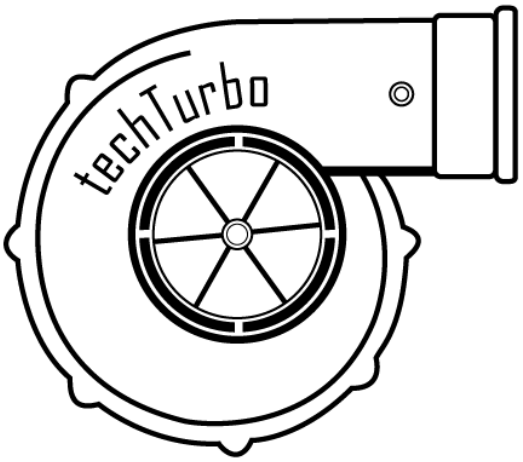
Technical documents, Test Plan and User Manuals



Publish Date: 5/14/2013

1. Glossary and Terminology

The Hotel	Alleger Hotels Ltd.
The Client	Sue Foster, representative from Allegra Hotels Ltd.
The Customer	Customers of the hotel
The Project Team	techTurbo

2. Contents

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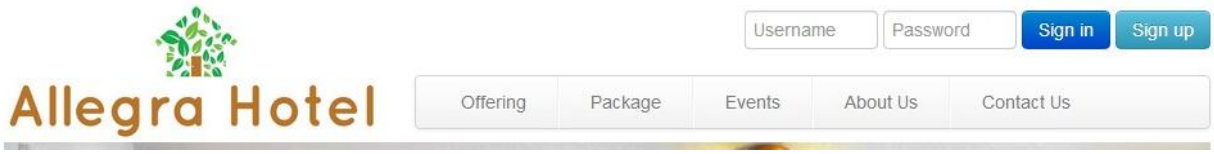
3. End-user manuals

3.1 Front-end hotel website for customers

This website is used by Allegra Hotels to make reservations on the website. With the help of this website, online search, online booking, online amendments, online confirmation, online paying and online cancellations are possible.

1. Website Navigation:



The navigation includes six parts:

a) The logo of Allegra Hotel: you can click it return the homepage;
b) Offering tag: you can click it to view various offers as shown in Figure B:

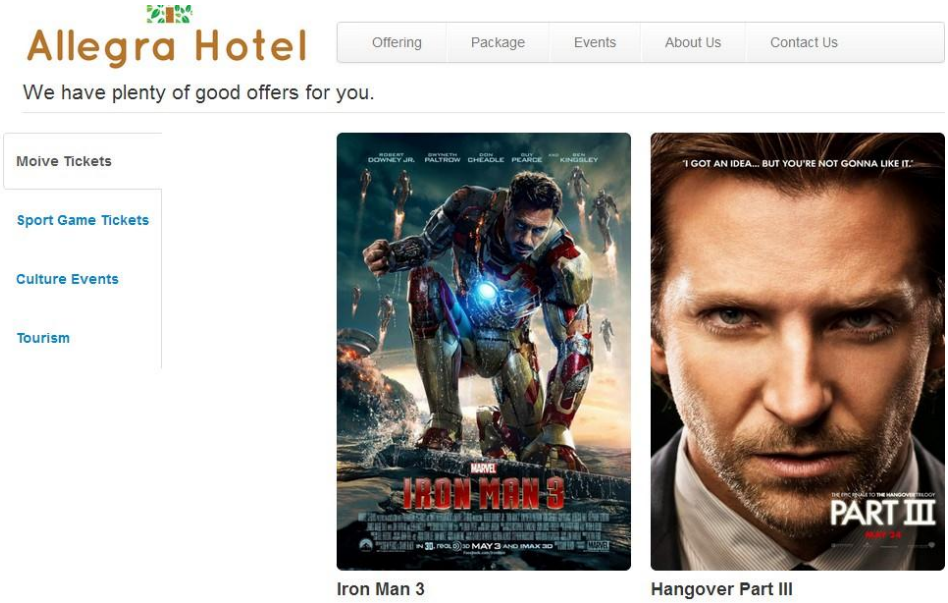


Figure B

c) Package tag: you can click it to book a package that contains room and some offering as shown in Figure C:

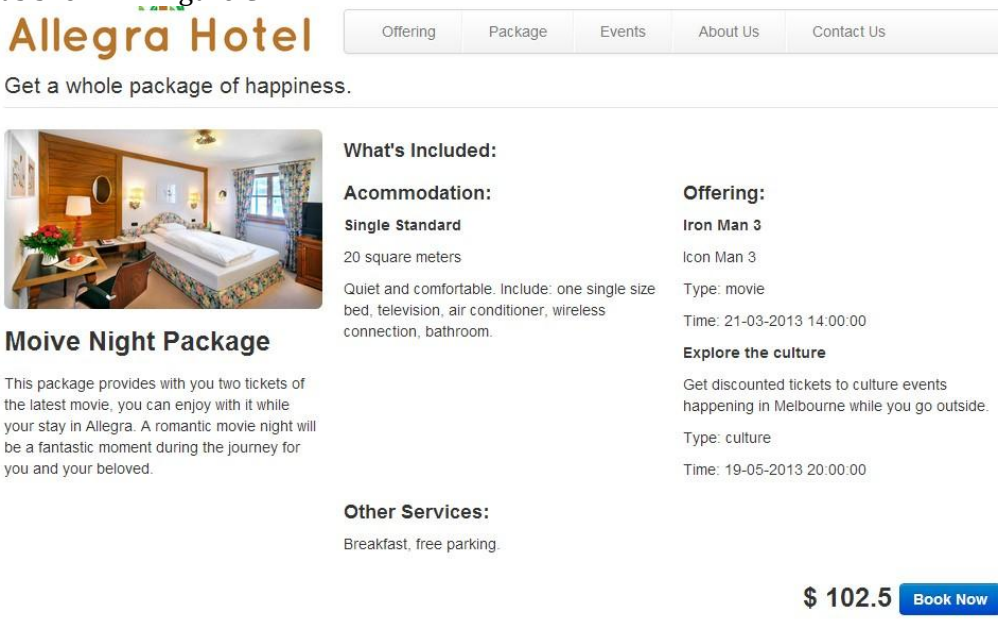


Figure C

d) Events tag: you can click it to view what is going on in Melbourne recently like Figure D:

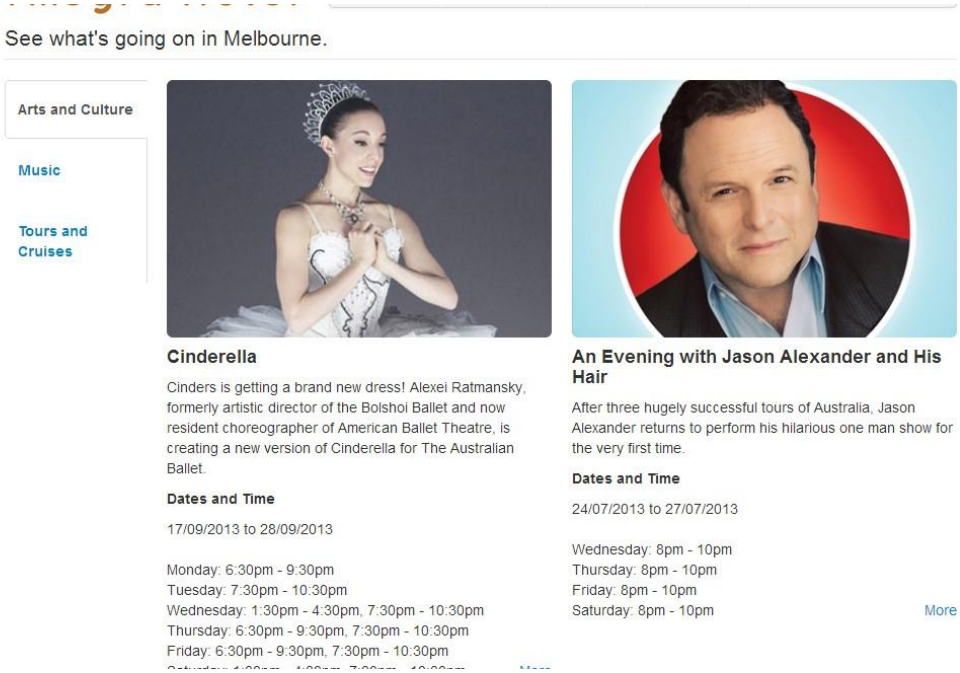


Figure D

And you can click “More” to go to the website that introduces this event directly.

e) About Us tag: you can click it to view all about Allegra Hotel(Figure E):

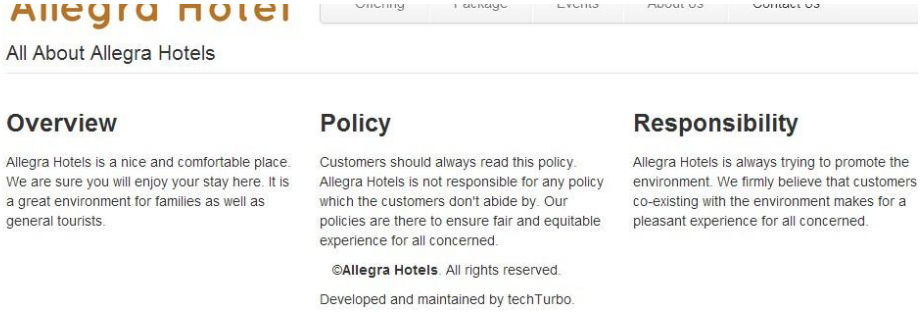


Figure E

f) Contact us tag: you can click it to contact Allegra Hotel directly to ask some questions as shown in Figure F:

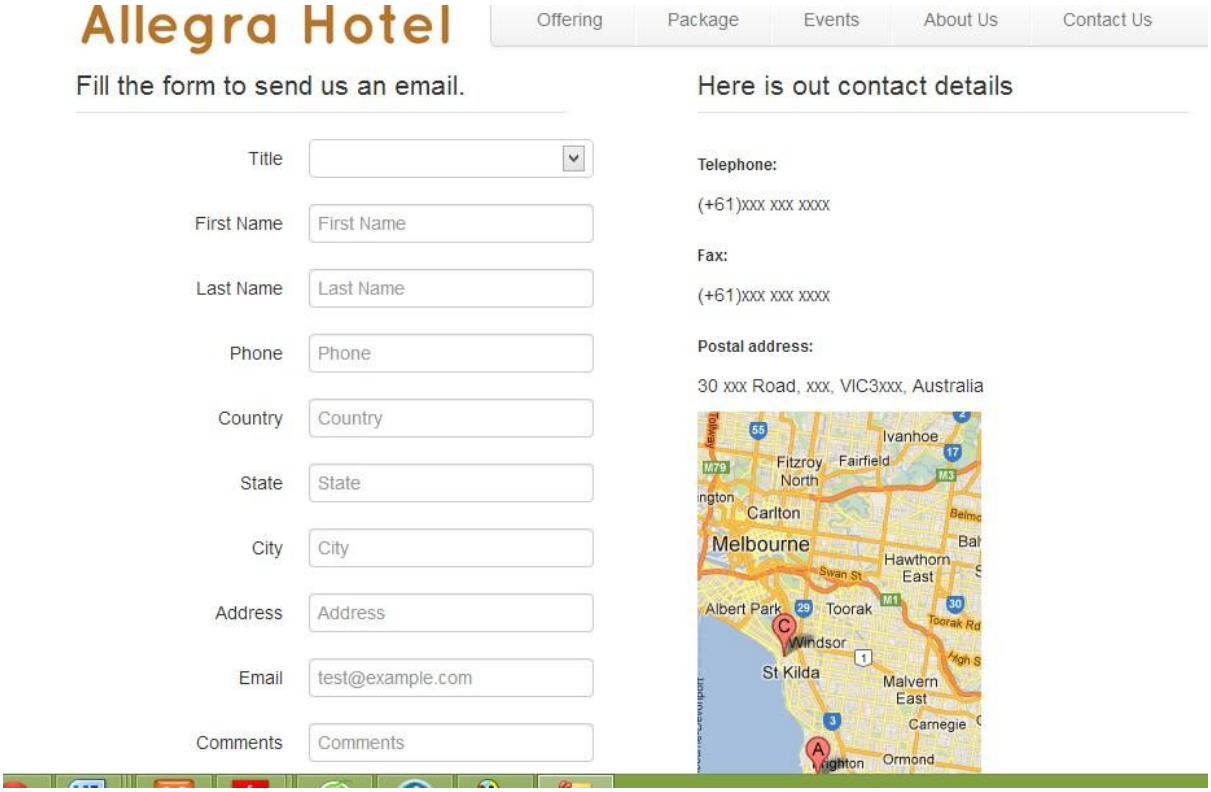


Figure F

2. Homepage:

At the bottom of the homepage, you can click these images to view websites about Ecotourism.

