

# Human Computer Interaction & GUI Programming (ITP4506)

Group project  
User Analysis Report

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## User characteristics

### Learning style

IVE students can quickly adopt different website layout since they spend time on browsing around the internet every single day. As a result, the first thing they do when they are browsing a website that they never browsed before is to move around different pages and see what can they do and what can't.

They do not usually read user manual or tutorial maybe until they get some troubles or sometimes they don't even try to read it.

### Tool preferences

IVE students are pretty good at making use of different website element. For example, drop down menus, multiple selection options, radio and checkboxes.

Also, most of them submerge in the Internet for quite a while and they know how to use various device,

they can like keyboard and mouse, to accomplish various goal.

### Physical differences

The target customers of the website is mainly IVE students in Hong Kong.

IVE students are mostly aged at 18-25, and some of them have various vision limitations for example short-sighted. However, they usually wear glasses to deal with it. As a result, this should not be a big issue. Using normal/medium sized font should be fine.

Also, they can finely control different device to perform different tasks. For example, using mouse and typing some words should not be an issue for them.

## Cultural differences

Since the target customers are the IVE students, which are studying Higher Diploma. All of them are very good at surfing the internet and know how to use mouse and keyboard clearly. Also, all of them have at least basic English reading skill.

## Knowledge of the job

IVE students may browse the website when they are planning to go for a trip when they have time and money. They may not browse the website daily but sometimes they are looking for/ waiting for a discount. In this case, they will most like browse the website daily for potential discount. Moreover, the time that IVE student browse the website should not be very long since they just look for different things or discount, finished their booking and good to go.

There are some specialized vocabularies. However, it should be fine for IVE students since most of them have already learnt that from other travel websites.

## Primary user and Secondary user

The primary user of the website is the IVE students. And there are no “secondary user” in the website since the primary users (IVE students) are not serving other people.

## Application familiarity

Novice should be able to use the website mainly with mouse to perform most of the function easily. For example, select and control different criteria of the filter function. And register an account should be very simple for a novice user.

Expert are still use mouse for most of the action. However, the efficiency should be able to further enhance by a touch of keyboard commands/ shortcuts. For example, navigate between items/ elements on the website.

## Techniques for observing and listening to uses

### Interview

Interview the IVE student, ask them to browse and maybe try “shopping” on some various travel agency website. At the same time, ask them what they think on some specific elements/events of the website, while they are browsing the travel agency website. For example, ask them if they like or hate the layout design, ask them how would they improved a specific page of the website like shopping cart page. By doing this, the expectation of the user can be examined and understand what the user really wants.

### Online survey

Design a set of question about e-commerce website and some user personal preference. For example, about the website layout design, the functionality of the website, the shopping process, etc. By doing this, the user preference on the travel agency website can be known.

## Environment Analysis

IVE student usually browse travel website while they are at home. Since it often involved payment especially when booking things which requires enter payment information and it should as secure as possible. Home is usually the go-to place for them to shopping online since it offers great security. It can make sure there are no malicious person around to cause some serious trouble. For example, leakage of credit card information.

However, there are also a small amount of student who will browse travel website in class since they are able to discuss with their friends and they love share what they have found.

## Recruiting Users

To collect general IVE student’s personal preference and requirement. An online survey will be created with Google form and spread the survey by mass-sending online survey link to the IVE student email address (XXXXXXXXXX@stu.vtc.edu.hk). As a result, the IVE student will

receive the email and click into the online survey link.

Moreover, posting notice about recruiting IVE students for interviewing and collection requirements on various IVE campus and offer \$50 cash to them. As a result, some IVE students that have time will apply for the interview and required information can be collected.

