

ITP4506 Human Computer Interaction & GUI Programming

## Assignment

### Web design analysis and user analysis

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# 1 User Analysis

Target Users
Tertiary students in Hong Kong

## 1.1 User Characteristics

### a. Learning style

#### Do-then-read

Tertiary students in Hong Kong can access to internet easily, they are experience in browsing different website. While browsing a website the first time the targeted user will not try to find a user guide to learn how perform different task with the website. The user group are willing to take the risk, they prefer using a system without reading the user guide. From the behavior above the user group learning style can be consider as “Do-then-read”. While designing the interface for the website, the UI should allow the user to recognize command on a menu.

### b. Tool preferences

#### Mouse or keyboard

As the project will only be desktop compatible, it is assumed that the user will use a PC desktop. For desktop input tools, the user group are experienced in using mouse and keyboard as input tools.

### c. Physical differences

#### Good visual abilities

Tertiary students in Hong Kong are young adult. According to University Grants Committee Customised Data Retrieval, in academic year 2015/2016 their students are aged widely, most of them are aged at from 19 to 22 years old.<sup>1</sup> It is believed that the people in this age are having good muscle strength and less visual difficulties. Although most of the user do not have physical problems, but there is user in this age range suffering from physical disabilities and visual disabilities, they might have problem with controlling mouse and keyboard or color-blindness.

### d. Cultural differences

#### High education background

Tertiary students in Hong Kong study in different university and institution learning professional knowledge.

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<sup>1</sup>University Grants Committee Customised Data Retrieval. (2016). [online] Available at: <https://cdcf.ugc.edu.hk/cdcf/indepthAnalysis.do> [Accessed 29 Nov. 2017].

#### Can read Chinese and English

Tertiary students in Hong Kong included locals and non-locals, most of them can read English.

#### e. Knowledge of job

##### Familiar with online purchasing or booking

The target user can perform the job in anywhere as they have a laptop or a pc desktop on hand. The job of purchasing travel package and booking hotel can be easily understand, user do not need to learn what is purchasing or booking. User will understand what the website functions is.

#### f. Application familiarity

##### Either novice or expert

User can be either novice or expert to online sales system. As many platforms provide online purchase or booking, user may have the experience in using this kind of application, they can understand the flow of the job and have the knowledge on diagnosing problems during perform the job. On the other hand, user may only have the concept of online purchasing or booking, they might not have performed the job before. From this discovery the website interface design should similar the other online purchase or booking website, so user can recognize flow of the services.

## 1.2 Techniques for observing and listening to users

#### Online surveys

As the services is web-based online system, user can do a survey after they use the system, this way the project team can obtain review from different users to improve the website.

## 1.3 Environment Analysis

#### On computer

The target users can easily access to PC desktop or laptop.

## 1.4 Recruiting Users

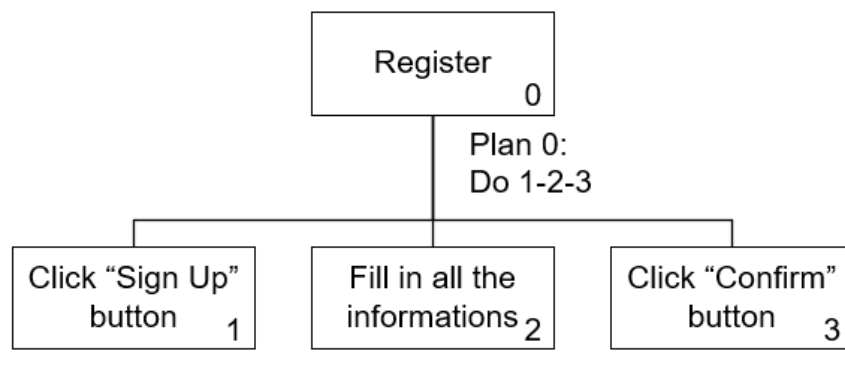
#### Test with real current users (Customers)

Customers will be recruited to test the website usability and function, their comment are important to the website development. With customers help the project team can easily how quick the user can learn to user the interface. In additions, users help can ensure the website design are following the “recognize” principal.

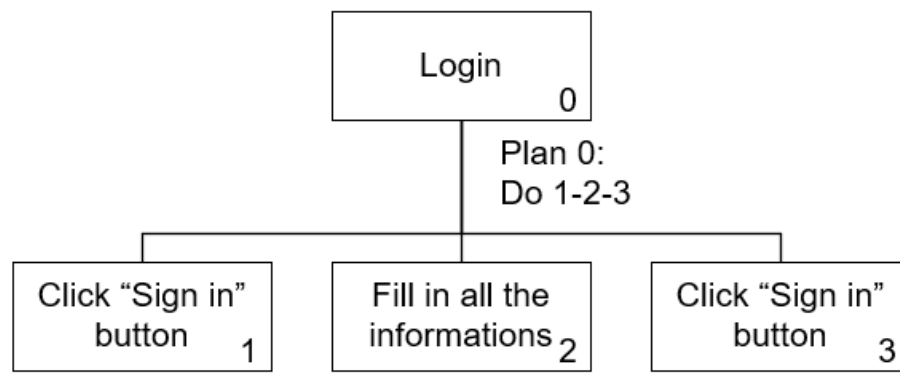
## 1.5 Task Analysis (HTA)

- Main Task
  - Register
  - Login
  - Search Product
  - Make Booking
  - Make Payment
  - Make Review