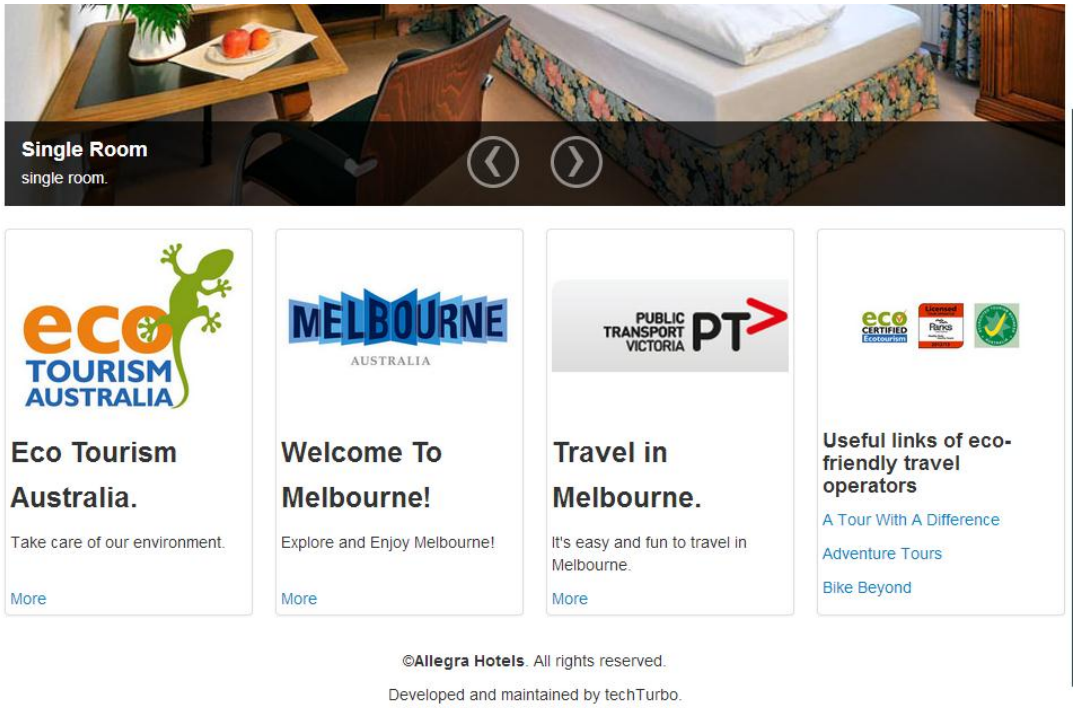


Figure Homepage

3. Register on the website:

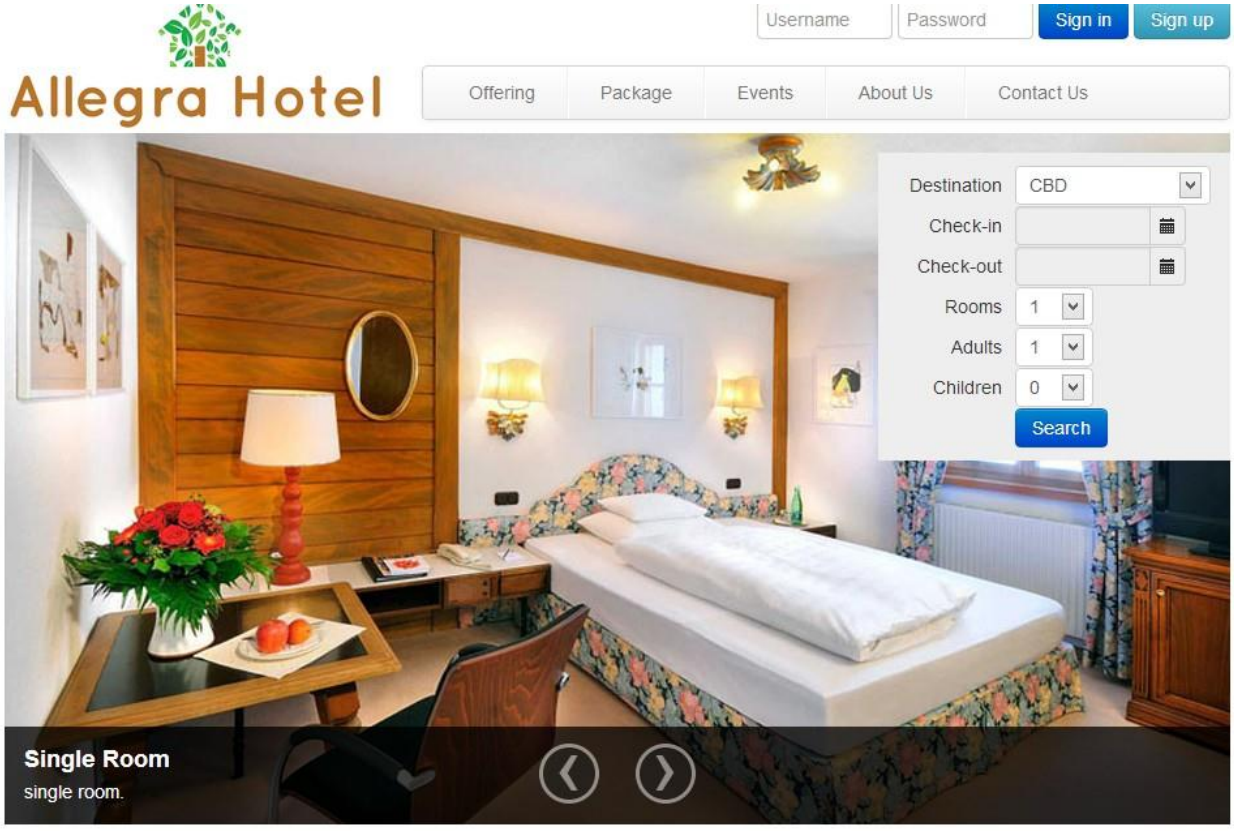


Figure: 1

When you click on Sign up as shown **in Figure 1**, a registration form will appear on the screen, where in you need to enter the information in the respective fields, as shown in **Figure 2:**