## Task Analysis

### Register account

1. Click on “Register” in the navigation bar of the website
2. Input required information
3. Click “Register” to register a account on the website

### Login account

1. Click on “Login” in the navigation bar of the website
2. Input required information
  - a. Input student email
  - b. Input password
  - c. Select “remember email and password”
3. Click “Login”

### Forgot password

1. Click on “Login” in the navigation bar of the website
2. Click “Forgot password”
3. Input student email
4. Click “Submit”

### Book hotel

1. Click on “Hotel” in the navigation bar of the website
2. Click on the country

3. Apply the filter to reduce search result
  - a. Select districts
  - b. Select room types available
  - c. Select stars of the hotel
  - d. Select Rating of the hotel
  - e. Type hotel name
  - f. Select Price
  - g. Select Date
  - h. Select Facilities / Services
4. Select the hotel and browse the detail information of the hotel
5. Select the date of booking
6. Select the amount of rooms needed
7. Click to “add to the shopping cart” (Need to login first)

#### Book Flights

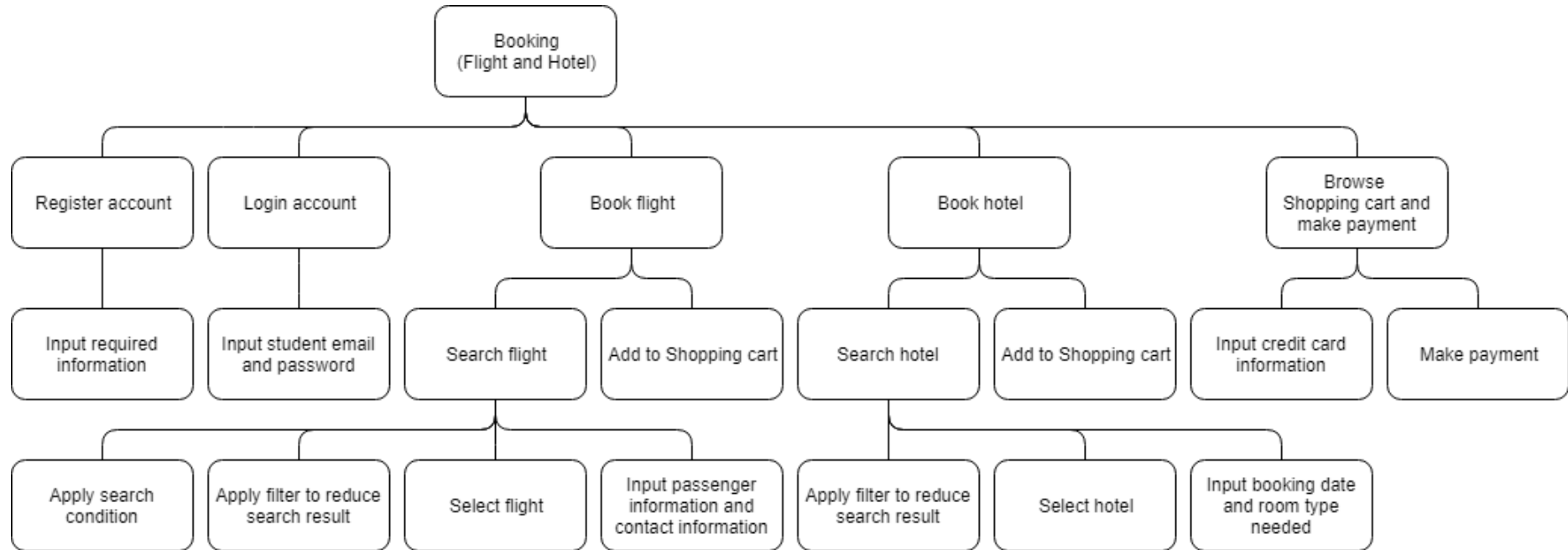
1. Click on the “Flight” in the navigation bar of the website
2. Click on the flight type
3. Apply the Search to get result needed
  - a. Select Depart and Return date
  - b. Select Departure and Destination
  - c. Select ticket class
  - d. Select number of passenger
  - e. Click “Apply Search” to apply the search condition
4. Apply the filter to reduce search result
  - a. Select number of stop of the flight
  - b. Select airline
  - c. Select Departure time



