

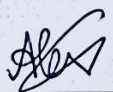
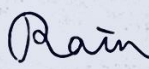
Hong Kong Institute of Vocational Education (Tsing Yi)

Department of Information Technology

Higher Diploma in Software Engineering

ITE4506 – Human Computer Interaction & GUI Programming

We declare that this is a group project and that no part of this submission has been copied from any other student's work or from any other source except where due acknowledgement is made explicitly in the text, nor has any part been written for us by another person.

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2 Distribution For Individual Part

	Yeung Lok Him	Sair Pui Fung
Part 1	<ul style="list-style-type: none"> • Customer Vehicle Ordering 	
	<ul style="list-style-type: none"> • Vehicle Sale handling 	
Extra function:	<ul style="list-style-type: none"> • Sales Statistics 	
	<ul style="list-style-type: none"> • Generate Invoice as PDF 	
	<ul style="list-style-type: none"> • Tasks 	
	<ul style="list-style-type: none"> • Calendar 	
	<ul style="list-style-type: none"> • Light/Dark Mode 	
	<ul style="list-style-type: none"> • Responsive 	
Part 2		<ul style="list-style-type: none"> • Motor Insurance Application
		<ul style="list-style-type: none"> • Insurance Sale Handling
Extra function:		<ul style="list-style-type: none"> • Export Data to CSV
		<ul style="list-style-type: none"> • Light/Dark Mode

3 Driving Question

How does good HCI design help Legend Motor vehicle system improve user satisfaction, and what advantages does it bring in this regard?

The HCI provides a design and interaction with the computer, focusing on the interfaces between users and the computers. In the Legend Motor vehicle system provides from the dashboard to handle orders and insurance fully covered with responsive to the user needs.

Regarding personalization, the system page often allows for tailor-made personalization, enabling user to have a nicer interface. The toggle theme for changing the night and light mode can ensure the user can use the night mode for displaying the information more visually appealing.

As for the error message, it is created to provide the user with the system state and having an error while inputting the data that does not match the format of our required pattern. This can provide transparency for the user to have confidence while using the system by acknowledging their input error.

Moving to talking about the advantages of the HCI design, the HCI design can help to encourage user engagement in using our system. A human interaction design can boost the user acceptance and easy to use may allow them to visit our site more often and by browsing our services based on their user preference can help to stay the site longer.

Also, proving a HCI and user-friendly design interface can help to increase the publicity of using our system and the existing user can help to promote other people for using our system based on our system is customer centered.

4 User Analysis

4.1 User Characteristics

Preferred Users: *Customer, Insurance Sales, Vehicle Sales.*

4.1.1 Learning Style

Do-then-read

In vehicle ordering and sales processing systems, the design of the two systems aims to let users directly know how to use the page when they enter. The vehicle ordering system is responsible for letting customers choose their preferred vehicle models to ask for quotation in an efficient way. On the other hand, the sales processing system provides the order handling function for vehicle sales to perform different tasks such as processing orders, cancellation, printing invoice etc. In the insurance sales handling system, a straight-forward interface showed for the sales to deal with the policies and the quotation of the insurance.

Both the systems' designs have been integrated to be sophisticated. Not only offering satisfactory experience for the customers, but also making sure that the operations for order handling and insurance application handling processes are smooth.

Read-then-do

In the insurance application system, the customers have to read the guide to familiarize the application flow before applying by themselves. This can reduce the errors caused during the application for the customers.

4.1.2 Tool Preferences

Mouse and keyboard would be preferred for users to use. It is assumed that users enter the website through a desktop computer or laptop. With a mouse, it can perform different actions by clicking different buttons, pulling any blocks etc. With a keyboard, users can type text in a text area or a search box to input the data or perform actions.

4.1.3 Physical Differences

Complementary Color will be used in the user interface as it plays a significant role for people who are not sensitive in colors. They have provided a visual contrast strongly. Fruitfully draw user's attention and enhance the style of the user interface.

4.1.4 Cultural Differences

Preferred language would be English, so that the users are assumed that can understand English.

4.1.5 Knowledge of job

Insurance Application System & Vehicle Ordering System

Assumed that the customers can perform any action anywhere with a laptop or PC. It is not hard for users to do the vehicle quotation and insurance quote application. Users can understand what to do based on the guidelines in the page.

Insurance Sales System & Vehicle Sales System

Assumed that the salesperson can perform any action anywhere with a laptop or PC. It is not hard for users to handle the vehicle quotation and insurance quote application from the customers. Users can understand what to do based on the user interface.

4.1.6 Application Familiarity

Users can be inexperienced or knowledgeable in using the system. There are already a variety of similar systems allowing users to request and salespersons to manage vehicle/insurance quotation requests. For those people who don't try using those systems, the website interface has to be designed as easy to understand.

4.1.7 Primary and Secondary Users

Primary User: *Vehicle Sales, Insurance Sales*

Secondary User: *Customers*

4.2 Techniques For Observing and Listening to Users

Think Aloud

The target users would be asked what they would they concern during their working time. To examine their expectations of the system and collect huge amounts of useful information by listening to their thoughts and plans.

Online Survey

It is efficient to collect opinions from an online survey platform after they have tried using the system.

4.3 Environment Analysis

The user would access the system with a PC or laptop.

