Introduction to HCI Final Report:
Online Hotel Booking System

Introduction to HCI, Group 5
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Abstract

This report is about the process of developing a hotel booking system which may be used in different countries. Previous research of related work is made. Before the final design, there would be two times of prototype design would be taken and evaluated. At last, a final design of a hotel booking system would be completed and described in this report.
Introduction

The hotel is a “template home” when people get to a new place. People stay in the hotels for few days for traveling or maybe visiting friends. With the incensement of the flow of people, the number of the hotel is increasing rapidly. When a traveler comes to a beautiful city, in which hotel he can fully enjoy of this city’s view? When a business man comes to a place, how he can a comfortable room? When a family comes to a city on Charismas holiday, how can they find a big sweet en-suit?

Facing with a great deal of hotel information, how people can find the ideal room? How can they make a reservation easily and simply? For helping people to find and book a suitable hotel, a system is required! To satisfied different end users, we select web-based system which is widely supported by different end devices (PC, MAC and tablets).

In order to design a hotel booking system, some relative work, not only hotel booking system but some other booking systems ex. train ticket booking system, are researched and compared. The result of the research is analyzed and the list of user’s requirements comes up. According to these requirements, some prototypes are created and the evaluation plan is made to compare and prove these designs. Then, a second prototype is designed basis the previous work. At the same time, the evaluation plan for the second prototype is made. Finally, a design of hotel booking system would be completed after the evaluation.
Definition of problem addressed

General introduction
A hotel is a “template home” when people get to a new place. People stay in the hotels for few days for purposes of traveling or maybe visiting friends. With the incensement of the flow of people, the number of the hotels is increasing rapidly. When a traveler comes to a beautiful city, in which hotel he can fully enjoy of this city’s view? When a business man comes to a place, how he can find a comfortable room? When a family comes to a city on Christmas holiday, how can they find a big sweet en-suit?

Facing with a great deal of hotels’ information, how people can find the ideal room? How can they make a reservation easily and simply? For helping people to find and book a suitable hotel, a system is required! To satisfied different end users, we selected web-based system for this project which is widely supported by different end devices (PC, MAC and tablets).

Problems addressed
For this system, here are some its main functions/tasks/problems:
1. Search the hotels by name, location, price, size
2. Offer the detailed information of a hotel(description, images, location, breakfast, traffic, nearby) and its rooms(facilities, size) in a comfortable way
3. Make a reservation in advance
4. Allow the previous clients to write reviews for hotels/rooms
5. Build a rating system for all the hotels
6. Characteristics of this system:
   1. Designed for world wild clients
   2. Different languages /currencies/ payment methods supported
   3. Design suitable booking process for the costumers in different ages
   4. Different supports for the costumers in different aim
   5. The user can access the system through their internet device in the browser
   6. GUI would be simple, useful and decent to help the client find what they want

For this web-based system, we designed a general system structure:
Review of related work

General Introduction:
In this report, we investigated some online booking systems, and find out the advantages and disadvantages of them both in the view of a user and a developer. As users, we analyzed the system’s GUI part including (content layout, information relativity, usability, practicability, functionality and so on.). As developers, we considered how to avoid these kinds of improper design, and how to build a better user interface.

Several online booking systems have been involved in the following report, for example, hotel booking, rail way ticket booking, ticketmaster, see ticket and so on. The following content is oriented by website.

National railway tickets online booking system

This is UK railway online booking system . ([1])

1. A simple and effective interface. This is what the user can see first time, system uses blue and white color to build this search interface which may let the user feel calm. Then the yellow button stand out of others elements can remind the user click here!

2. There is some useful information for those potential users below the ticket booking interface, such as hotel booking, special ticket offer.

3. Among the tickets list, the selected ticket is displayed in a special color.
Some ideas to improve this system:
1. Because this is a railway ticket booking system, maybe it can offer a map of the railway then user can choose the departure and destination directly on the map.
2. Also based on the ideal above make the name of popular place in red or yellow on the map will help the user booking the ticket effective.
3. A popular travel path option could be shown on the map

US football ticket online booking system

This is an American football booking system, which provides football tickets booking serves for whole nation. (2)

Advantages:
1. There is a list of locations where games would be hold up, it is convenient to choose the tickets that people want
2. Figure for distinguish of seats, clearly showing the seats and easy to choose. This may be used to set up the system to book the specific seats.
3. Provide calling serves for someone who do not familiar with this online booking system

TOP EVENTS

Top events gives suggestions to customers to book, and it is a kind of advertising at the same time.