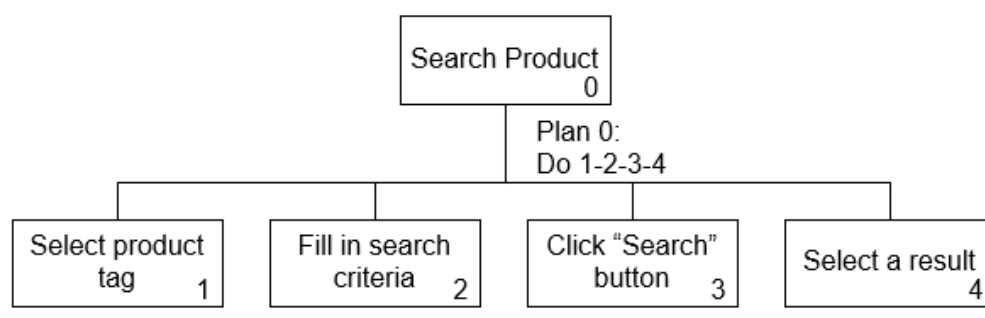
- Register



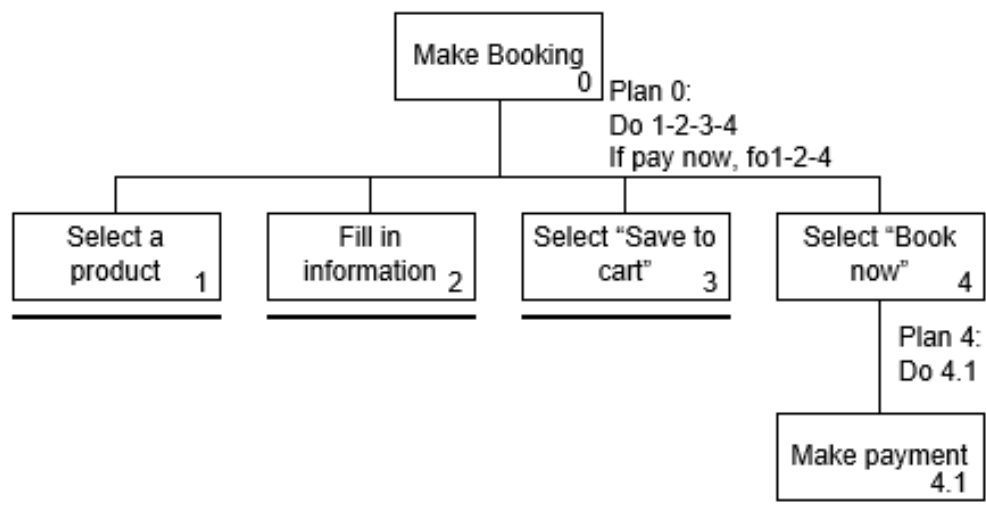
- Login



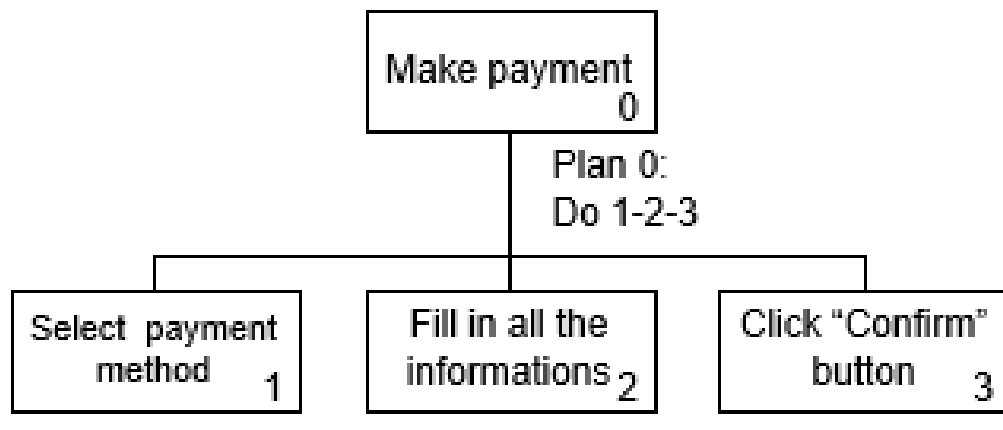
- Search Product



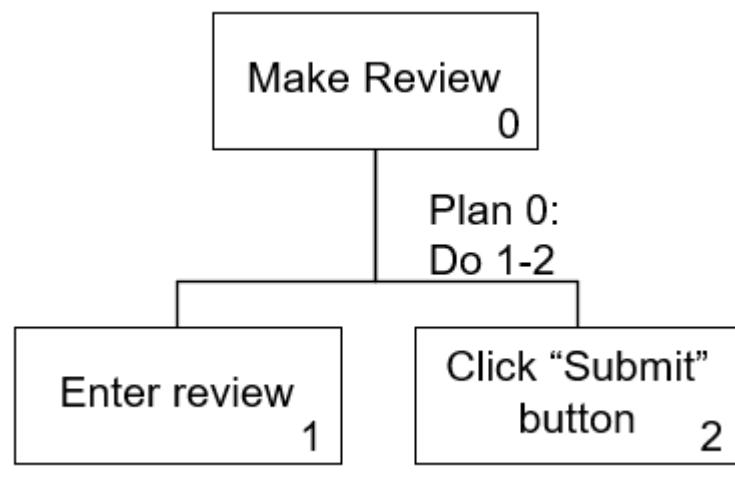
- Make Booking



- Make Payment



- Make Review



## 2 Web Design

### 2.1 Mental Model

- Register

#### Mental Model

For register mental model <http://www.hongthai.com> register flow is referenced. This register flow design is a commonly used by different website, it is simple and clear, it is expected that the target user have this as mental model.