4.4 Recruiting Users

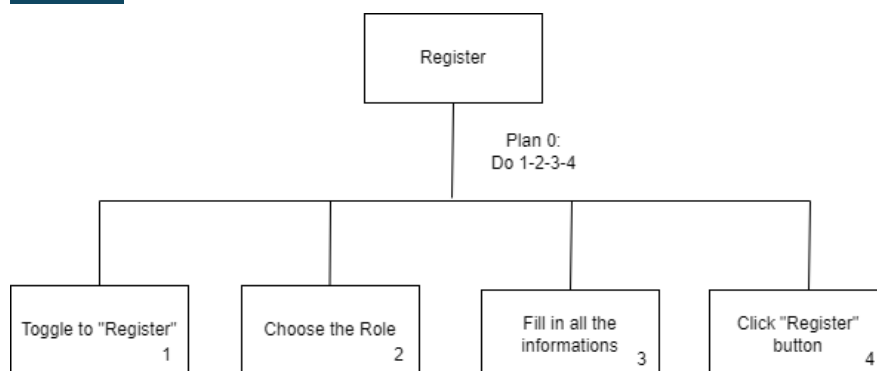
To collect the opinions of our interface's user interface, we would like to test the Customers, Vehicle Sales and Insurance Sales. It is important that develop the website based on their comments, they can provide professional knowledge for the user interface design.

4.5 Tasks Analysis (HTA)

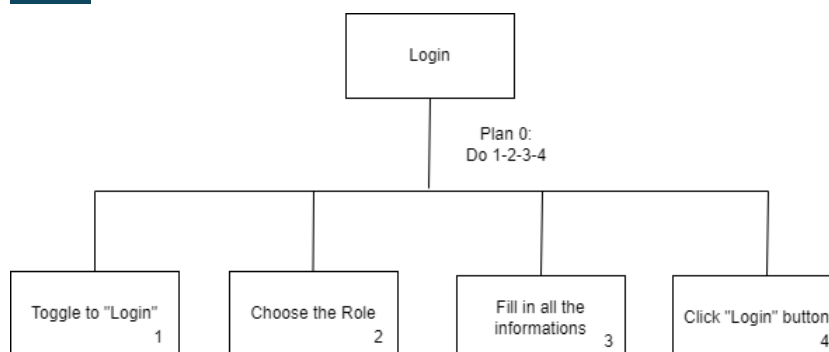
Tasks

- Register
- Login
- Request Vehicle Quote for *Customer*
- Insurance Quote Application for *Customer*
- Order Processing for *Vehicle Sales*
- Quotation Processing for *Insurance Sales*

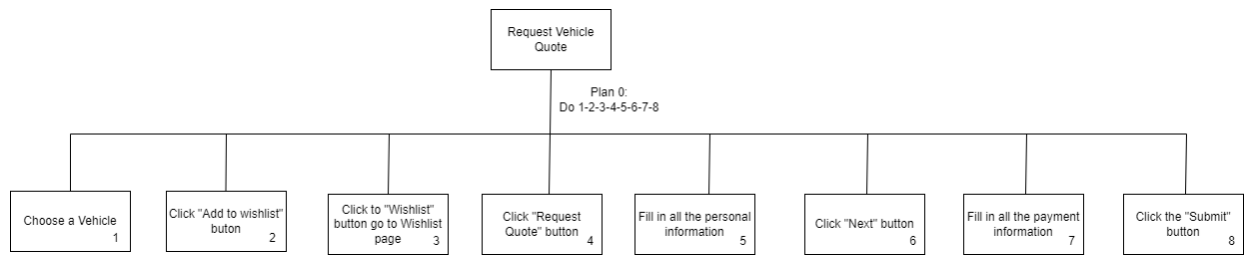
4.5.1 Register



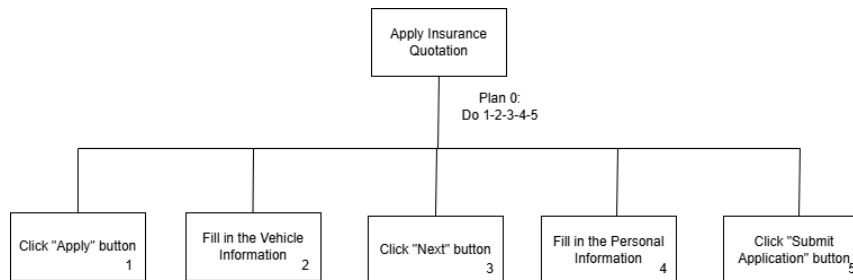
4.5.2 Login



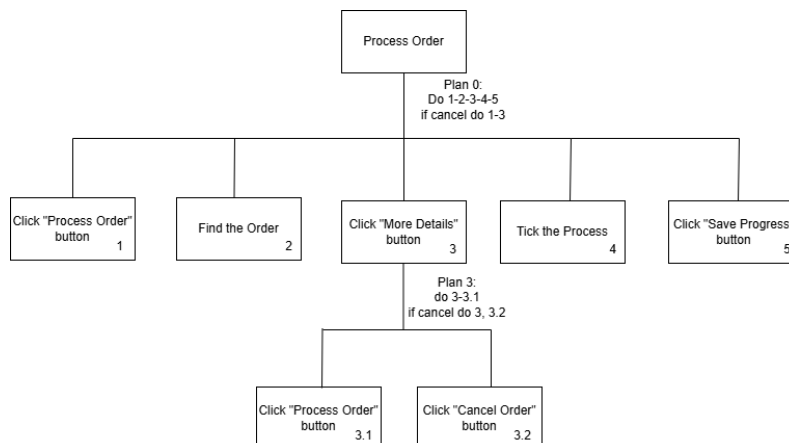
4.5.3 Request Vehicle Quote for Customer