- d. Select Arrival time
  - e. Select Departure Airport
  - f. Select Arrival Airport
  - g. Select the flight and browse the detail information of the flight
5. Input the passenger personal information
- a. Input first name and last name
  - b. Input date of birth
  - c. Select nationality
  - d. Select type of travel document
  - e. Input the corresponding travel document number
  - f. Select the gender
6. Input contact information
- a. Input first name and last name
  - b. Select the prefix country code of mobile phone number
  - c. Input the mobile phone number
  - d. Input the email
7. Click to “add to the shopping cart” (Need to login first)

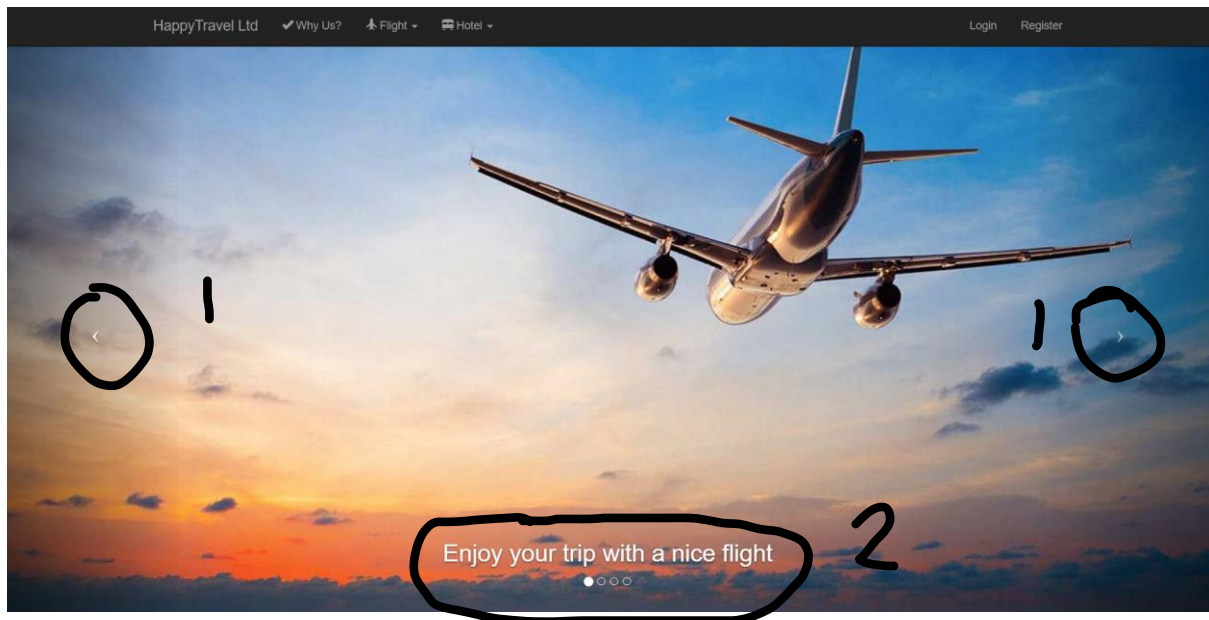
### Browse shopping cart and make payment

- 1. Click on “Shopping cart” in the navigation bar
- 2. Browse the content in the shopping cart
- 3. Click “Proceed to Payment”
- 4. Input required information
  - a. Credit card number
  - b. Credit card security code
  - c. Credit card expire date
- 5. Click “Payment”