Disadvantages:
1. Some pages include too much information and there are little guides.
2. The previous page is one of location pages. There are too many options to choose, and the customers who are not good at geography would not be happy to do that. Suggest a map of nations instead of these pages and place these locations on the map.

Conclusion:
Photos are much better than words for showing information. Either location lists or seats description is suitable for this situation. At the same time, it would not make customers feel confused when they are facing many choices.

**Hotels online booking system**

This is an international hotel booking system in UK. (1)

**Advantages:**

1. Multilingual environment makes the system become suitable for international business.
2. Showing prices in any kinds of currencies, this is another good point of international users.
3. There are two kinds of process for booking. One is for the people who know the time and location, another one is for the people who want to search for some hotels.
4. Provides general evaluations of hotels. This would be important information for customers.
5. Mobile versions of website is important when smart phone have become effective tools in people’s lives
6. Security is a most important issue. There gives confidence for people to choose the web.

**Disadvantages:**

1. The map searching system is not located on the first pages. This would make it to be ignored.
2. There are only one room picture for a hotel. Providing different services must be the rule of every hotel, so providing pictures of any kind of rooms would help people to know the details.

**Conclusion:**

Different search processes for different customers is good to involve more customers. Providing international services if the web is made for international.
Ticketmaster online booking system

An American company who sells different kinds of tickets that includes music, sport, and theatre and so on. As the company stands on the top, it has many brands in other countries which provide best services to people.

Good ideas:
1. The booking website provides service in many countries. According to click the scroll button, visitors can choose which one is fits to them.

2. The search bar is very easy to find. It is above the menu. Red is a kind of bright color, and the background color is black. It makes people easy to notice the search button.

3. People can apply for a account which can provide personal service

4. There is an ad in main page. But people can close it. Now many websites don’t allow visitors to do it.

5. In recommend area, not only show some pictures. They also introduce the show and show buying tickets links from the picture.

6. In different area, they show current popular shows. For example, in music, they show
popular teams.

7. The best offers parts, the pictures show what offer it includes

![Justin & Friends](image)

**Bad ideas and suggestions:**

1. The website is too long so that people need to scroll it. They can try to put many information to other pages instead put in one page

2. Some links are too small and not easy to find

They need change the size or color of font.

3. The social network share is on bottom and very small. Many teenagers use get new information by them. Make the icons bigger and give some good area in the webpage.

4. Complex information makes people confused. Just put some key information can help people do better.

**Booking process:**

Main page-search results—detail pages-pay pages
Main page—different tickets selection—detail pages—pay

**Conclusion:**
As a big ticket company, it provides much information about activities. The alignment and alignment rules of HCI are used well. People can search in different ways. But how to keep clear in complex information is a hard task for visitors.

**Seetickets online booking system**

It is a different style of ticketmaster[^5]. The pages are well simple and close to social network.

**Good ideas:**
1. The pages are very simple so that people can find information quickly

![Image of Seetickets](https://via.placeholder.com/150)

2. They classify different kind of tickets with pictures and using table style in web design.

![Image of Seetickets](https://via.placeholder.com/150)

3. People are easy to share the website on social network as the share link is very easy to find

![Image of Seetickets](https://via.placeholder.com/150)

4. In search results, it gives some simple words to each picture that help people find show quickly.
5. For a special show, people can give their ideas about it

Bad ideas and suggestions:
1. Search bar is hard to find on main pages because the color is the same with the background. Make the search bar color different.

2. The add function is on the top. When people open it, they say ads first and the ads is none business of tickets. Put ads in other area of the websites or make it smaller.

3. The recommend events don’t write which area it belongs to, music? Sports?

4. Offers are too few. Add more offers, make the introduction shorter.

Booking process:
Main page-search results-detail page-pay

Conclusion:
The simple design makes people easy to find the tickets, social network let visitors can share the information with friends.
General Principle of HCI

Human-Computer Interaction is the study about the interrelation between systems and users. Its goal is to improving availability of systems and making them suitable for users’ needs, and finally decreasing the obstacles of computer getting to know what users want.