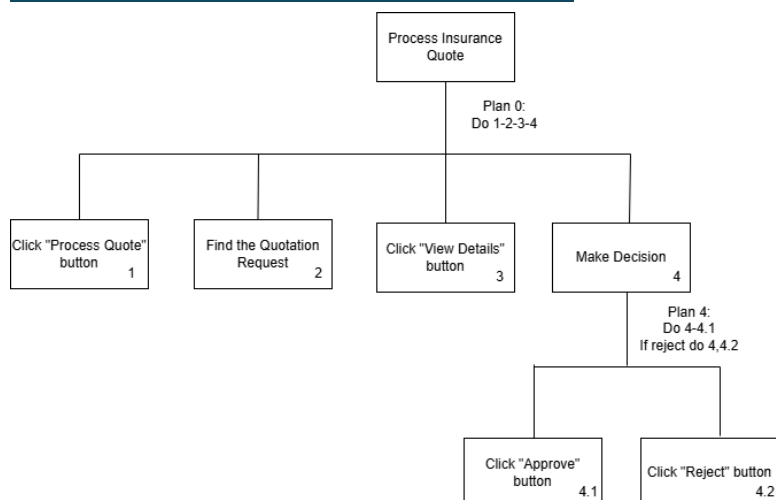
4.5.4 Insurance Quote Application for Customer



4.5.5 Order Processing for Vehicle Sales



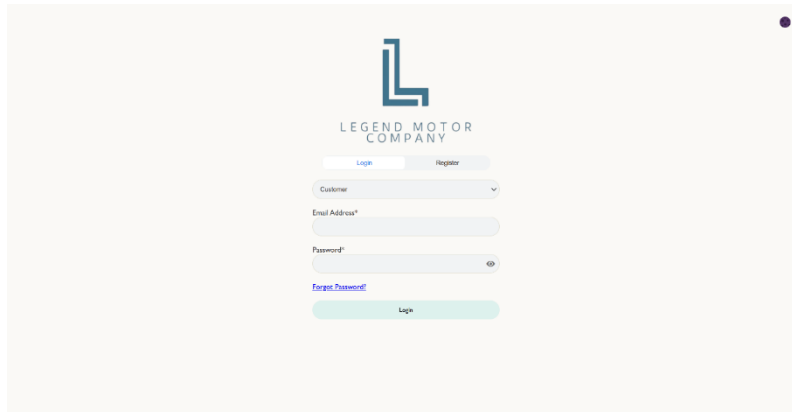
4.5.6 Quotation Processing for Insurance Sales



5 Web Design Concepts

5.1 Mental Model

5.1.1 Sign in and Registration

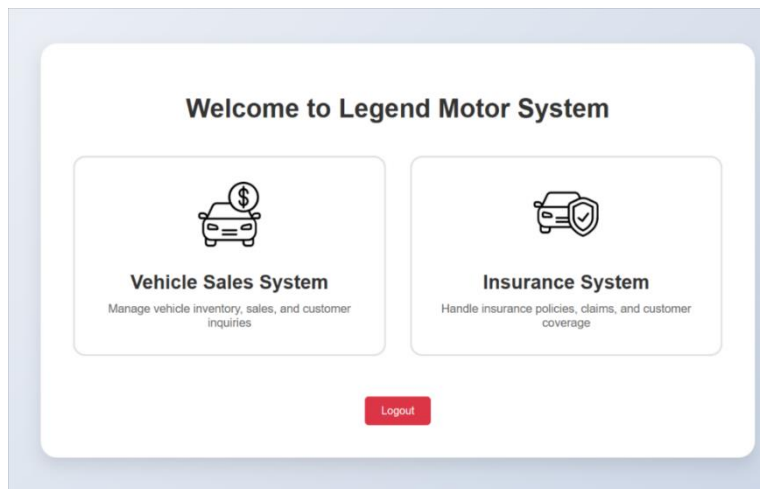


The page provided a mental model focusing on the accessibility and the security consideration for making it. The interface provides a clean and double purpose of the design with providing the toggleable login and

registration tabs to avoid extra loading time and extra actions from disturbing user to login or register. The user is allowed to select the role (customer, vehicle sales and insurance sales) before registering for the form. This can enable the user to select the wrong role during the registration. The visual password strength check and real-time feedback validation enhance experience on creating the password and corrected form requirement without any frustrations. Apart from it, the show or hide password button can help the user to quickly find that their input matches with

their desired input. Moreover, the design also makes the light mode and dark mode by using an emoji to present by easy for the user to acknowledge the user preferred theme.

5.1.2 Navigation for access across different systems



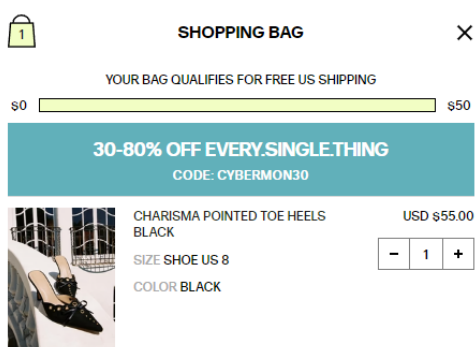
This page provides a navigation interface for the user to having a clear and centered navigation to provide the user to choose which system that want to be straight-forward. It offered two clear instruction pathways, the Vehicle Sales System and the Insurance System. If the user

clicks on the vehicle sales system, it will posit to the page for buying cars. Meanwhile, the user clicked on the insurance system it will direct to the page of getting quotation of the car. When the user clicks on the logout button, the user can directly log out and go back to the login page of the system.