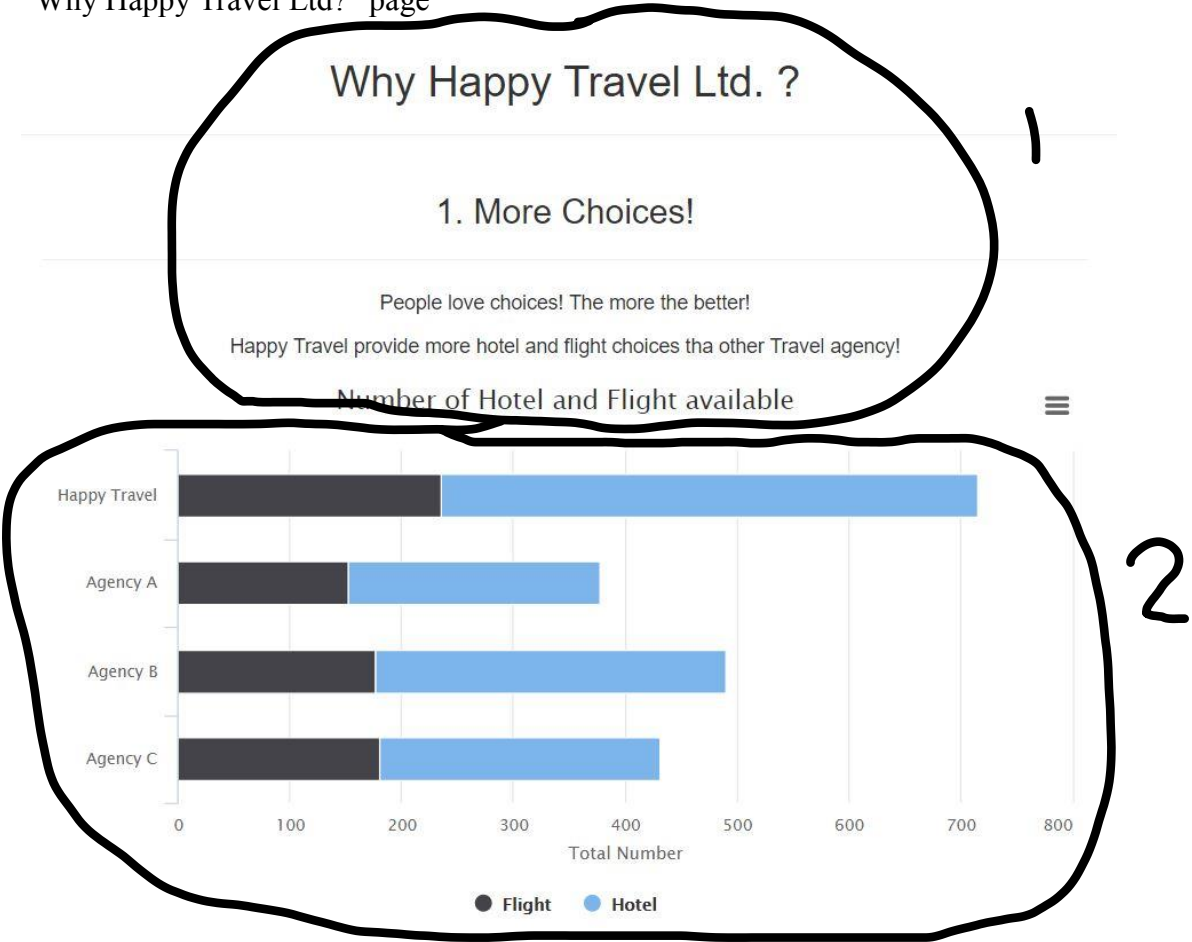
## Web Design Concepts

### Main page

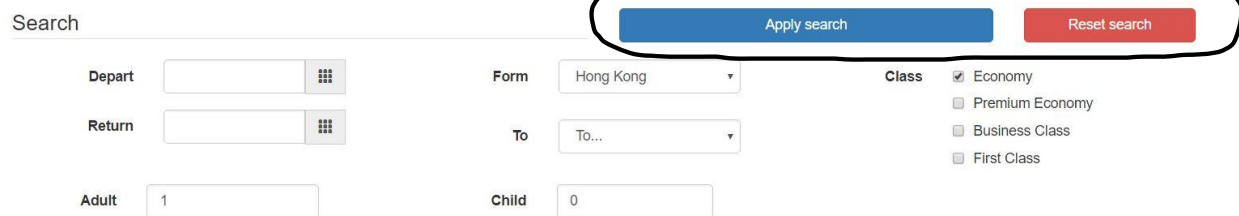


1. Arrow keys that make use of the user's mental models  
Since user usually understand what will happen press the arrow are pressed, the slide show will move to previous/next picture.
2. A simple caption that describe the picture and some indicators in bottom that allows user have a brief idea of number of pictures, and which picture they are looking at.  
Making use of the center alignment can help user focus on the text.