Interaction models

The most influential mode of HCI is Norman’s model. There are 7 stages in Norman’s model:

Set goals
Set schematic diagram
Define order of actions
Execution
Observe system
Explain functions of systems
Evaluation

The most important stages in this model are: Execution and Evaluation. The key of Human-Computer Interaction is not the functions or codes in the system, but the ways to running functions to implement the functions and let users know what systems can do for them.\[6\]

Principle of Display design

In order to showing users the functions of a system, the display must be designed under some principle and make sure the availability for users. There are 13 principles stipulated\[7\]:

Perceptual principles:

1. Legible. A display must be designed clearly that users can understand it so that they can use the system effectively.
2. Avoid absolute judgment limit. Sensory variables may be much different for different users. These would cause misunderstanding.
3. Top-down pressing. Providing enough proves when there may be expected results from users, otherwise questions of users would decrease credibility of systems even only for the impression of users.
4. Redundancy gain. A signal should be represented by more than one way so that it could be understood by either way.
5. Use discriminable elements. There must be obvious differences amount signals so that they would be mixed.

Mental model principles:

6. Principle of pictorial realism. The representing ways of signals should be related with the changed of the elements in real would. For example, a thermometer shows high temperature when the liquid column is high.
7. Principle of moving part. The moving ways of signals should be related with the real motion of elements. For example, the elevation signal on the screen should moves upward when the
aircraft rises.

**Principles based on attention:**

8. Minimizing information access cost. Time and energy is cost when users turn their attentions from an element to another element. Minimizing these costs would make the system easier to be popular.

9. Proximity compatibility principle. Completing a mission may need more than one function. Representing those signals in similar ways would make them easy to distinguish.

10. Principle of consistency. A signal should be represented by more than one way so that users can understand it with a great possibility.

**Memory principles:**

11. Replace memory with visual information. Users cannot store all knowledge about the system all the time, so the system must provide some information to remind user to help them rebuild their memory.

12. Principle of predictive aiding. Sometimes the following action can be predicted when users finish one action. Providing some predictive aid could be helpful if users do not know or forget how to achieve it.

13. Principle of consistency. Users would have habits when they deal with similar systems and the designers could use theses habits to guide users to complete actions step by step.
Analysis of users requirements

Persona and scenario

<table>
<thead>
<tr>
<th>Name: James</th>
<th>User type: old people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: 68</td>
<td></td>
</tr>
<tr>
<td>Job: no</td>
<td></td>
</tr>
<tr>
<td>Basic info: something wrong with his eyes, act slow, don't use computer and internet very often</td>
<td></td>
</tr>
</tbody>
</table>

**Scene One:**
Two weeks before the Christmas holiday, James and his wife wants to go to London for the holidays, but they are currently living in Birmingham, so he want to book a middle class hotel which can have a good view of the London city through the room’s window. And they really want a room with double bed. Now he is at home with a slow WIFI, whether he can book the ticket successfully?

**Scene Two:**
James’s grandson is studying in US, and nowadays, he wants to see his son and have s trip in US. Because his grandson is living in the university’s apartment, so he has to book a hotel, he heard of a hotel named “home inn”, so he wants to stay there. Now he needs to find the hotel and book that hotel by this system. He doesn’t care about the room type, what he wants is just that hotel!

**Scene Three:**
James used to live in Glasgow when he was young, now he wants to go back to that city live few days. What he needs is a unsure period of staying in that city, he don’t know the which hotel is good. So maybe he needs the system to give him the most popular hotels in that city. Nowadays, something wrong with his eyes, he can’t see the screen for a long time, so he wants to book a hotel in 3 minutes at most.