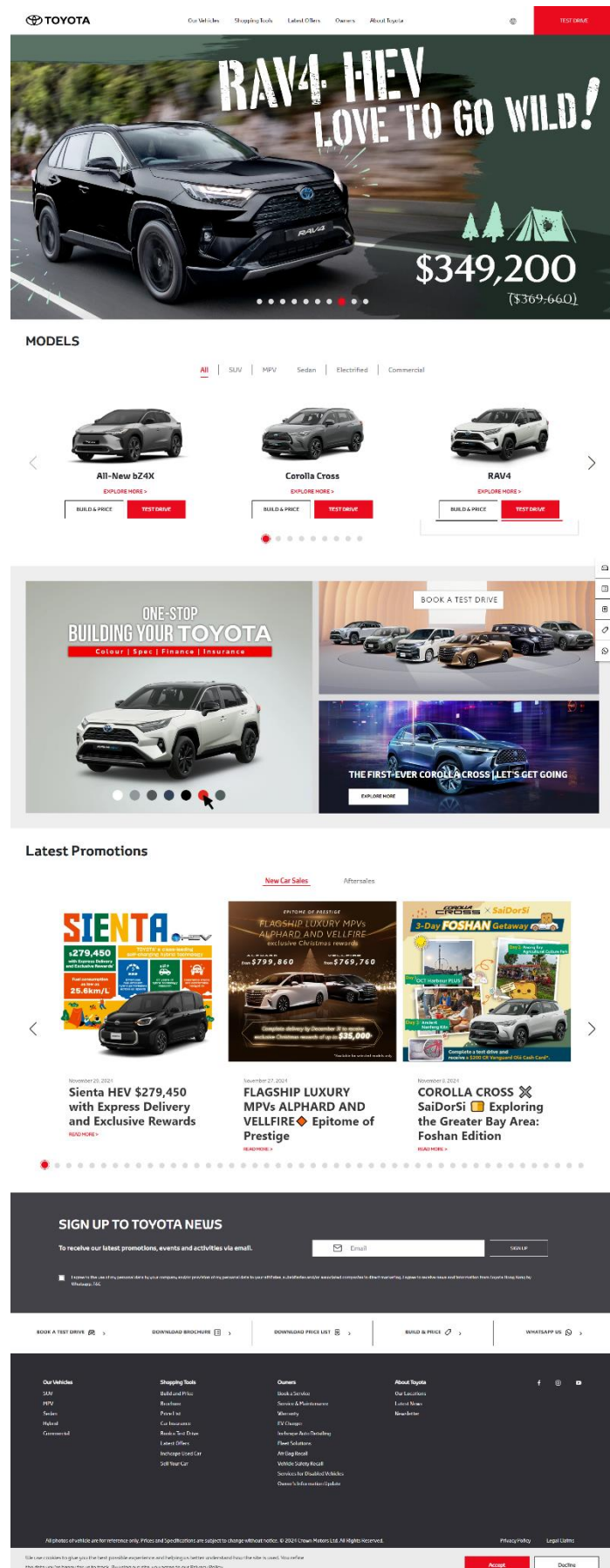
5.1.3 Vehicle system

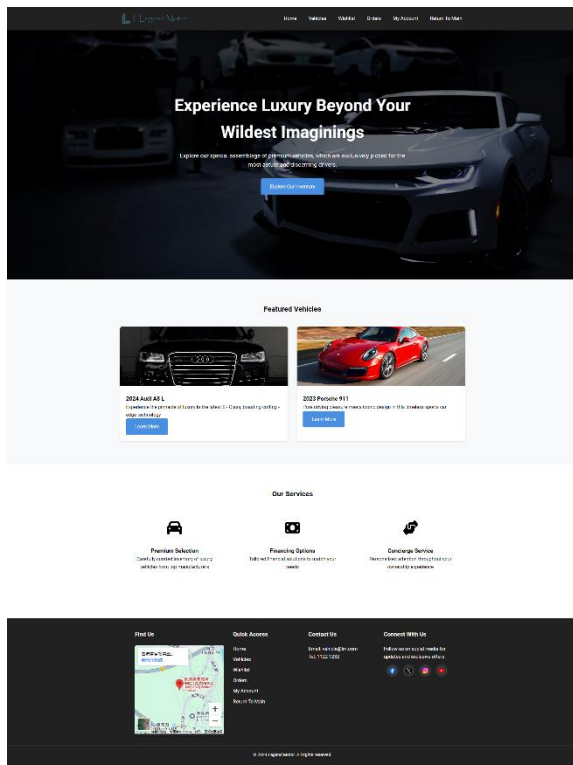
The navigation bar can provide an easy way to direct across different pages. It provides a clear and hover effect on the button for the user to know what the button is hovering. Just like the Toyota home page, it provided a header to the user to select which page the user wants to direct. In the middle of the screen, it will display the information, or the popular car based on popularity and provide the filter for the user to filter the user desired drivetrain type. Below provide a footer showing the social media and the quick action page for helping the user by clicking below. This can gain the intention of helping user and meeting their required goals.

<https://www.toyota.com.hk/en/>

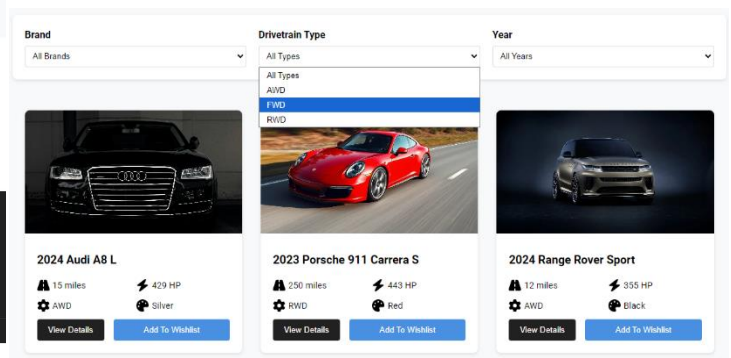


The wishlist(shopping bag) provided a feature summary for the user to know what is the product feature of the item that they selected.