1. click “register”
2. enter the information required
3. click “submit”

康泰旅行社

新加坡4天尋味之旅 \$4999起

第一部份：會員資料基本

英文姓名\* SurName Given Name

中文姓名 姓 名

稱謂\* 請選擇稱謂

推薦人資料

☐ 沒有推薦人

☐ 推薦人電郵地址或電話號碼

第二部份：會員個人資料

電郵地址\*

確認電郵地址\*

登入密碼\*

確認登入密碼\*

我同意接受尊享會所有條款及細則。

我同意使用以上之個人資料，透過不同渠道作直接市場推廣提供旅遊相關資訊及優惠。

遞交

## Current Design

In order to let user to find the “Sign up” button, the button is placed the navigation bar, this is a common used design. After user click the “Sign up” button they are directed to the sign up page. The register process require user to input many data, in order to let user feel the register process is fast and easy, the sign up page is divided into 3 parts. First, user input the account information. Then, the personal information. Finally, they can review the information inputed and agree the term and condition. They can click confirm to finish the registration process.

1. click “register”
2. enter the account information
3. click “Next”
4. enter the personal information
5. click “Next”
6. confirm information and agree terms and conditions
7. click “Confirm”

The screenshot shows the first step of the registration process. The page has a header with 'Happy Travel' and navigation links for 'Tours', 'Hotel', 'Sign-Up', and 'Sign-In'. Below the header, there are three steps: Step 1 (Set up account), Step 2 (Enter personal information), and Step 3 (Confirm information). The main form area is titled 'Join HappyTravel' and contains four input fields: 'Email', 'Username', 'Password', and 'Confirm Password'. At the bottom right, there are 'Back' and 'Next' buttons.

The screenshot shows the second step of the registration process. The page has the same header and step indicators. The main form area is titled 'Join HappyTravel' and contains four input fields: 'Name' (with 'Peter' and 'Chan' entered), 'Mobile Phone' (with '12345678' entered), 'Birth Date' (with '2017/12/01' entered), and 'Gender' (with 'Male' selected). At the bottom right, there are 'Back' and 'Next' buttons.

The screenshot shows the third step of the registration process. The page has the same header and step indicators. The main form area is titled 'Join HappyTravel' and displays the account information: 'Account Information: Username: peterchan, Email: peterchan@gmail.com' and 'Personal Information: Name: PeterChan, Mobile Phone: 12345678, Birth Date: 2017-12-01, Gender: Male'. At the bottom, there is a checkbox for 'I agree to the Terms & Condition and Privacy Policy' and 'Back' and 'Submit' buttons.

The screenshot shows the final step of the registration process. The page has the same header and step indicators. The main form area is titled 'Join HappyTravel' and displays a green checkmark icon and the message: 'Account registration successful. Auto redirect in 3 seconds'. At the bottom, there is a checkbox for 'I agree to the Terms & Condition and Privacy Policy' and 'Back' and 'Submit' buttons.

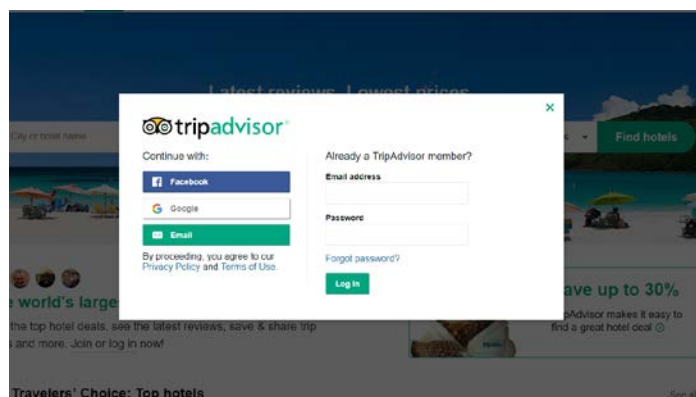
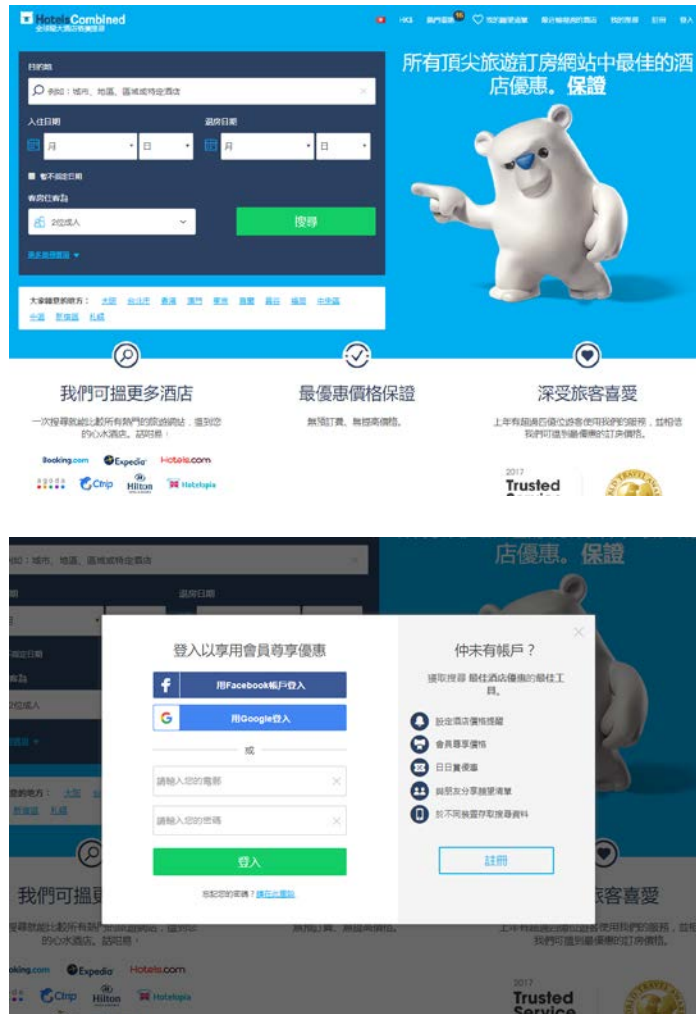


- Login

## Mental Model

For login mental model <https://www.hotelscombined.hk/> login flow is referenced. HotelsCombined used a pop up box as the login interface, by using this method user can login faster without directing to another page. This is commonly be adopt to different websites like Twitch and TripAdvisor