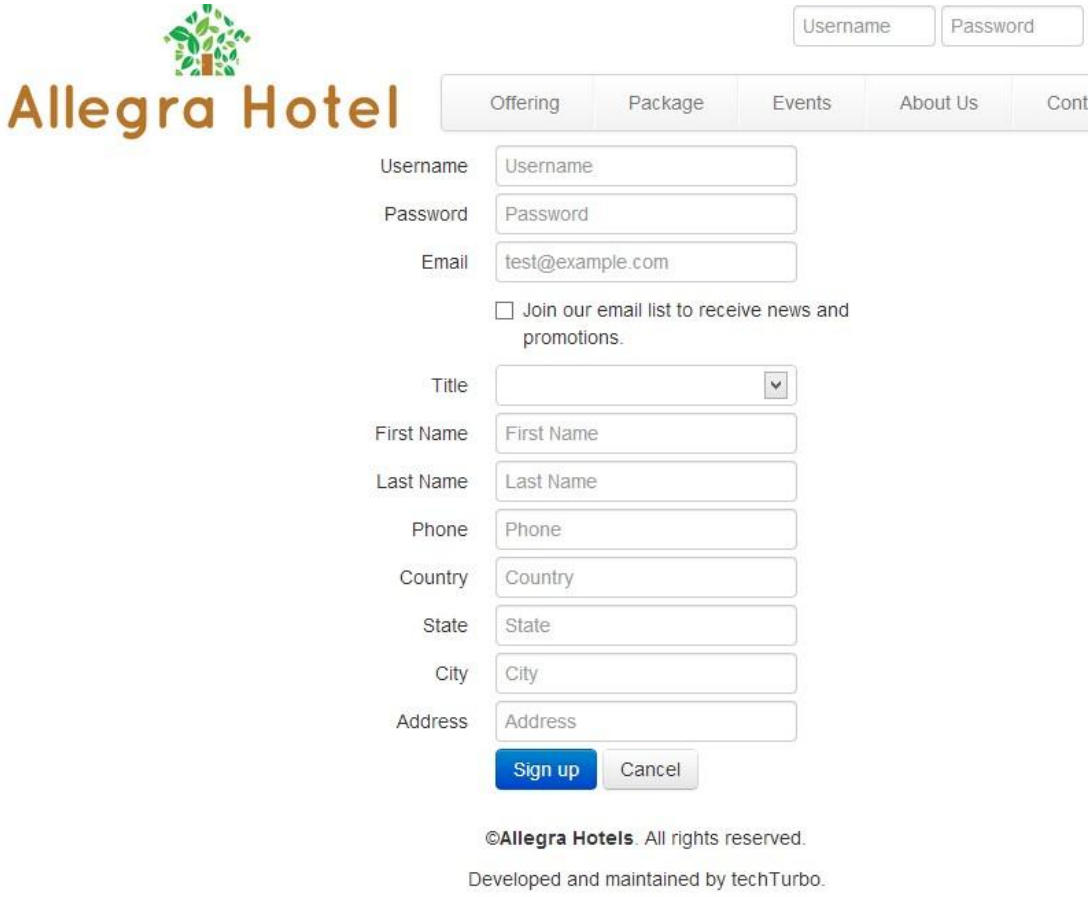


Figure 2

Enter your details as required in the above form and click the Sign up button. You can start accessing the website and make bookings online.

4. New User Login

Figure3

Enter user name and password & Click on Sign in as shown in Figure3 to logon to the website, then your name will be displayed like Figure4:

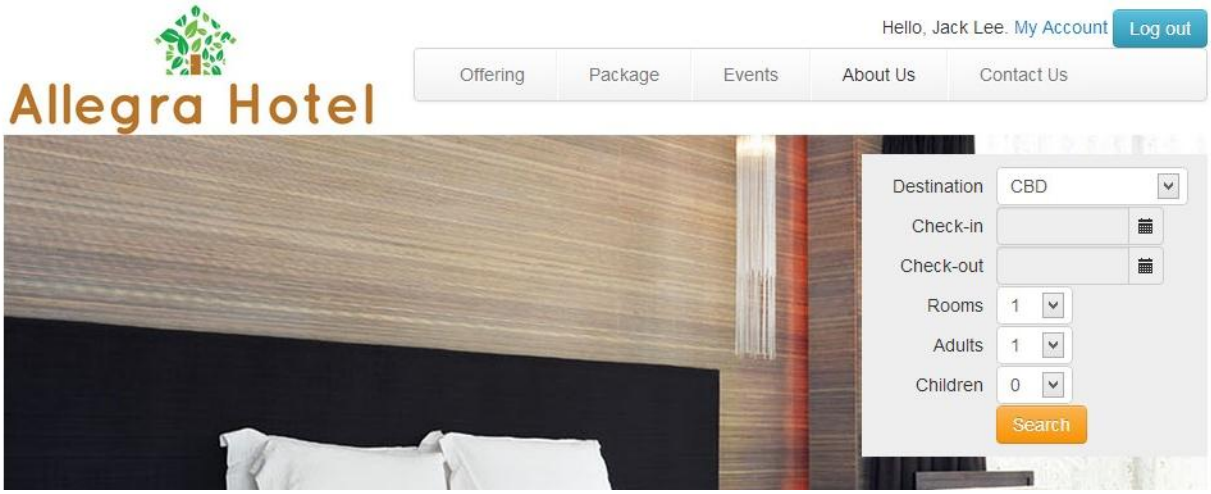


Figure 4

5. Book Online

The functionality of the Allegra hotel website is divided into 2 processes

- Search Process
- Booking Process

1) Search Process:

The search process consists of a search engine (as shown in Figure5) for searching rooms and offering to be booked.

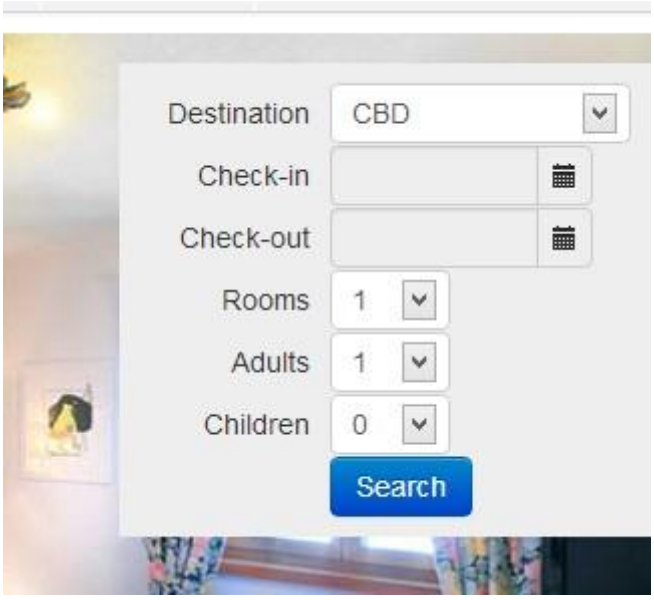


Figure5

The customer can search for rooms using the search parameters. The primary search parameters include selection of Destination, the date of stay (Check- In and Check - out dates), Number of Travelers both Adults and Children.

Choose the country, city, and number of rooms, adults and children. Search for by clicking the Search Button like **Figure 6.**

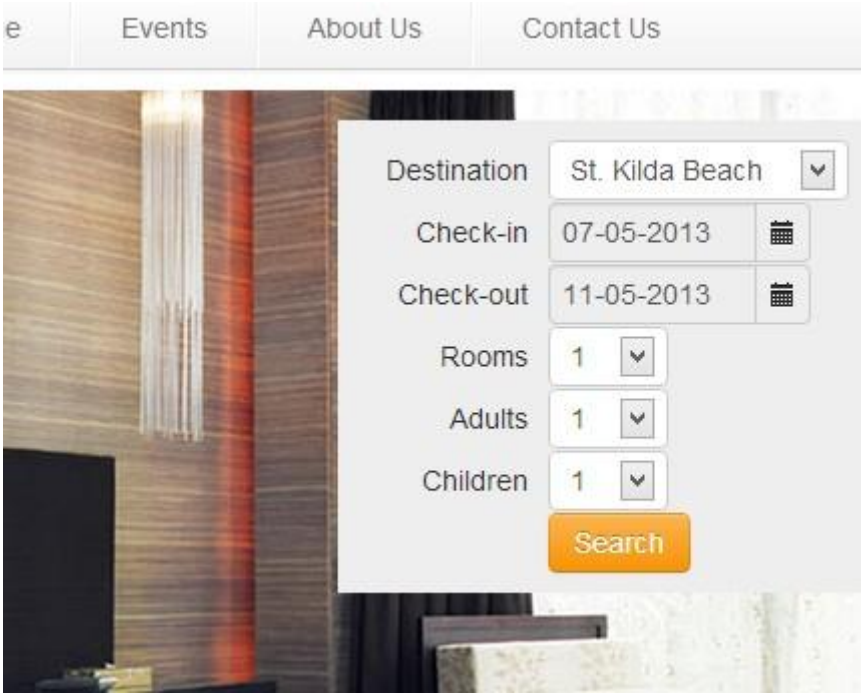


Figure 6

2) Booking Process

After Click the search button in Figure6, a series of rooms are displayed as shown in Figure7:

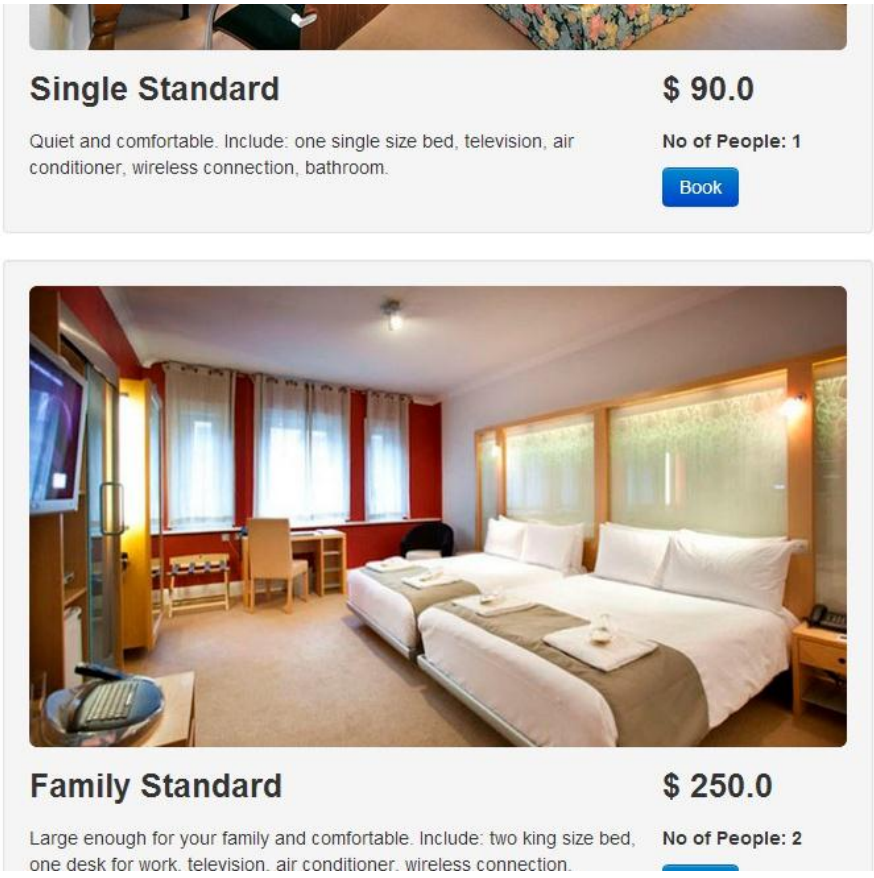


Figure 7

Then, you can choose the room type that you want to reserve like Figure8:

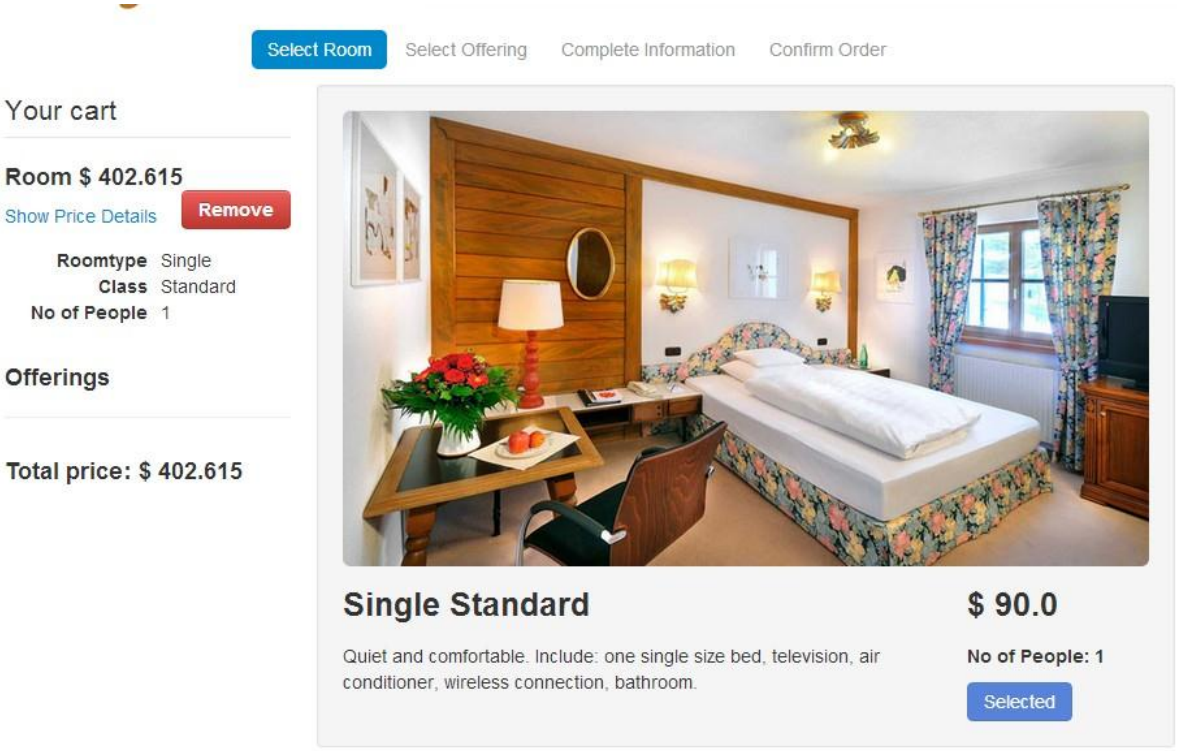


Figure 8

Now, you can notice that the book button as shown in Figure7 is changed to selected and your cart in Figure8 displays the total price of your current state and you can click "show Price Details" to check your price details like Figure 9:

Figure 9

Or you can slide the scroll bar to the bottom, and click the ”Finish Select Room” button (Figure10) and go to the select offering page(Figure11).

Figure 10:

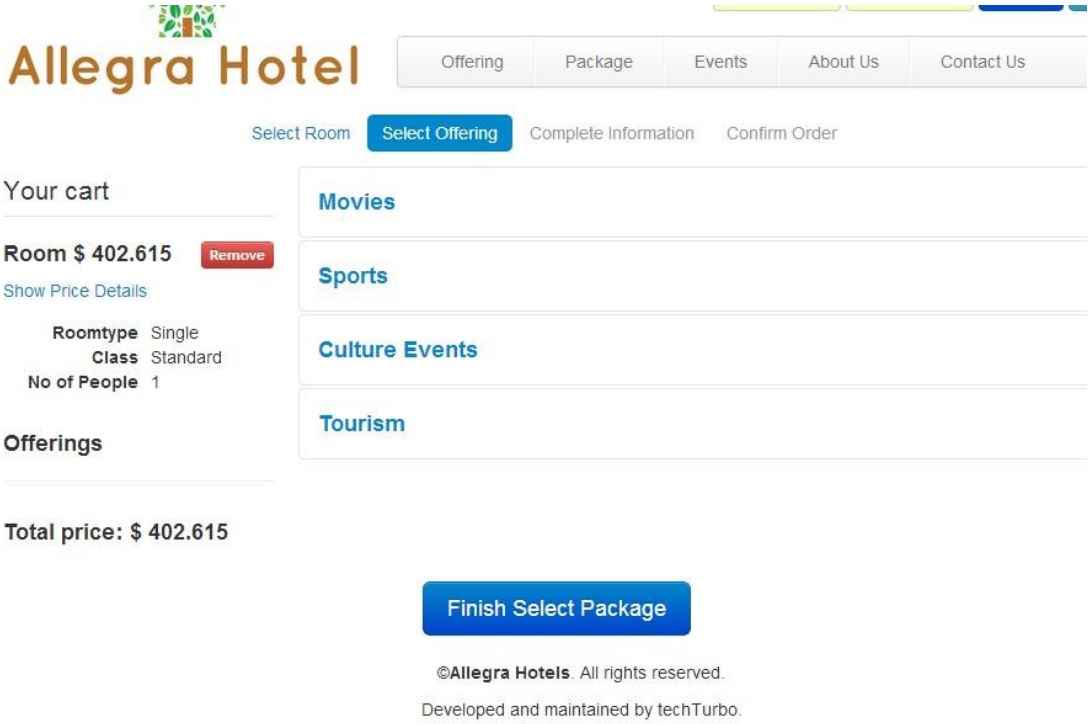


Figure 11

You can select one or more any kind of offering that you like in Movies, Sports, Culture Events and Tourism area. For example, you want to choose a Movies offering as shown in Figure12:

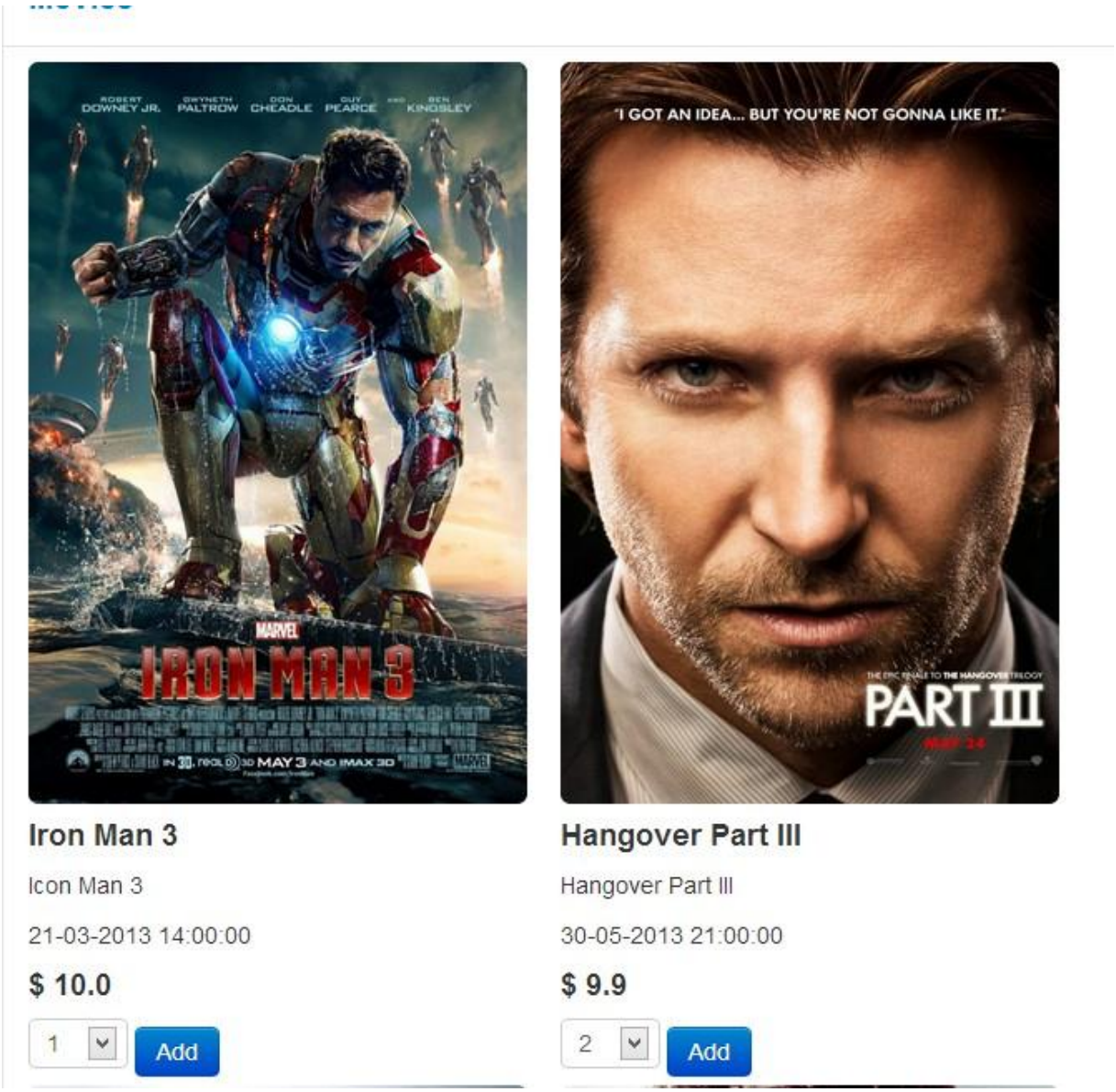


Figure 12

You just need to click the add button, this offering will be added to your cart like Figure13:

Figure 13

If you want to cancel this selection, you just need to click the "remove" button and this item will be removed immediately. After selecting offerings, you need to slide the scroll bar to the bottom and click the "Finish Select Package" button (Figure 14) go through the Complete Information page (Figure15).