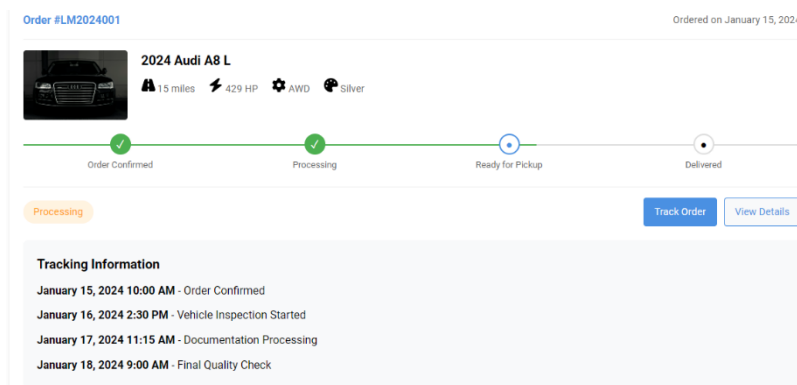
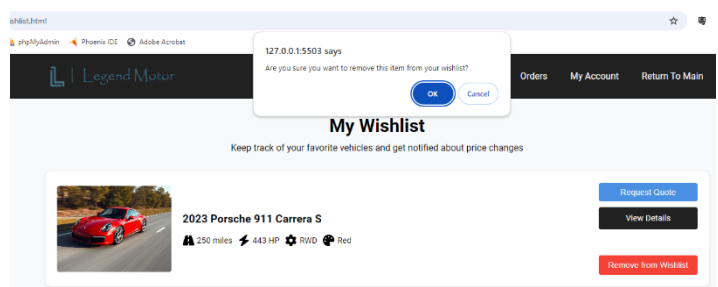


This is our webpage is designed similar to the page of the Toyota, the header provided a navigation feature for the use to guide the user which is their desired page and the learn more buttons help to direct to the car purchase main system. This is a page to show a brief description of each of the cars. The footer also provided the social media icons for the user to know our social media based on their most used icon like YouTube.



A wishlist provided with the car feature is also provided and a clear button for allowing user to remove, proceed to the quotation and view details pages. A dialog will be shown to the user to ensure he is really wanting to remove the wishlist item.

A progress indicator used the ticker symbol and the green-in-color to show the user that the task is relative proceeding to those particular places in the order.

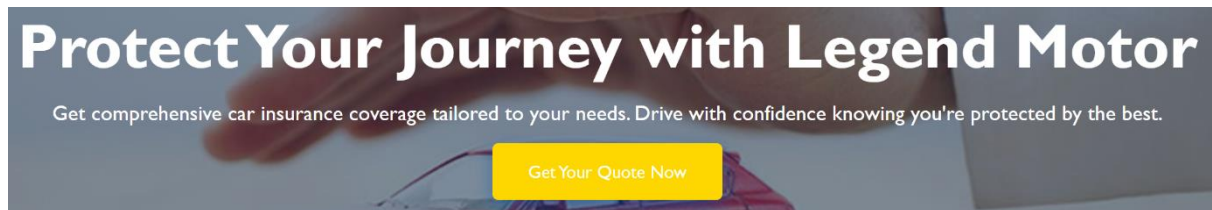


5.1.4 Insurance system



Figure 1 Reference of the how to get a quote form
<https://www.aig.com.hk/personal/auto>

company icon and pressing the “get your quote now” provided a human-like language for

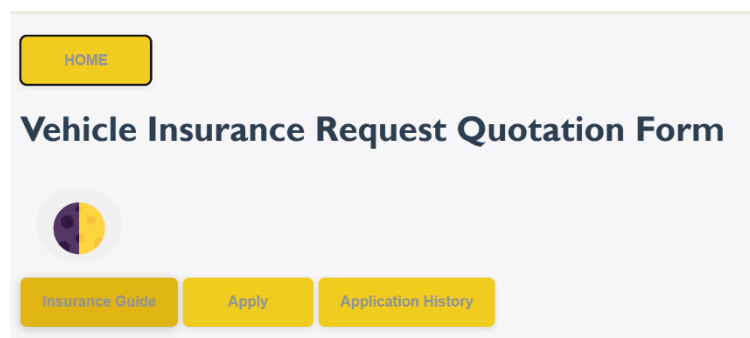


engagement to the user to know it is a clickable button if they wish to get the car insurance



quotation. The table is a usual practice for helping the user that allows users

to compare the difference between the coverage of the third party and the comprehensive. Moreover, the header can help the user if they wish to go to another page, especially the quotation form. In the quotation form, there are four buttons. If the user wish to locate back to the home page of the system, the home button is named as a usual design as Home. However, when the user want to have a nicer



interface for filling the form the “moon” emoji is provided a clear message for the user of knowing that button is for changing the them. Alternatively, the insurance guide is provided below which is for the user that is not familiar with the steps. The “Apply” button will be clear message for the user that is required to apply the new quotation.

The screenshot shows a web form titled "Vehicle Information" with a red progress bar at the top. The form contains several input fields: "Vehicle Brand Name" (Audi), "Vehicle Model" (A8 L), "Manufacturing Year" (2000), "Seating Capacity" (2), "Cylinder Capacity (C.C.)" (600), and "Estimated Vehicle Value (HK\$)" (121000). A yellow tooltip is visible over the "Manufacturing Year" field, stating "Enter 4 digits for year (2000-2024)". A "Next" button is at the bottom right.

Moreover, a progress bar offers feedback on the advancement of a process helping users understand how long they can finish to fill in the form. When the user is not familiar with our system requirement, a

user will directly want to know how to input the field. When a user hover on a textbox, it will reveal additional hidden information. So they can quickly correct it and move on to the next question. A submitted form can be notified the user successfully of the order and it will be processed for under review.