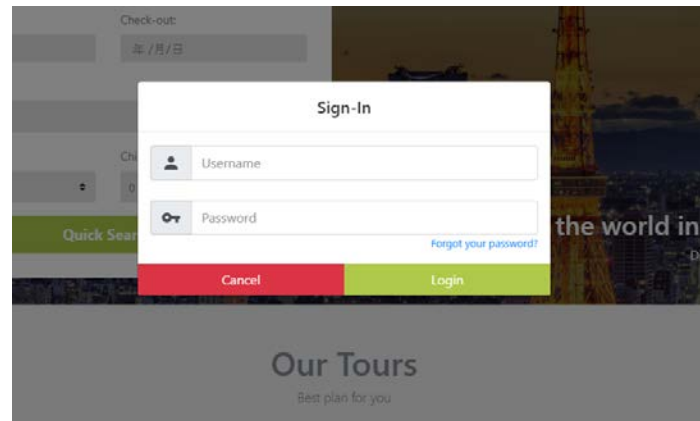
1. click "login"
2. enter the information required
3. click submit



## Current Design

In order to let user to find the “Sign in” button, the button is placed the navigation bar. After user click the “Sign in” button a pop up box is showed. User can input their username and password to sign in, this is a design commonly seen for sign in function. User can click the blurred area or click cancel to close the box.

1. click “Sign in”
2. enter the account information
3. click “Sign in”

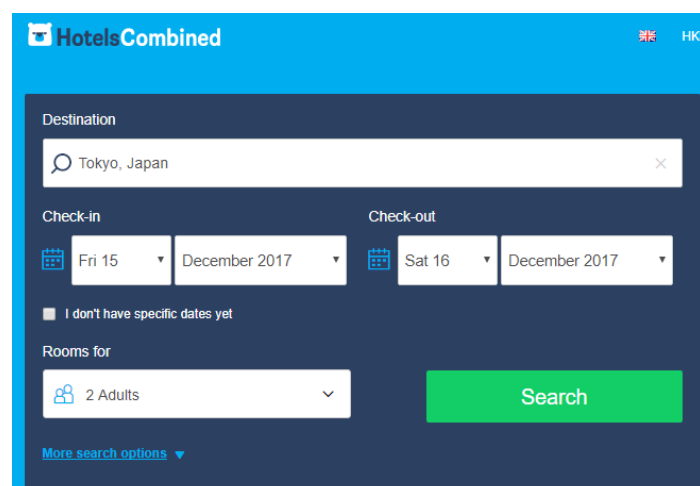


## • Search Product

### Mental Model

For search product mental model different booking website are referenced. The design of putting the search box in the banner session of the website is very commonly used among booking website. User can enter a destination, check in/out or date etc. to search for items. It is believed that the design can help start searching for product as soon as the website is loaded. The user will be direct to the result page to view products.

1. enter the information required
2. click “Search”

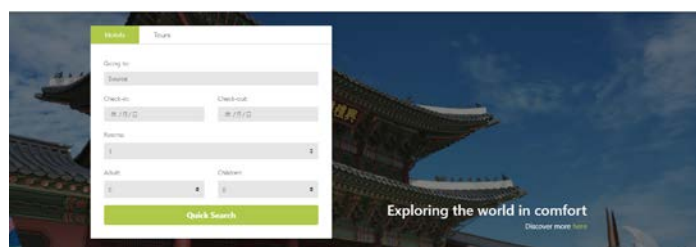




## Current Design

By adopting search product mental model, a search interface is included in the banner of the index, this is convenient design for user, they can search for product directly after the index page is loaded. User will then be directed to the result page, user can see a similar search box in the banner, user can search for different product in result page directly.

1. Select "Tour" or "Hotels"
2. enter the search requirements
3. click "Quick Search"



HotelsTours

Going to:

Source

Check-in:

年 / 月 / 日

Check-out:

年 / 月 / 日

Rooms:

1

Adult:

0

Children:

0

Quick Search

HotelsTours

Travel type

Long Haul / Short Haul

Going to:

Destination

Depart date:

年 / 月 / 日

Adult:

0

Children:

0

Quick Search

Tour Search

Going from:

Source

Going to:

Destination

Check-in:

年 / 月 / 日

Check-out:

年 / 月 / 日

Rooms:

1

Adult:

0

Children:

0

Search

Tours

Search tour by id

Destination

Q

Filter tours by

Tokyo, Fujitsu two days free exercise, 5 days regiment

2017-09-01 to 2017-11-30

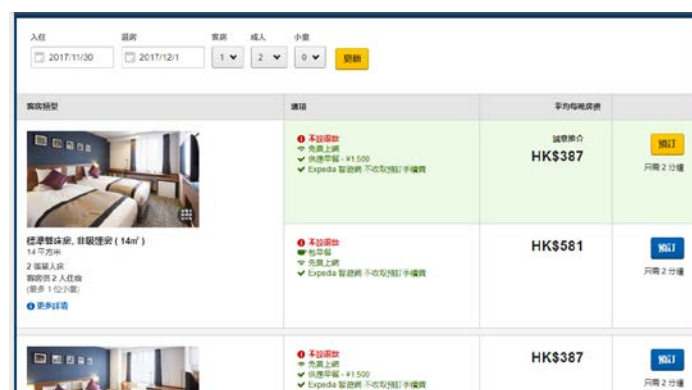
ABITF-SP

- Make Booking

## Mental Model

For make booking mental model different booking website are referenced. After user be directed to the deatail page of a product, user can see a book now button, the screen will smooth scroll to the booking session where user select the date of reservation and the room type. Most of the booking website will then direct user to the payment page.