“Why Happy Travel Ltd?” page




## Search Flight



Search

Depart  

Return  

Adult

Form

To

Child

Class ☒ Economy ☐ Premium Economy ☐ Business Class ☐ First Class

The layout of the flight searcher.

1. There is a big **contrast** between the width and color of the “Apply search” and “Reset search” button.

Also, the color of the button act as a very effective **affordance** since red usually means “dangerous” which will clear the search condition and blue usually mean “informative” which will offer a list of flight available and various filter that can be used to reduce search result.

## Date picker



Depart  

Return

Adult

« January 2018 »

Su	Mo	Tu	We	Th	Fr	Sa
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

The Date picker of the Depart date and Return date.

1. The calendar **metaphors** help user recognize the calendar view available.
2. The calendar view provides an easily to access interface to select date.

## Number selector



Adult   

The number selector selecting the number of passenger.

1. The up and down arrow **metaphors** help user recognize the increase and decrease number function is available.

## Filter flight

Search Apply search Reset search

Depart    
 Return    
 Adult  Child

From    
 To

Class ☒ Economy   
☐ Premium Economy   
☐ Business Class   
☐ First Class

**Filter** 2

**Stops**   
☒ Direct   
☒ 1-stop

**Airline**   
☒ Cathay Dragon   
☒ Cathay Pacific   
☒ Hong Kong Airlines   
☒ HK Express

**Departure Time**   
☒ 0:00 - 6:00   
☒ 6:00 - 12:00

**Summary of cheapest flight** 1

	HK Express	Cathay Pacific	Hong Kong Airlines	Cathay Dragon
Direct	1500 HKD	1900 HKD	1860 HKD	1650 HKD
1 Stop	n/a	n/a	n/a	n/a

**Kaohsiung International Airport** 3

Airline	Departure	Arrival	Class	Price	
HK Express	18:50	20:10	Economy	1500 HKD	<span>Select</span>
Hong Kong Airlines	19:50	21:10	Economy	1600 HKD	<span>Select</span>
Hong Kong Airlines	20:30	21:50	Economy	1800 HKD	<span>Select</span>

The flight list and the filter options will be shown after the blue “Apply search” button is clicked.

1. The summary of the cheapest flight offered by each available airline.
2. A list of filter condition

Different condition of the filter are separated by some white space between using **Visual Organization by proximity**. Making sure that the options are grouped together.

Also the title of each condition of the filter is bolded. Provide **contrast** between the options that are supposed to be select and the title of the filter condition to help the user to recognize between these 2 things.

3. The heading of the tables have blue colour in the background. Making it **consistence** within the page.

## Flight list

Kaohsiung International Airport					
Airline	Departure	Arrival	Class	Price	
HK Express	18:50	20:10	Economy	1500 HKD	Select
Hong Kong Airlines	19:50	21:10	Economy	1600 HKD	Select
Hong Kong Airlines	20:30	21:50	Economy	1800 HKD	Select
Cathay Pacific	21:20	23:00	Economy	1900 HKD	Select

Taichung International Airport					
Airline	Departure	Arrival	Class	Price	
HK Express	18:50	20:10	Economy	1500 HKD	Select
Hong Kong Airlines	19:50	21:10	Economy	1600 HKD	Select
Hong Kong Airlines	20:30	21:50	Economy	1800 HKD	Select
Cathay Pacific	21:20	23:00	Economy	1900 HKD	Select

Taipei Songshan Airport					
Airline	Departure	Arrival	Class	Price	

Each table showing the corresponding flight offered by various company.

The layout and the width of each grid among different table are **consistence**.

1. The Flight offered are grouped by arrival airport using the **Visual Organization by proximity** web design concept by separating them with uses of horizontal rule <hr> Also, the name of the airport is bigger than others and in bold. Provide a great **contrast**.
2. The heading of the table is in bold. Provide **contrast** to the user.
3. The body of the tables are all **aligned** to the left. Making it **consistence**.