<table>
<thead>
<tr>
<th>Name: Tom</th>
<th>User type: mid-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: 40</td>
<td></td>
</tr>
<tr>
<td>Job: bank manager</td>
<td></td>
</tr>
<tr>
<td>Basic info: rich, work hard, like to enjoy the life, travel sometimes</td>
<td></td>
</tr>
</tbody>
</table>
Scene One:
Tom will travel to Leeds new Monday for some business issues for three days. But he never been there before that means he don’t know the way after getting off the train. But he needs a hotel which is near the city center. And if the system can show he the way from the train station to the hotel, he will make reservation right now with the system. Now there are only 10 minute before leaving the office, can be make it in 10 minutes?

Scene Two:
Once, Tom needs to go to Japan for a one-month project, but he doesn’t familiar with the local hotels and he really wants to know the local culture. And he doesn’t have foreign currency account. What he can do is just pay by this credit card in GBP. Now he is looking for a system which can gives him some hotel selection suggestion that in which hotel he can contact with the local culture directly and also, the system must support GBP payment.

Scene Three:
Tom has a classmate meeting next month, they selected the same hotel in a city, but that is not a very famous hotel, so may not be able to be found on the internet.

Name: Sam
Age: 19
Job: Supermarket Cashier
Basic info: just graduated from high school, don’t have too much money. Love travelling,

User type: young people

Scene One:
Sam just want to go out on weekends, he actually doesn’t care about the place, what he want is just go out for one or two days, and he really care about the price. So he needs the system to offer him lots of recommendation information for him to select.

Scene Two:
Sam just receive an offer from a US university which is him dream university, but he never went to US before, he don’t know whether that is he want or not. So before he makes decision, he wants to go to that university for an investigation in summer. So now he needs to book a hotel which near the university but he don’t trust the online payment, so he wants to just book a room and pay when he get there. He is not sure whether that is possible or not which this system.

Scene Three:
Sam is studying in the city A, but his girlfriend is living in city B, every Friday he needs to see his girlfriend and back on the Sunday afternoon. Because he did this every week, so for saving
money, he really wants this system send him promotion information by e-mail frequently. So this system may have some promotion system to distribute this kind of information.

User requirements

1. Simple to learn for different age
2. Easy to use for the old people
3. May offer the telephone number of the hotel for someone who don’t use computer a lot
4. The system may use high contrast color for old people to identify the different areas on the website
5. The system may offer some popular places or hotel for people
6. Show the direction from location X to the target hotel, the location X could be someplace in the same city
7. The system could contains the world wide hotel data and the data should up to date
8. Offer a strong secure website for people who will transfer lots of money by this website
9. Offer a promotion system to allow the user to leave their e-mail address for receiving the latest information
First generation prototypes

Rationale

After comparing the related work which introduced previously, five pages of the booking system are decided: search page, search result page, compare page, hotel detail page, and booking page. Compare page is set to show the detail of some hotels in search result page which selected by customers. It helps to compare several hotels which users are interested in.

There would be two search systems. One of them is some input frames for the users who want some hotels directly. Another map search system would show a world map, and users select different area to find out hotels. Both two systems can be used for the customers who do not know the hotel they want and search for advises.

Describe and present the prototypes

Prototype 1

This website aims on the offer hotels. We provide the direct offers to customers. They can find cheap hotel in a short-time is our dream

Search page:

Search bar: can search hotels by name, location, zip,
Search button: start to search
Best offer today: shows some offer hotels today. If customers searched, the ads will accord their history of websites.
Map: shows all fits hotels location on the map.
Arrive: choose when to live
Nights: how many days needed to live?
Sorts: different sorts help customer help the hotels more quickly
JPG: the photo of hotel
Name: hotel name
Price: room price

Address: hotel address
Book: book a room
Hotel detail:

Name: hotel name
Book: the page of room information
Reviews: customers review
Jpg: room photos
Style: the size of room
Intro: simple information of room facility
Price: how much per night
Number of room: how many rooms needed
Book: book a room

Booking page:

Check in: when live in
Check out: when leave
Number of room: how many rooms booked?
Total price: the price of room
Customer details: some personal information of customers
Payment: pay the fee of room
Book now: book room
Close: not book a room

Prototype 2

This model is design for travels who want the best hotel in the world. We provide many details of hotels to help them choose hotel

Search page:

where to go: hotel, zip, etc.

arrive: 23th, Jan

nights: 1

visitors: adult 1, kid 0

search

Where to go: search the hotel by name, zip, address...
Arrive: when start to live
Nights: how many nights they needs
Visitor: how many people live?