Review Your Application

Reference Number	INS6JPVJJDP
Status	Pending Review
Coverage Plan	comprehensive
Vehicle	Audi A8 L
Body Type	Saloon
Full Name	Chris Wong
Email	chris.wong@gmail.com
Payment Method	BankTransfer

Application Submitted Successfully

Your application has been submitted successfully!

Reference Number: INSBFJBE48BI

Status: Pending Review

You can track your application status using this reference number in the application history.

[Go to Application History](#)

A clear interface provided the user to search and appear recent created order for the user. This allows users to view details, deleted application and the status of the quotation. Users love that they can enter any keywords and phrases into a search bar to locate the order on a

website. The search bar enables the user to search with any details in the order that match with their input for showing the records. The user tends to know the red button is the delete button,

The screenshot shows a page titled "Welcome to Your Quotation History". It features a search bar with the placeholder text "Search by Reference Number or Email" and a yellow "Search" button. Below the search bar, there is a section for "Application INSBFJBE48BI" with a table showing details: Status (Pending Review), Date (12/2/2024), Vehicle (Audi A8 L), and Coverage (comprehensive). At the bottom right of this section are two buttons: "View Details" (yellow) and "Delete Application" (red).

it is offered a red button for them as practices.

5.1.5 Vehicle Sales Order Processing



Dashboard

Orders

Inbox

Sales

Tasks

Calendar

Settings

Logout

A sidebar is provided in left aligned which the text begins at the same virtual line on the left-hand side of the page which enables the user to go to the page that they want to direct to and provide a common icon like chatbot using a chatbot bubble which is a common icon for the user to know it is for communication. The processing flow allows users to search, filter for helping the user to shortlisting their required order. A clear interface inside showing a check box for shortlist the status, date range and the amount range. The calendar icon is attached to allowing the user to know

Filter Orders

Status

☐ Processing ☐ Completed ☐ Cancelled

Date Range

dd - ---- - yyyy

Amount Range

Min Amount Max Amount

that is

Order ID	Customer	Vehicle	Date	Amount	Status & Actions
LM2024001	Chris Wong	2024 Audi A8 L	Mar 15, 2024	\$45,000	Processing
LM2023089	Jane Smith	2023 Porsche 911 Carrera S	Mar 14, 2024	\$55,000	Completed
LM20230023	Mike Johnson	2024 BMW M4 Competition	Mar 13, 2024	\$65,000	Cancelled

selected the date in order to prevent the user is not match our pattern which used a calendar provided. It can prevent an error in the selection of range. In addition, for the user to communicate to the clients, inside the chatroom, an unread notification having how many messages are unread. It can help the user quickly spotted which client message needed to be replied.

CW **Chris Wong** Mar 15, 2024 **1**

Order: LM2024001 **Processing**

Hello Chris! Thank you for yo...

JS **Jane Smith** Mar 14, 2024

Order: LM2023089 **Completed**

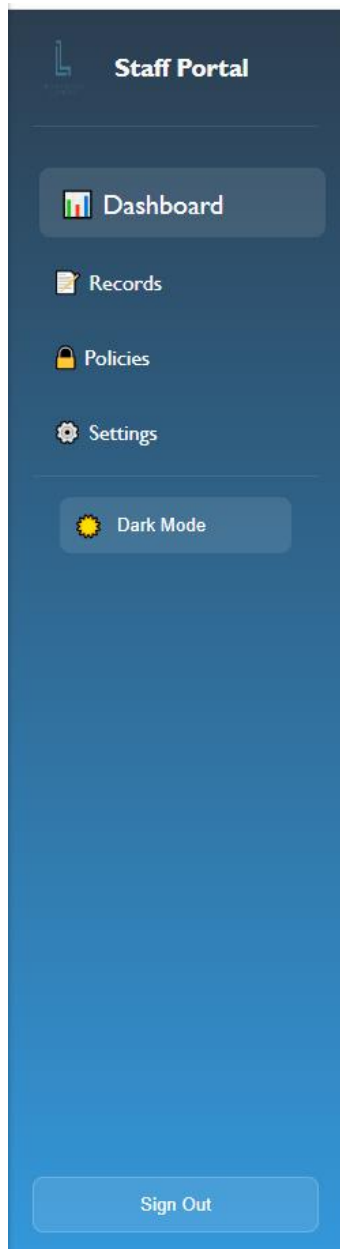
Hello Jane! Thank you for your inter...

MJ **Mike Johnson** Mar 13, 2024

Order: LM20230023 **Cancelled**

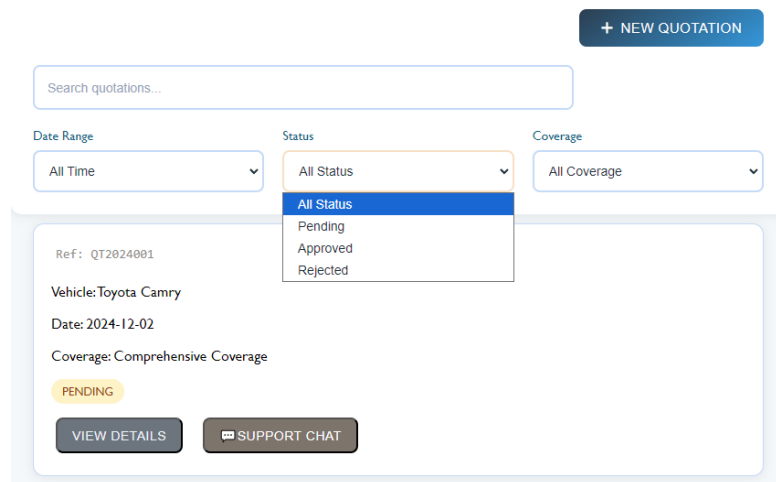
Hello Mike! Thank you for your inter...