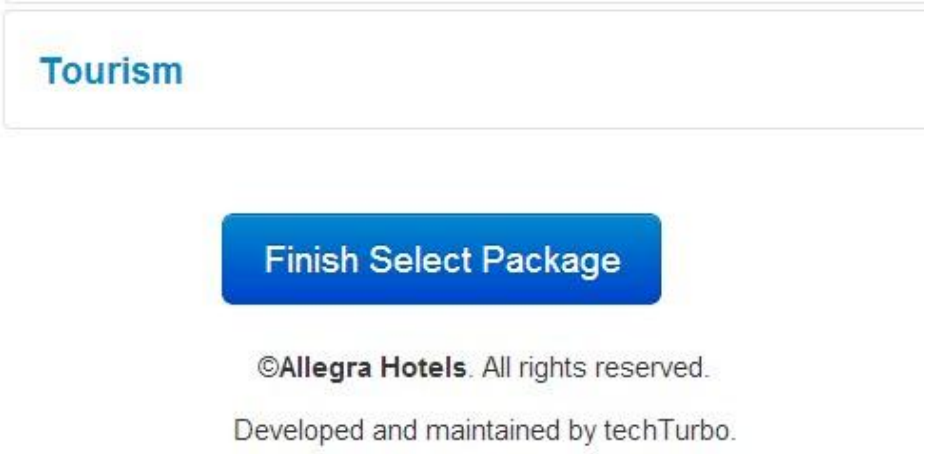


Figure 14

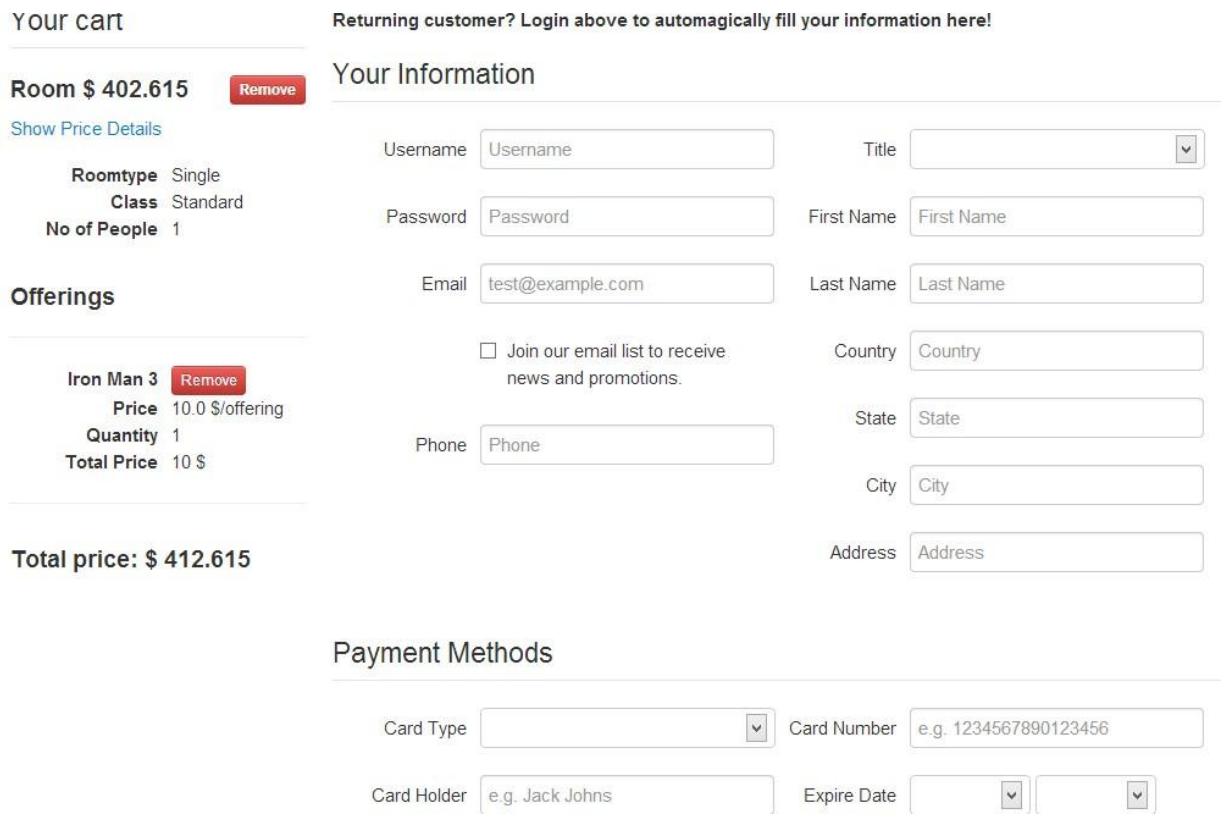


Figure 15

Then you need to complete your information and payment methods form like Figure16:

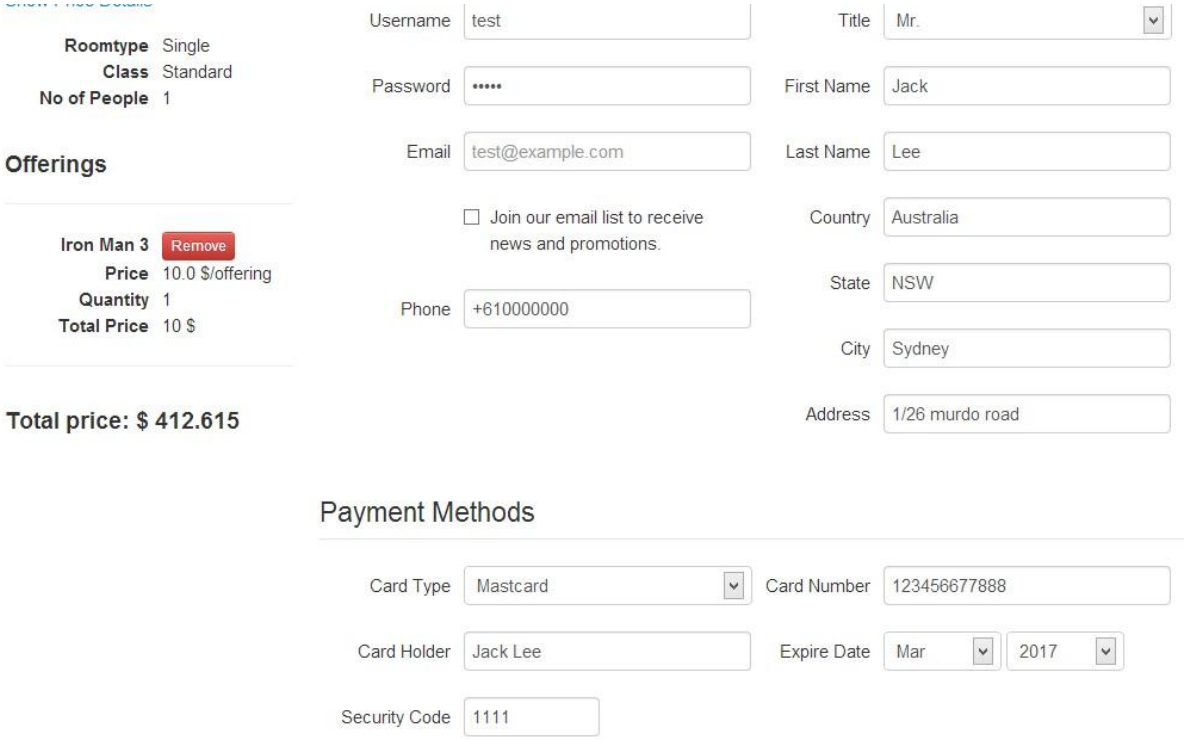


Figure 16

And choose the ”Finish and Go conrim Order” button at the bottom to confirm this order (Figure17):