Search detail:

<table>
<thead>
<tr>
<th>hotel name</th>
<th>distance</th>
<th>stars</th>
<th>prices 21 Jan</th>
<th>best discount 22 Jan</th>
<th>distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>daga</td>
<td>0.8</td>
<td>5</td>
<td>45</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>wetw</td>
<td>11</td>
<td>3</td>
<td>32</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>hfsdh</td>
<td>2</td>
<td>3</td>
<td>16</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>fhans</td>
<td>3</td>
<td>3</td>
<td>46</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>luyiky</td>
<td>32</td>
<td>4</td>
<td>67</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>gadg</td>
<td>4</td>
<td>2</td>
<td>23</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

Sort: can sort by different key words
Distance: the distance from the hotel to the place visitors searched
Best discount: according to visitors’ date, we can provide price for a few days around that day

**Hotel detail:**

Title: hotel name, star rating  
Jpg: photo of hotel  
Intro: simple intro of hotel  
Booking: page to choose room  
Map: where the hotel is  
Hotel photo: more photos of hotel  
Reviews: what other people talk about this hotel  
Arrive: when to live  
Nights: how long they live  
More info: detail info of room  
Dates: prices for a few days, visitors can choose a better one  
Rooms: how many rooms they need
Booking page:

who books?
name ______________________ ouak hotel
 e-mail ______________________ xx street
 phone no ______________________ birmingham

when arrive?
name ______________________
additional requests ______________________
time ______________________
need breakfast ☐

arrive date ______________
rooms ______________
nights ______________
total price ______________________

payment

 card type ______________________
 name on card ______________________
 card number ______________________
 end date ______________________
 cvv ______________________

terms and conditions ☐

book

Who books: who book the room?
When arrive: who lives in it and any speech services?
Payment: method to pay
Right side: details of booking (rooms, prices...)
Prototype 3

Search page:
This is the main page of the website which allows the user to search the hotel, together with some recommendation information. This page offers the entry point of this system.

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search box</td>
<td>Allow user input the key words for searching</td>
</tr>
<tr>
<td>Search button</td>
<td>When clicked search the key words</td>
</tr>
<tr>
<td>Check-in date</td>
<td>Allow user to select a check-in date</td>
</tr>
<tr>
<td>Check-out date</td>
<td>Allow user to select a check-out date</td>
</tr>
<tr>
<td>Ads</td>
<td>Ads below the search area offers user some popular hotel information</td>
</tr>
</tbody>
</table>

Search result page:
When the user searched with the appropriate key word, this page will display the search result together with the basic info the each hotel

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel image</td>
<td>Display a picture of the hotel</td>
</tr>
</tbody>
</table>
Select button | When clicked, the system will jump to this hotel's detail page
---|---
The smile face | It is a general rating system, the more smile faces means higher level
Back to homepage button | A button allow the user to jump back to the home page

**Hotel detail page:**
When one of the hotels of the list has been selected, this page will display the detail info of this hotel such as hotel’s description, location on the map, room type, price, hotel rate, customer reviews.

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel image on top left corner</td>
<td>Display a picture of the hotel together with the detailed images</td>
</tr>
<tr>
<td>Map</td>
<td>Display the location of the hotel</td>
</tr>
<tr>
<td>The smile face</td>
<td>It is a general rating system, the more smile faces means higher level</td>
</tr>
<tr>
<td>Customer review list</td>
<td>A list of the customer reviews for this hotel</td>
</tr>
<tr>
<td>Room area</td>
<td>One room area refers to one type of the hotel room, the drop down list allow the user to select the room amount. The book it button is for user to book this room</td>
</tr>
</tbody>
</table>

**Booking page:**
When the user select one type of room of a hotel, this page will be displayed, in this page, the customer should confirm the booking info and offer his basic personal info. Then the customer can book this room.
<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel detail area</td>
<td>This area is for the booking details of the room. It contain the hotel’s name, location, room type, check in date, total price</td>
</tr>
<tr>
<td>Customer detail area</td>
<td>This area is used to get the customer’s detail which including the customer’s name, e-mail, title, check in and time.</td>
</tr>
<tr>
<td>Tick box</td>
<td>The two tick boxes are used to confirm the above information</td>
</tr>
<tr>
<td>Book now button</td>
<td>When the two tick boxes ticked by the user, this button will be enabled, then the user can click to confirm the booking. Then the customer will received a confirm e-mail.</td>
</tr>
</tbody>
</table>

**Evaluation and conclusions**

As the designing so far, The idea of system only came from designers’ mind, which mean it may be wishful, not suitable for customers. Evaluation must be taken to improve the system and modify it to become available for customers.