1. Click “Book now”
2. Enter select date and room type
3. Enter payment information




## Current Design

Referencing make booking mental model, in the deatail page of product a “Book now” button is provided, user can click the button and select date and room type. Under the request of Happy Travel it is the best to provide a option to user, selecting “pay now” or “add to cart”, so that user can pay immediately or pay later.

1. Click “Select”
2. Enter select date and room type
3. Select “pay now” or “add to cart”

Happy Travel
My Cart Tours Hotel Sign-out

< Back Tour Details



Tokyo, Fujitsu two days free exercise, 5 days regiment [AJHTF-SP]  
2017-09-01 to 2017-11-30

- ★ A tour of North and South Kyushu highlights!
- ★ Sightseeing Wild dolphins by boat to experience the Japanese natural black sand steaming spa!
- ★ Kyushu hot springs all over Japan, stay 5 nights Hot Springs Hotel, enjoy Japanese-style hot spring music.
- ★ Enjoy the famous Yanagawa - eel dishes, tempura + Tao Banbian Ding Shi, Japanese kimchi set meals!

HK\$6099

Select

Itinerary introduction Tours Fee Booking instructions

A tour of North and South Kyushu highlights, and take the characteristics of sightseeing train - Ibusuki Jade box train!

【Multiple experiences】 Sightseeing Wild dolphins by boat to experience the Japanese natural black sand steaming spa, water Yanagawa Rafting experience the quiet and quiet style!

【5 Nights Hot Springs】 Kyushu hot springs all over Japan, stay 5 nights Hot Springs Hotel, enjoy Japanese-style hot spring music.

Enjoy the famous Yanagawa - eel dishes, tempura + Tao Banbian Ding Shi, Japanese kimchi set meals, Japanese barbecue, hot pot, and the hotel rich dinner!

Step 1 Select Product Step 2 Enter Information Step 3 Confirm Information Step 4 Payment Step 5 Book Successfully

Select Your Tour

Check-in: 2017/12/01

**Tour Info**

Tour ID	Price	Status
AJHTF-SP	HK\$4999	Available

Total: HK\$4999

< Cancel Next

**Flight Info**

Depart: China Eastern Airlines Arrive: China Eastern Airlines

**Enrollment**

Room	Price	Quantity
Adult Half	HK\$4999	1
Child Half	HK\$4999	0
Child No bed	HK\$3999	0

Confirm Information

**No.1 Traveler**

Room*	Single man
Name*	MR. 121 12
ID number*	12
Valid date*	2017-12-01
Nationality*	CL
Birthday*	2017-12-01

Total: HK\$4999

< Previous Pay now Add to cart

**Contact information**

Name*	MR. 212 12
Email*	2

- **Make Payment**

### Mental Model

For make payment mental model different booking website are referenced. Usually user are required to enter their name and contact information, after they need enter the payment information like credit card number and security code.

1. Enter personal information
2. Enter payment information
3. Click “confirm”

客房 1: 2 位成人, 2 張單人床, 吸煙  
 ✓ 包早餐 ✓ 免費上網

姓氏:請以英文輸入\* (英文, 例: Chan) 名字:請以英文輸入\* (英文, 例: Dai Man)  
 請使用英文字母輸入姓氏。 請使用英文字母輸入名字。

國家/地區碼\*  
 Hong Kong +852

手機號碼\*  
 以便酒店聯絡您

☐ 收取有關此行程的短訊通知 (免費)。

立即預訂! 另有 17 人正在查看此住宿。

您正在預訂我們於 Canal City Fukuoka Washington Hotel 的最後一間雙人房, 吸煙房 (Modern, 10.1)。

我們的資料傳送方法安全可靠 我們會保護您的個人資料

輸入優惠或推廣代碼

記帳卡/信用卡 支付寶

MasterCard Visa JCB American Express

持卡人姓名\*

扣帳卡/信用卡號碼\*

到期日\*  
 月 年

### Current Design

The mental model will be referenced, user can pay directly or pay later. User can pay for all the items in the “My cart” page. User will then be ask to enter their name and contact, also as payment information.

1. Click “Pay now”
2. Enter information
3. Click “Confirm”

Payment

Credit Card  
 Safer money transfer using your bank account, Visa, MasterCard, Discover, American Express.

Card Number  
 Card Holder MM/YY CVV

PayPal  
 You will be redirected to PayPal website to complete your purchase securely.

Total: HK\$4999  
 < Cancel Submit

- Make review

## Mental Model

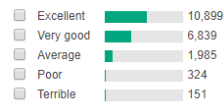
For make payment mental model different booking website are referenced. Usually In TripAdvisor a button “Write a Review”, giving rate and review.

1. Click “Write a review”
2. Enter review
3. Click “submit”

### Reviews (28,609)

[Write a Review](#)

#### Traveler rating



#### Traveler type

- ☐ Families
- ☐ Couples
- ☐ Solo
- ☐ Business
- ☐ Friends

#### Time of year

- ☐ Mar-May
- ☐ Jun-Aug
- ☐ Sep-Nov
- ☐ Dec-Feb

#### Language

- ☐ All languages
  - ☒ English (20,198)
  - ☐ Japanese (1,621)
  - ☐ Russian (1,197)
- [More languages](#)

#### Show reviews that mention

 Search reviews

- All reviews
- victoria peak
- tram ride
- sky terrace
- lugard road
- viewing platform
- wax museum
- view of hong kong
- amazing view
- shopping mall
- night view
- madame tussauds
- sunny day
- long queue
- enjoy the view
- worth the trip
- visiting hong kong
- victoria harbour

1 - 10 of 20,198 reviews



WilliamT1373  
Craigavon,  
United  
Kingdom

32 16

Reviewed yesterday via mobile

#### Must see

Queued for approx,1 hour to get tickets,10 min ride to top. Make sure you buy ticket to take you to observation deck,once there the views are very impressive a must see.Below the deck there are floors of shops and restaurants. Very well run.

Thank WilliamT1373

#### Your overall rating of this attraction

Draft saved at 12:33 PM.



