposit tidak akan dikembalikan.

2697115
 6505