5.1.6 Staff Insurance Quotation Handling

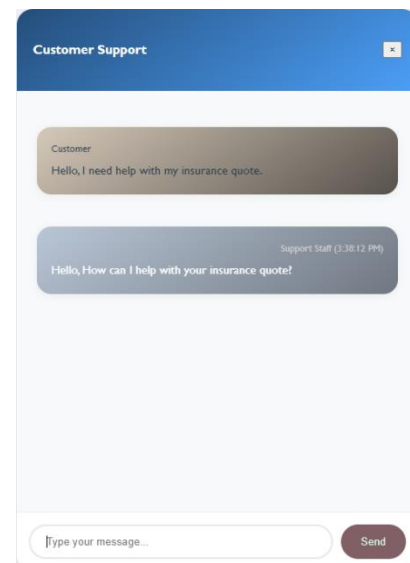


A notification is often in the right-hand side of the page for the user to knowing the incoming quotation is submitted from the client. It is embedding a close icon for clearly showing the user that the notification can be closed without remaining in the screen.

Different emojis are attached next to the name of the page such as the records are using a memo emoji which is quite common for the user to know is related to the form submitting or the records related item. Moreover, the dashboard uses statistics emoji that allows users to have an analysis meaning inside when clicking the button. An



addition emoji is added related to addition meaning to provide a straight-forward mindset of clicking this button can create a new quotation. A pull-down menu is also provided for the user to acknowledge that it is sorting or filtering functions for shortlisting the records. A support chat provides a “Type your message...” placeholder for the user can type inside the box directly and send button is common practices usually next to the typing bar. Different colors are used for allowing users clearly to know which role they play is taking place.



When the user is clicking the view details button, the system will provide instant feedback of

the records details showing. They only provide three available options: reject, approve and edit. This is as common as in the processing of the records without any extra thinking. If the user wishes to modify the records, click on the edit button. The table format will be changing to an editable form without transforming it into another page. This can ensure the user smoothly stays on the page that they located in. Alternatively, as from the below, if the user is hoping to modify the field, not only provide a pull-down menu offered choices for the user to limit their error input but also provide a little tip for the user. The data, which is modified, can be

Search quotations...

Date Range

All Time

Status

All Status

Coverage

All Coverage

Ref: QT2024001

Vehicle: Toyota Camry

Date: 2024-12-02

Coverage: Comprehensive Coverage

PENDING

VIEW DETAILS

SUPPORT CHAT

Insurance Information

Coverage Type:

Comprehensive Coverage

Vehicle Information

Manufacturing Year:

2020

Body Type:

Sedan

Seating Capacity:

5

Cylinder Capacity:

2000

Vehicle Value (HK\$):

200000

Personal Information

Full Name:

John Doe

Phone:

12345678

Email:

john@example.com

Driving Experience:

5 years

Payment Method:

creditCard

REJECT

APPROVE

EDIT

Ref: QT2024002

Vehicle: Honda Civic

Date: 2024-11-29

Coverage: Third-Party Coverage

APPROVED

VIEW DETAILS

SUPPORT CHAT

Ref: QT2024003

Vehicle: Ford Focus

Date: 2024-11-22

Coverage: Comprehensive Coverage

REJECTED

VIEW DETAILS

SUPPORT CHAT

Ref: QT2024004

Vehicle: BMW X5

Date: 2024-11-07

Coverage: Comprehensive Coverage

PENDING

VIEW DETAILS

SUPPORT CHAT

Insurance Information

Coverage Type:

Comprehensive Coverage

Vehicle Information

Manufacturing Year:

2021

Body Type:

SUV

Seating Capacity:

5

Cylinder Capacity:

3000

Vehicle Value (HK\$):

600000

Personal Information

Full Name:

Bob Brown

Phone:

22334455

Email:

bob@example.com

Driving Experience:

8

Payment Method:

Credit Card

CANCEL

SAVE CHANGES

Seating Capacity:

5

Cylinder Capacity:

3000

provided with a clear message to the user to pay attention to that the data field that they really wish to edit.

As for the format of the number type, a number input allows users to input a numeric value and adjust it up or down using a two-part control. The dark and light

Dark mode enabled

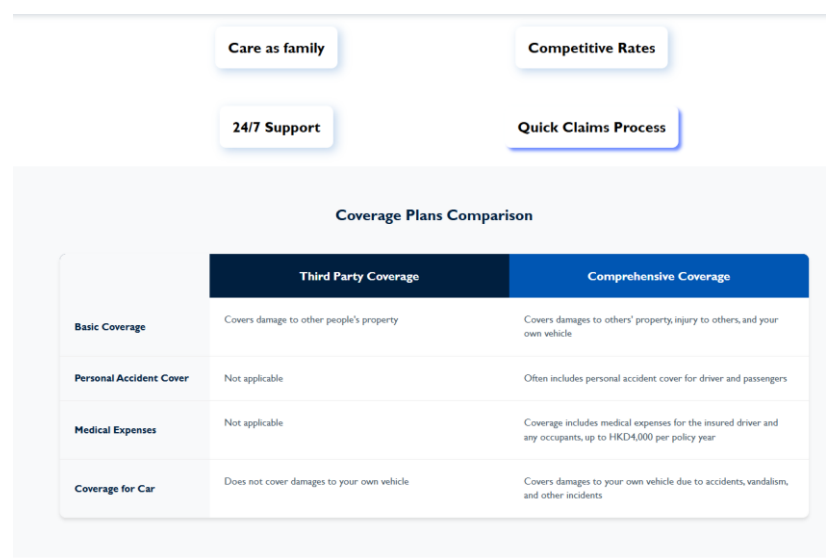
mode embed notification for informing users of important status changes and updates.