## Flight booking

1

Passenger Information  
Adult x1  
Child x0

Hong Kong > Taiwan 07 Dec > 10 Dec

2

Passenger 1 Adult

Surname/Last Name:\*

Given/Last Name:\*

Date of Birth \*

Nationality  
Hong Kong

Travel Document  
Passport

Travel Document Number:\*

Gender \*  
☒ Male ☐ Female

Contact Information

Surname/Last Name:\*

Given/Last Name:\*

Prefix  
Hong Kong(+852)

Mobile phone number: \*

3

Departure

18:50	>	20:10
Hong Kong		Taiwan
07 Dec		07 Dec
Flight time: 1h20m		

Return

22:30	>	23:55
Taiwan		Hong Kong
10 Dec		10 Dec
Flight time: 1h25m		

Price

Adult fare	1400 HKD
Airport departure Tax	100 HKD

The flight booking page which require the user to input the passenger information, contact information and contain information of the flight for confirmation.

1. The number of passenger

The x1 and x0 are in bold to provide the contrast since the number of passenger is extra important.

2. The information input form.

The input title and boxes are **aligned** to the left which has 2 columns. Making it look **consistence**.

Also, the input form of passenger information and contact information are separated with the uses of horizontal rule <hr> using the **Visual Organization by proximity** web design concept.

3. The departure flight and arrival flight are separated with the uses of horizontal rule <hr> using the **Visual Organization by proximity** web design concept.

Also, the tables have **consistence** layout since the layout if basically the same.

Price

Adult fare	1400 HKD
Airport departure Tax	100 HKD
Total amount	1500 HKD

1. The amount is highlighted in blue which have **contrast** to the green background



## Hotel search |

Filter

Reset filter

Hotel name

Stars

Room type

Location

Price/day

Taiwan Hotel

BEST CHOICE TW The go-to hotel choice in tw

Star : ★★★★★

Price/ day : 718 HKD

Rating : 9.2 / 10

Taipei Hotel

Very nice hotel in taiwan. High star rating

Star : ★★

Price/ day : 225 HKD

Rating : 6.7 / 10

Hotel TW

Reasonable price and nice environment.