**User test**

The system is designed to provide services for customers all around the world, so the test must be taken by all kinds of customers. There would be three groups with ages of 16-30, 30-50, 50-70.
The people in ages of fewer than 16 and over 70 are no included because most of them slightly lives in hotel or would be under the tutelage. Each group would test the system in three different situations.

Groups 16-30:
1. Tourism in another city
2. Admitted by a school or university in another city and have not found an apartment
3. Date with heterosexual friend in another city

Groups 30-50:
1. Business trip either long time or just few days
2. Academic communication
3. Gathering of old classmates

Group 50-70:
1. Visiting relatives
2. Seek medical attention
3. Return visiting

Every tester would use the hotel booking system prototype and give feedback of the experience, and the improvement plan would be set up according to the result of the tests.

**Expected result**

All these situations in the test could be considered as two in search process, one is that the customers know the hotels they want and just want to find the hotels directly when using the booking system, and another is that the customers want to search some hotels in an area. Thus, the improved system should have two different search systems so that users can search in the ways they want:
1. search a hotel directly
2. map search

The customers are in different ages and have different way to think, but they all used some other systems in the past. When they use this hotel booking system, the memory of that may lead their behaviors. Thus the system should be consistent with other system’s common styles.

The evaluated system should have enough information in each page for every hotel, and the same time they should not be too much. Thus users could use the system clearly and fast. To do that, the feedback of the test would be useful to modify the amount of information in each page.
Second generation prototype

Evaluation of tools for constructing prototype

Windows paint: it is the basic application of windows operation system which is easy and convenient for the general drawing tasks. All the developer with the windows OS can use it. But after one developer editing one picture, it seems to be impossible for other developer to edit it, because the “elements” exist in the form of pictures. Once something saved, it is impossible to change it any more.

Hand drawing: this is the most direct way of expressing the developer’s idea. But it calls for drawing tools such as pen, rulers and paper. Once do something wrong, the developer can revise it easily. But it cost too much time to draw the GUI. And there are no standards for the page elements, for example, developer A draw a button in his way, while developer B draw a button in his way.

Drawing tools: there are several tools for this purpose; they are designed for building GUI in a professional and convenient way. Some of them require installation while some not. Many of them are free.

Finally, we decided to use an online GUI tools (Lumzy\(^8\)) which is a free prototype building tools for webpages. The user can use it easily and export their work into jpeg or PDF.

Microsoft Power Point: it is very easy to add slides which contain static pictures or animation, and it can be used to present words description as the same time. The PPT file itself is on the local disk, so it doesn’t rely on the network.

Lumzy: it is online GUI development tool which has the simulated presentation function, after the prototype built, the developer can add the event to the elements (buttons, check boxes, tick boxes). So the developer can test the presentation when building the GUI.

As the same as above, we selected Lumzy because we can present and build the prototype as the same time, and its simulation function is much vivid than ppt.
Description of prototype

Search page:
Search result:
Comparison page:

![Comparison page](image1)

Hotel detail page:

![Hotel detail page](image2)
A plan for the evaluation of the prototype and Results and Conclusion

An evaluation of the prototype
As we make a website for all users, so the website needs to consider what they need. For the whole process for booking hotel, there are 4 pages needed as last: search page, result page, hotel details, booking page. So my plan is to think that I was a customer who needs to book a hotel, and find the problems when I test each page.

Search page
First of all, people need to find a hotel they need. Some one knows the hotels’ name, someone knows the zip... So I will check if the search page provide different searching methods, the more the website provided, the function is better.

Another thing is that if someone books a room, they need to consider the date. If the search page can’t choose a specific date, it is not a good one.