Click to rate

#### Title of your review

Summarize your visit or highlight an interesting detail

#### Your review

[Tips for writing a great review](#)

Tell people about your experience: describe the place or activity, recommendations for travelers?

(100 character minimum)



## Current Design

To let user make review easily a comment session will be put at the deatail page of each product item. The mental model of user is considered, user can enter rating and comment while making comment.

1. Enter information
2. Click "Submit"

Reviews

Rating

☆ ☆ ☆ ☆ ☆

Title

Comments

Submit

3.4 out of 5

Mal

Nov 27, 2017

3 out of 5

Average

small rooms, not well-maintained, few amenities, great location though, good itinerary

by A verified traveler

Nov 24, 2017

1 out of 5

Disappointing

diana

Nov 24, 2017

5 out of 5

Great place

Great

Nadivuka

Nov 4, 2017

4 out of 5

Nice, Reasonable

Great

caralyn

Nov 1, 2017

4 out of 5

Great trip

Great

Rating

☆ ☆ ☆ ☆ ☆

TExting

sdfhsdfhsdfs

Submit

3.67 out of 5

A verified user

Dec 1, 2017

5 out of 5

TExting

sdfhsdfhsdfs

...

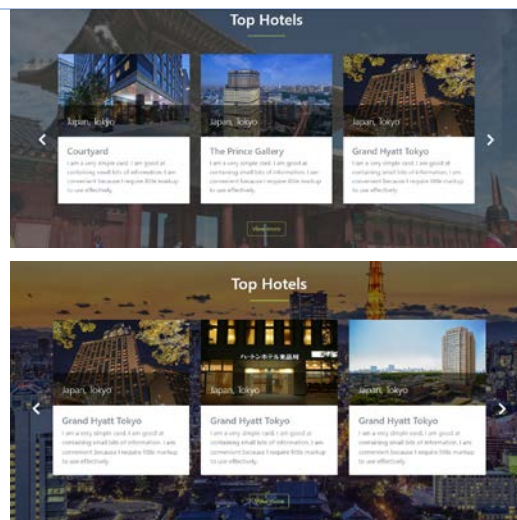
## 2.2 Affordance

### Physical Affordance

The screenshot shows a search interface with two tabs: 'Hotels' (active) and 'Tours'. Below the tabs is a 'Going to:' section with a 'Source' input field. This is followed by 'Check-in:' and 'Check-out:' date pickers, both showing '年/月/日'. Below these are 'Rooms:' and 'Adult:' dropdowns, both set to '1' and '0' respectively, and a 'Children:' dropdown set to '0'. A green 'Quick Search' button is at the bottom. Below the main form is a secondary navigation bar with 'Hotels' and 'Tours' tabs.

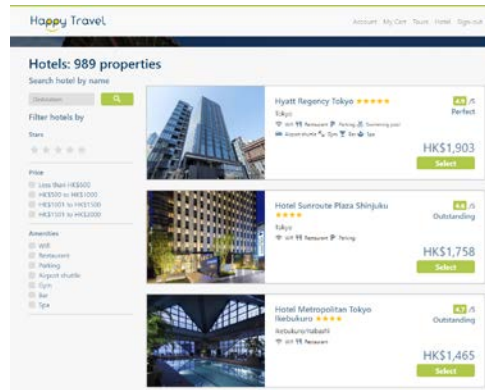
- Search box

The search box is blatant and clear, located in the banner of the index. The appearance instantly clear to a user that they can search product from this session.



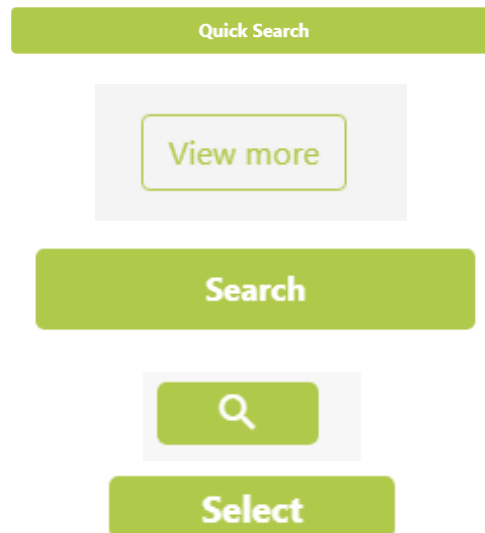
- Top hotels session

The arrow icon in the left and right is a button that allow user to view more hotels. The design is straightforward of affordances.



- Search result page

The page is divided in to left and right side, it clear that the user can sort the result using the left panel. Anyone would be able to guess what action they can perform just by looking at this affordance.