Star : ★★★

Price/ day : 275 HKD

Rating : 7.8 / 10

Hotel PaPa

Very nice hotel located in taiwan

Star : ★★★

Price/ day : 203 HKD

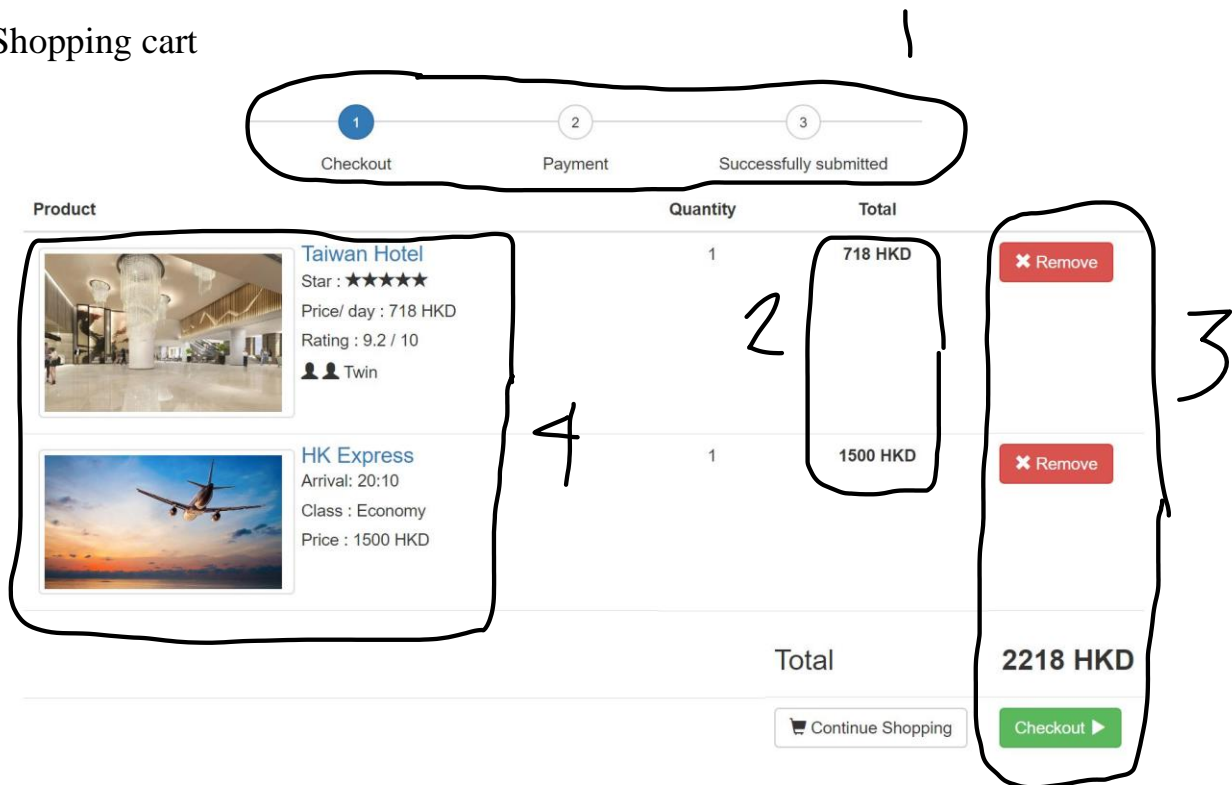
Rating : 8.6 / 10

Hotel Tainan

This page makes use of the **mental model** of the user. Since the user will know the function of filter which can reduce the search result. And they know how do the filter process already.

1. There is a filter function on the left of the page
2. The “Reset” filter button is red which means “dangerous” to the user.
3. There are multiple filter conditions which contains some options. Each of the condition are separated by some white spaces using the **Visual Organization by proximity** and they are all **aligned** to the left which looks very **consistence**.
4. There is a range selector that the user can select the price range by drag the blue ball **metaphor** on each side of the range bar.

## Shopping cart



1. There are indicators on the top of the page to indicate the step of payment
2. The price of the product is in bold and looks different to other text. This provide a **contrast** effect.
3. The “Remove” button have a cross **metaphor** and the red color means “dangerous” to the user, since click on it will remove the product from the shopping cart.  
The “Checkout” button have a play **metaphor** and the green color means “successful” to the user and acting as an effective **affordance** since clicking on the button will go to the next step of payment.  
The color of these 2 button gives a **contrast** effect to the user.
4. The product list has equal dimension of picture and the text are **aligned** to the left. It looks very **consistence** to the user.

## Input Credit card information

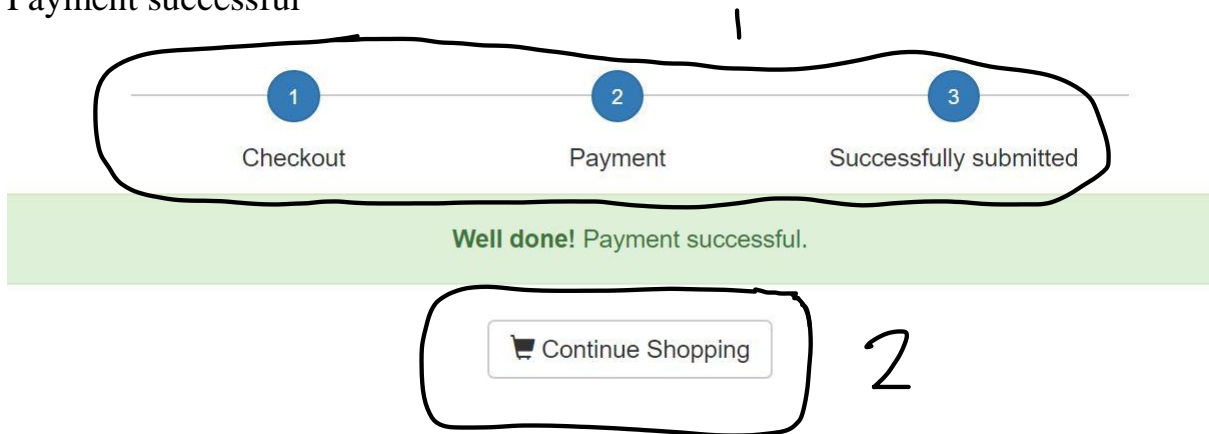
The form is titled "Payment Details" and features logos for VISA, MasterCard, DISCOVER, and AMERICAN EXPRESS. It is divided into three steps: 1. Checkout, 2. Payment, and 3. Successfully submitted. The "Payment" step is active.