And the response time should be short. If over 5 seconds to open the search results, the customer may lost their patience.

Result page
This page should provide detail information about the different hotels such as price, star rates and so on. Customers can see hotels by different ranking. I will check the necessary information: hotel name, price, star rating, and booking button. If one of them is lost, the page is failed. Book button must have bright color and in the right place that means people can find it very easy.

Hotel page
The page is for hotel and room details. It must have the hotels’ name, address, contact number and some photos of the hotel. I will check if some of them were not consider in the page.

For the rooms, it should have the size, intro and price. I will see whether the distribution is fit or not. The information is too complex or not.

Booking page
The most important thing is safety. If there are some technology methods for the website, it is better. For example, if a customer needs to log on and make a booking. If he log out, the booking page should give the mistake message and go to homepage.

The page should have a summary of the booking and some basic info that needs to pay such as the information of credit cards. The terms are also needed.

I will check each page whether has necessary information as I mentioned below. And the
response time is also important to test.

Because the hotel is affected by different elements, we need series experiments.

Experiment 1

Looking for 2 groups of people, one group often booking hotels online and the other group never do that online. Then give them some specific hotels and specific rooms. All people need to book these rooms online. When all finish the mission, ask them what is the problem they think need to solve when they book rooms. As some are never book rooms online, the feedback need to be selected. The feedback which is provided by new users of booking online is more important.

Result:
According to the experiment the learnability can be improved. New users can use website normal quickly.

Experiment 2

A group of people can go to the booking Customer Experience website and do some searching, click from one page to another one. They may need repeat these tests in different pages for several times and record the time.

Result:
The search should show the result within 10 seconds. One page goes to another one should less than 5 seconds.

Experiment 3

Booking hotels needs a lot of personal information, the security is very important. The system can allow some errors. As they are many kinds of errors. We must check the basic ones are correct.

A. Linking: click the link can go to right page
B. Information: the information needed should be the right type. For example, the system says a message box if users type letters when he need write his phone number.
Security: some pages won’t appear if the users don’t finish other pages. For example, users need select rooms, and then they pay online. The page order can’t be changed
Summary and recommendations

Achievements

In this project, we know that HCI is a field covers many other different domains such as science, art, engineering, craft and so on. And we also understand the importance of design in system development. During the developing, the developers should think about the capabilities of people, what the user is doing, how they will be used and many other issues beyond the coding part.

In this project, we have learned how to use user centered design (scenario and persona) to get the user’s realistic requirements, how to use prototyping to build the GUI efficiently and how to evaluate the design.

Finally, we have designed a user interface of online hotel system together with the problem analysis, relative system review, user requirements.

Analysis of the project

During this project we held weekly meeting to discuss and distribute the task to group members, at every weekends, we integrate the weekly report. Also we have a chart room where we can hold short discussion and share documents.

For evaluation, there are three parts to be addressed:

Strongpoints:

1. We have analysis 8 online booking systems which give us sufficient information (how about the GUI, how about the user experience, how about the security) about what are advantages and what are disadvantages in a booking system. Based on these analysis results, the built our system.
2. Our system’s design is based on three different age groups which will cover users as many as possible.
3. This system I trying to be simple, direct and efficient which cut down the irrelative content and information that people may never use.
4. This system is trying to illustrate the information in a distinguished way to let the user get the information in a short time

Problems list:

1. The general layout is not good enough, some elements’ location are really not good
2. The color of the current system is really simple and didn’t take the user experience into
account.
3. There is not help/FAQ section for the user, if they find problems, they can’t get help
4. The information in the current system is not enough for the user,
5. The current design didn’t include the login system

Possible recommendations:

1. The system should use some more user friendly elements to build the GUI, for example, filleted corner square, 3D elements, some light animation and so on.
2. Help information: The interactive help function is required. When the user move the cursor on a link or button, the relative help information may be appear in the form of bubble.
3. FAQ: the current system doesn’t have a strong FAQ system which can help the users with some general problems. In the further, it should be added.
4. The personas and scenarios are not enough: in the future, we can generate more personas to cover various users to fulfill various requirements
References

[1] http://www.nationalrail.co.uk/