- Button

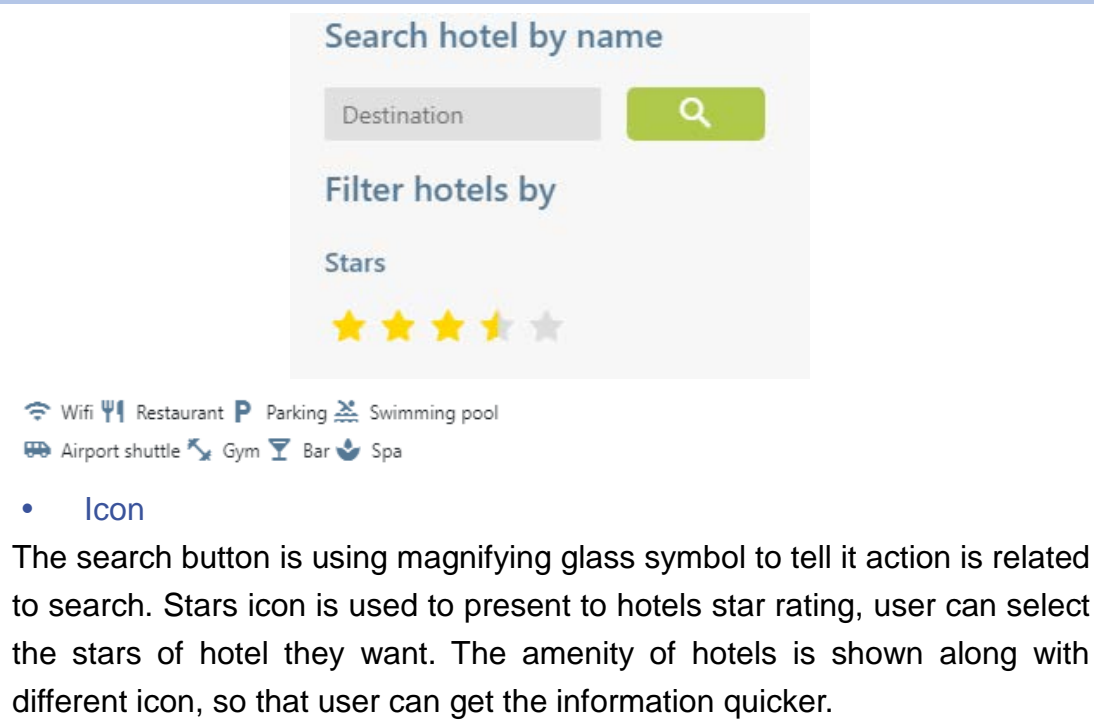
All call to action button is similar to search another, featuring a consistent design. The button is using a rounded corner and the color will slight change while on hover, this way the button can seems clickable to user, ensuring that they know it is a button.

The screenshot displays a hotel search interface with a sidebar on the left and a main content area on the right. The sidebar, titled "Hotels: 989 properties", includes a search bar, a "Filter hotels by" section with "Stars" (1-5 stars), a "Price" section with four ranges, and an "Amenities" section with checkboxes for Wifi, Restaurant, Parking, Airport shuttle, Gym, Bar, and Spa. The main content area, titled "Search hotel by name", features a "Destination" input field with a search icon, a "Filter hotels by" section with "Stars" (1-5 stars), a "Price" section with four ranges, and an "Amenities" section with checkboxes for Wifi, Restaurant, Parking, Airport shuttle, Gym, Bar, and Spa. Below these filters, three hotel cards are shown: Hyatt Regency Tokyo (5 stars, Perfect, HK\$1,903), Hotel Sunroute Plaza Shinjuku (4 stars, Outstanding, HK\$1,758), and Hotel Metropolitan Tokyo (4 stars, Outstanding, HK\$1,758).

- **Result page sorting panel**

A language affordance is applied in here. "Search hotel by name" and "Filter hotels by" is indicated, so that user will have no room to the imagination as to what the intended action is. In this case, user can find very clear that they can sort hotel by their name or checking the box of criteria the sort hotels.

## Iconic Affordance



The image shows a user interface for searching and filtering hotels. At the top, there is a section titled "Search hotel by name" which contains a text input field labeled "Destination" and a green button with a magnifying glass icon. Below this is a section titled "Filter hotels by" with a sub-section "Stars" showing five star icons, where the first four are yellow and the fifth is grey. At the bottom, there is a row of amenity icons and labels: Wifi (Wi-Fi symbol), Restaurant (fork and knife), Parking (P), Swimming pool (pool symbol), Airport shuttle (shuttle bus), Gym (dumbbell), Bar (glass), and Spa (bathtub).

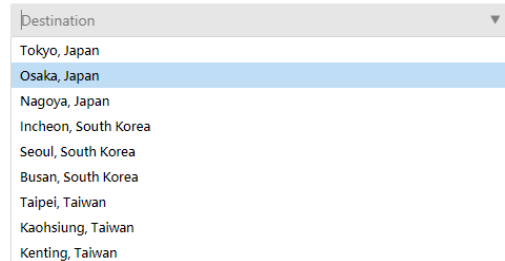
- [Icon](#)

The search button is using magnifying glass symbol to tell it action is related to search. Stars icon is used to present to hotels star rating, user can select the stars of hotel they want. The amenity of hotels is shown along with different icon, so that user can get the information quicker.

## 2.3 Content Organization

### Alphabetical Organizational

Going to:

A dropdown menu with a light gray header containing the text "Destination" and a downward arrow. Below the header, a list of cities is displayed: Tokyo, Japan; Osaka, Japan (highlighted in blue); Nagoya, Japan; Incheon, South Korea; Seoul, South Korea; Busan, South Korea; Taipei, Taiwan; Kaohsiung, Taiwan; and Kenting, Taiwan.

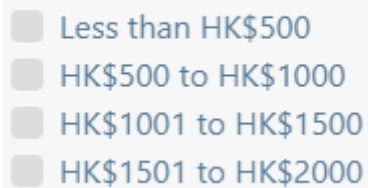
Destination
Tokyo, Japan
Osaka, Japan
Nagoya, Japan
Incheon, South Korea
Seoul, South Korea
Busan, South Korea
Taipei, Taiwan
Kaohsiung, Taiwan
Kenting, Taiwan

- [Select destination](#)

The Countries name is sorted by alphabetical, along with different cities of the country. User can select easily.

### Chronological Organizational

#### Price

- 
- A list of four price range options, each preceded by a gray square checkbox. The options are: Less than HK\$500, HK\$500 to HK\$1000, HK\$1001 to HK\$1500, and HK\$1501 to HK\$2000.
- ☐ Less than HK\$500
  - ☐ HK\$500 to HK\$1000
  - ☐ HK\$1001 to HK\$1500
  - ☐ HK\$1501 to HK\$2000

- [Price sorting](#)

The price sorting in the result page is using chronological organizational. It is easier for user select a price range.