The form contains the following fields and elements:

- CARD NUMBER:** A text input field with a placeholder "Valid Card Number". A small credit card icon is located to the right of the input field, circled with a handwritten "1".
- EXPIRATION DATE:** A text input field with a placeholder "MM / YY". It is circled with a handwritten "2".
- CV CODE:** A text input field with a placeholder "CVC".
- COUPON CODE:** A text input field.
- Book:** A large green button at the bottom of the form, circled with a handwritten "3".

1. There is a credit card **metaphor** of the right of the input. Also, there is a placeholder in the input. Notify the user to input a valid card information. It uses a pale color to bring a **contrast** to the title of the input.
2. There is a placeholder telling the required format. It uses a pale color to bring a **contrast** to the title of the input.
3. The "Book" button are in green color. Green usually means "successful" to the user.

Payment successful



1. The indicator on the top of the page and the message on the center notify the user have successfully book and finished payment.
2. There is a “Continue Shopping” with a shopping cart **metaphor** on the left.

## Register

Register

---

\* Student email  @stu.vtc.edu.hk 1

\* Password  must contain at least 8 characters 2

\* Confirm Password  must be same as above

Programme   3

Date of Birth  4

☐ Email me promotional materials in the future

5

1. The suffix of the student email can help user to input their student email.
2. There is a password strength bar that can show the strength of the password to the user.
3. There is 2 drop down menu for the user to select their program.
4. The DoB have a calendar **metaphor** on the right of the input notifying the user can pick a date using date picker.
5. The “Register” and “Reset” button has a big **contrast** in the width and the color.  
Red color usually means “dangerous” to the user.  
Green color usually means “successful” to the user.  
The “Register” button also act as a **Affordance** since it is very easy to understand as it can tell the user that they can register an account after it is pressed.

## Login

### Login

---

Student email

@stu.vtc.edu.hk

Password

☐ Remember email and password

Login

[Forget Password?](#)

1. The suffix of the student email can help user to input their student email.

## Forgot password

### Forgot Password

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Leave your student email and we will email you to reset your password

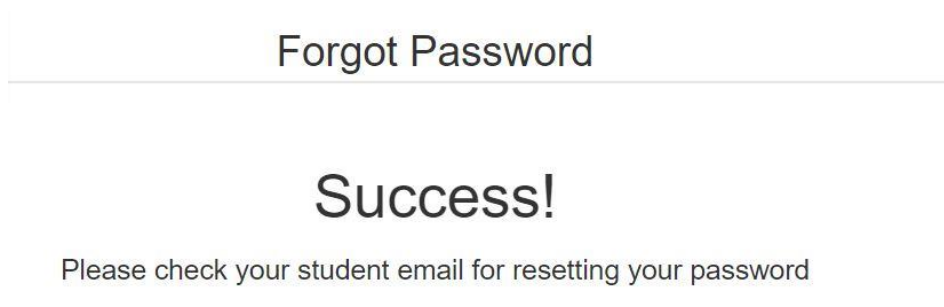
Email

@stu.vtc.edu.hk

Submit

1. The suffix of the student email can help user to input their student email.

Forgot password successful



The “Success!” are **aligned** in center and have bigger font size. Provide a **contrast** to the user.

### Navigation bar



There are some **Ad Hoc** links in the navigation bar which located on the top of the page. Also, there are some **metaphors** in navigation bar items.