5.2 Content Organization

The content organization is a classification system for organizing content into groups. We have used the approach of ambiguous organizational schemes, which are enabled using task-oriented design and the topical which is categorized the user navigation by the user subject. The navigation sidebar is used based on the user what they doing to interact with the system. Besides the topical approach is used as for the insurance quotation and the ordering pages' navigation bar. As for the organizational structures which define the relationships among the groups. The structure is using the database organizational structures, which when user fills in searching bar, and the bar will take directly to the shortlisted item.

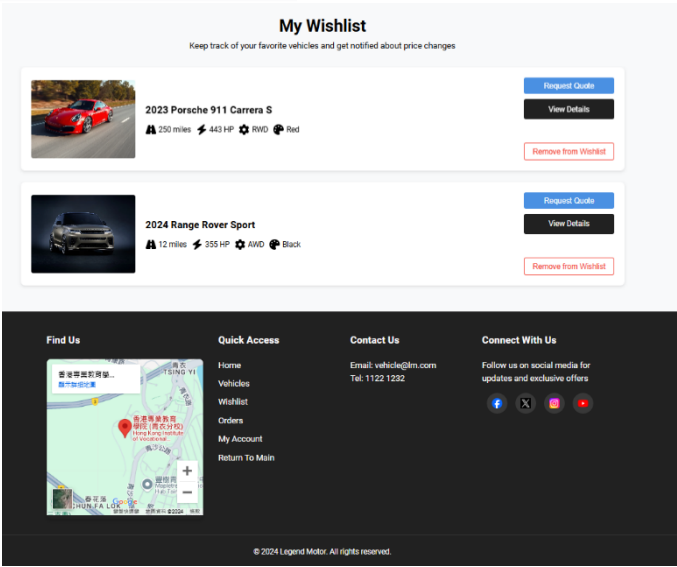
5.3 Visual Organization

5.3.1 Proximity



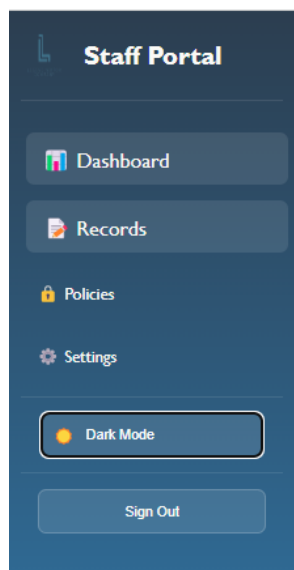
In our website, we are offered the proximity to appealing to the user. For example, the information page of the insurance provided the spacing between different characteristics of our company insurance plan and the below offered the

comparison table for the user to distinguish the difference between the third-party insurance coverage and the comprehensive coverage. Moreover, the wishlist in the sales page also provides proximity to the user, two containers are used to allow users to know that there are two different items in the wishlist. This ideas is also applied to the ideas of the insurance quotation

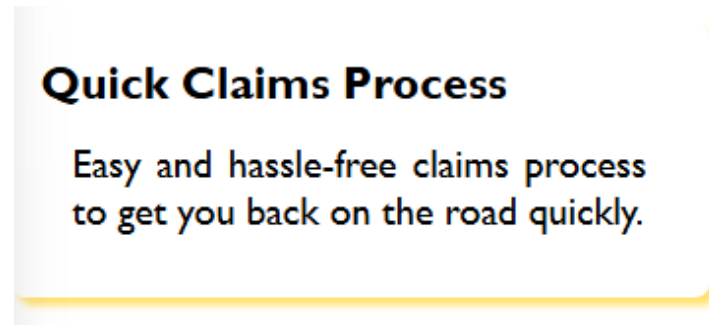


system to separate different quotations in the same palce but in two container. The footer is also implemented by grouping the quick access which help the user to different pages, the contact us which used to put the information of the company and the connect with us showing the social media that we had.

5.3.2 Alignment



The insurance staff navigation bar is using the left alignment to ensure all the links are aligned equally. Most straightforward of using the justify alignment is the characteristic of our insurance plan. It allows the user to see the content information.



Moreover, most of our containers use the alignment in the

center, which offered the user look on the card in the middle of the screen without glaring stare on the screen left and right. Providing is an example of the order management of the staff side.

Order ID	Customer	Vehicle	Date	Amount	Status & Actions
LM2024001	Chris Wong	2024 Audi A8 L	Mar 15, 2024	\$45,000	Processing
LM2023089	Jane Smith	2023 Porsche 911 Carrera S	Mar 14, 2024	\$55,000	Completed
LM2023023	Mike Johnson	2024 BMW M4 Competition	Mar 13, 2024	\$65,000	Cancelled

5.3.3 Consistency

In almost all our page owned similarity on the interface design. Our website provides visual and functional consistency. The use of a monochromatic blue color is used for making the interface more consistent. The color scheme includes dark blue for headers and key elements, a darker blue for interactive components, and lighter for hover states and accents. This consistent color usage can provide an appealing design and gave the image of our company is trustworthy. The font style is a way to provide consistent. The usage of 'Gill Sans' makes sure that the style of our website has a readability design. Our website also consistency on alignment. The navigation header owns a fixed position at the top with our company logo consistently aligned left and navigation links aligned right. This main body container includes the headings, feature cards, and buttons used a centered alignment scheme. The sidebar items are placed in the same location across pages, ensuring users can easily navigate the site regardless of which page they are viewing.

5.4 Navigation Design

Our design is having example of database navigation, the searching provided in order management and the quotation management allowing users to search and sort with filtering their requirement. Moreover, the vehicle sales page in customer view provides user to having a flow of entering the home page then select the vehicle. After adding the wishlist, the user will be able to proceed to the payment page. Moreover, a lot of ad hoc is added to the website enabling users to direct to different pages from one page to another page.