## 2.4 Visual Organization

### Alignment

Reviews

Rating

☆☆☆☆☆

Title

Comments

Submit

3.4 out of 5

Mel

Nov 27, 2017

3 out of 5 **Average**  
small rooms, not well-maintained, few amenities, great location though, good itinerary

by A verified traveler

Nov 24, 2017

1 out of 5 **Disappointing**  
Disappointing

diana

Nov 24, 2017

5 out of 5 **Great place**  
Great

Nadiuska

Nov 4, 2017

4 out of 5 **Nice, Reasonable**  
Great

carolyn

Nov 1, 2017

4 out of 5 **Great trip**  
Great

#### Select Your Tour

Check-in: 2017/12/01

##### Tour Info

Tour ID	Price	Status
AJHTF-5P	HK\$4999	Available

##### Flight Info

**Depart** China Eastern Airlines **Arrival** China Eastern Airlines

##### Enrollment

Room	Price	Quantity
Adult Half	HK\$4999	1
Child Half	HK\$4999	0
Child No bed	HK\$3999	0

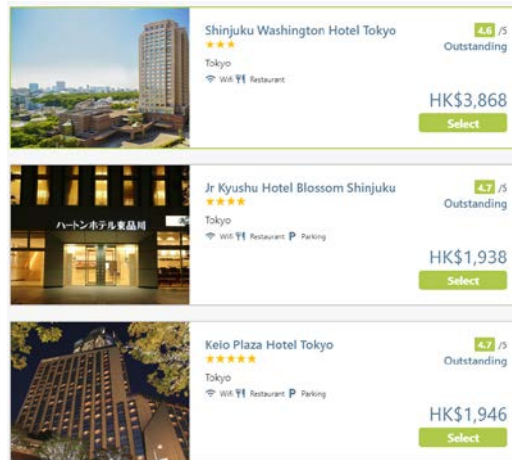
- **Vertical-align**

Vertical-align is used to align the review, all review is aligned properly, so that the presentation can be more clear and consistent.

- **Horizontal-align**

In the website horizontal-align is used to align the information and control.

## Consistency



- Result list

The result list item in the result page is consistency to each another, user can recall what information is located quickly. This also present a clean and consistent design.

The image shows a payment page with a progress bar at the top indicating five steps: Step 1 (Select Product), Step 2 (Enter Information), Step 3 (Confirm Information), Step 4 (Payment), and Step 5 (Successfully submitted). The 'Payment' section is active, showing two options: Credit Card and PayPal. The Credit Card option is selected, displaying fields for Card Number, Card Holder, MM/YY, and CVV. The PayPal option is also visible, stating that the user will be redirected to the PayPal website. The total amount is HK\$4999, and there are 'Cancel' and 'Submit' buttons.

Step 1 Select Product   Step 2 Enter Information   Step 3 Confirm Information   **Step 4 Payment**   Step 5 Successfully submitted

### Payment

☒ **Credit Card**  
Safer money transfer using your bank account, Visa, Mastero, Discover, American Express.

Card Number

Card Holder    MM/YY    CVV

☐ **PayPal**  
You will be redirected to PayPal website to complete your purchase securely.

Total: HK\$4999

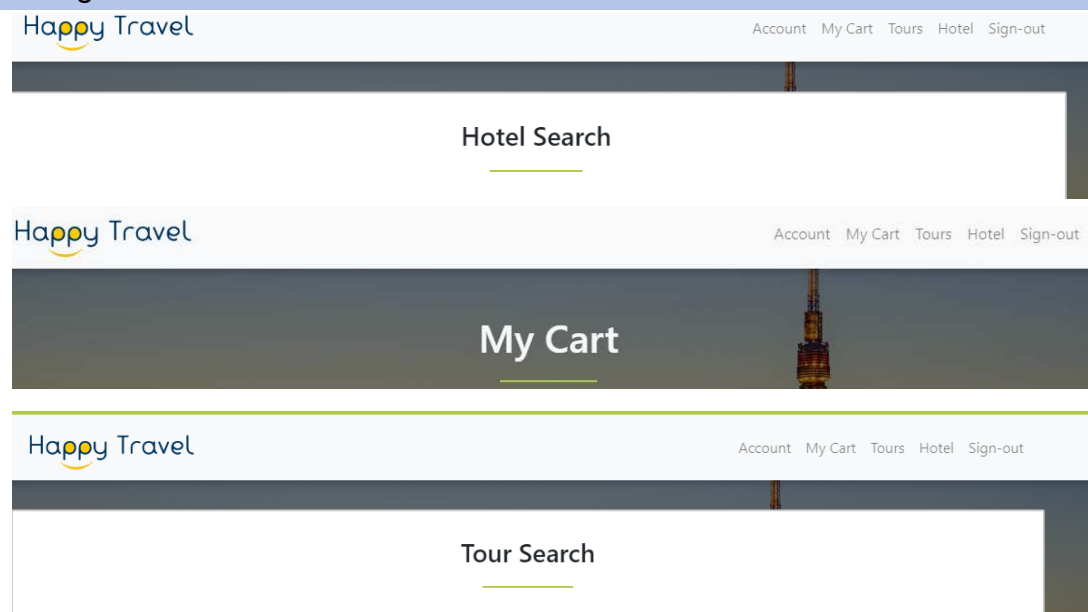
< Cancel   **Submit**





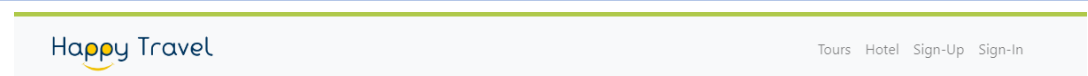
## 2.5 Navigation

### Navigation



- **Breadcrumbs**

Breadcrumbs is used to show the user currently where they are, so they will not feel lost while browsing the website.



- **Global Navigation**

Using global navigation keep the website navigation simple and clear, user can clearly know what navigation to click to perform specific task. Together with the Breadcrumbs, the user experience can be further enhanced, user will never get while using the website.