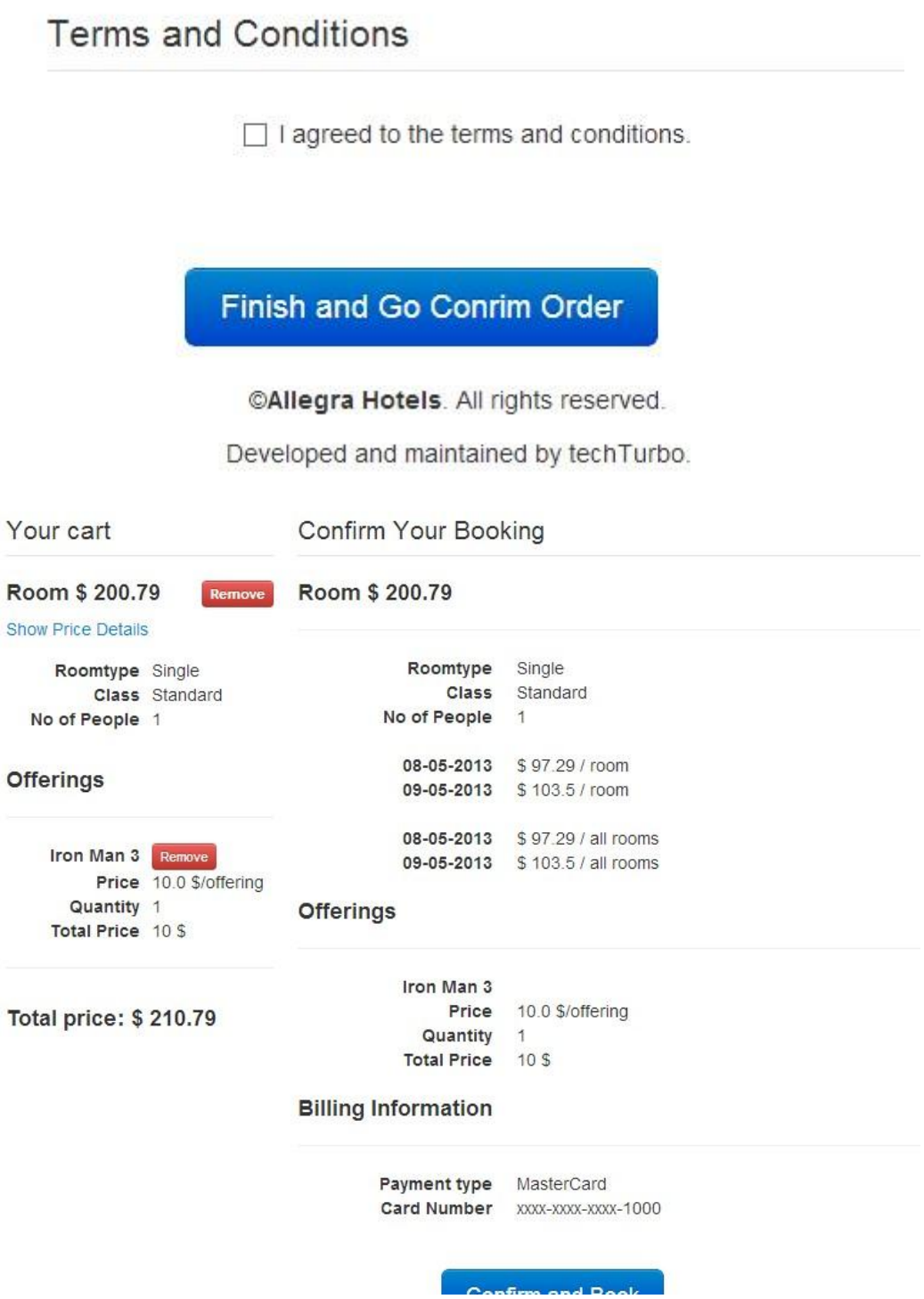

Terms and Conditions
I agreed to the terms and conditions.
Finish and Go Conrim Order
©Allegra Hotels. All rights reserved.
Developed and maintained by techTurbo.
Your cart
Room $ 200.79
Remove
Show Price Details
Roomtype Single
Class Standard
No of People 1
Offerings
Iron Man 3
Remove
Price 10.0 $/offering
Quantity 1
Total Price 10 $
Total price: $ 210.79
Confirm Your Booking
Room $ 200.79
Roomtype Single
Class Standard
No of People 1
08-05-2013 $ 97.29 / room
09-05-2013 $ 103.5 / room
08-05-2013 $ 97.29 / all rooms
09-05-2013 $ 103.5 / all rooms
Offerings
Iron Man 3
Price 10.0 $/offering
Quantity 1
Total Price 10 $
Billing Information
Payment type MasterCard
Card Number xxxx-xxxx-xxxx-1000

Figure 17

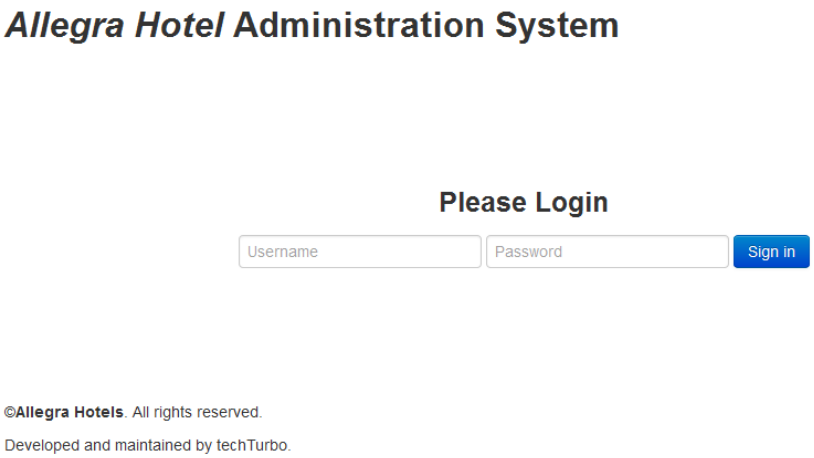
3.2 Administration System

3.2.1 Introduction

The administration system of the Allegra Hotel contains of the webpages to enable the hotel administrator to manage the data for the web site. It includes the basic operation functions for the data of the customer, hotel, reservation, packages, sales and system. The administrator can create an account and login securely to do the website maintenance task.

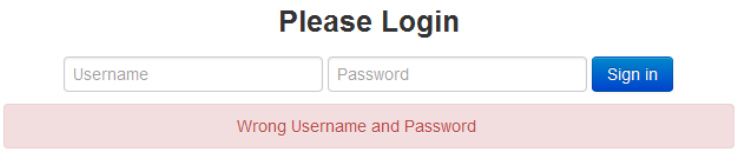
3.2.2 User manuals

Admin login page:

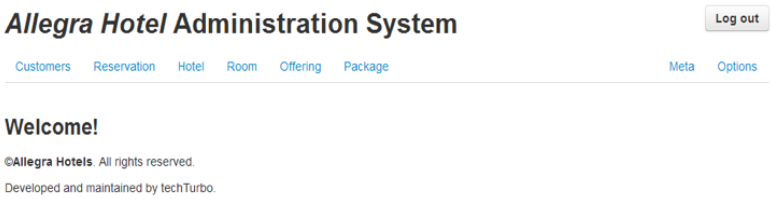


This is the home page for the administration system, the administrator need to input the correct username and password then press Sign in button to log into the system.

If the user put the invalid authentication, there will be a warning tag pop up below the textbox as the figure below shows:

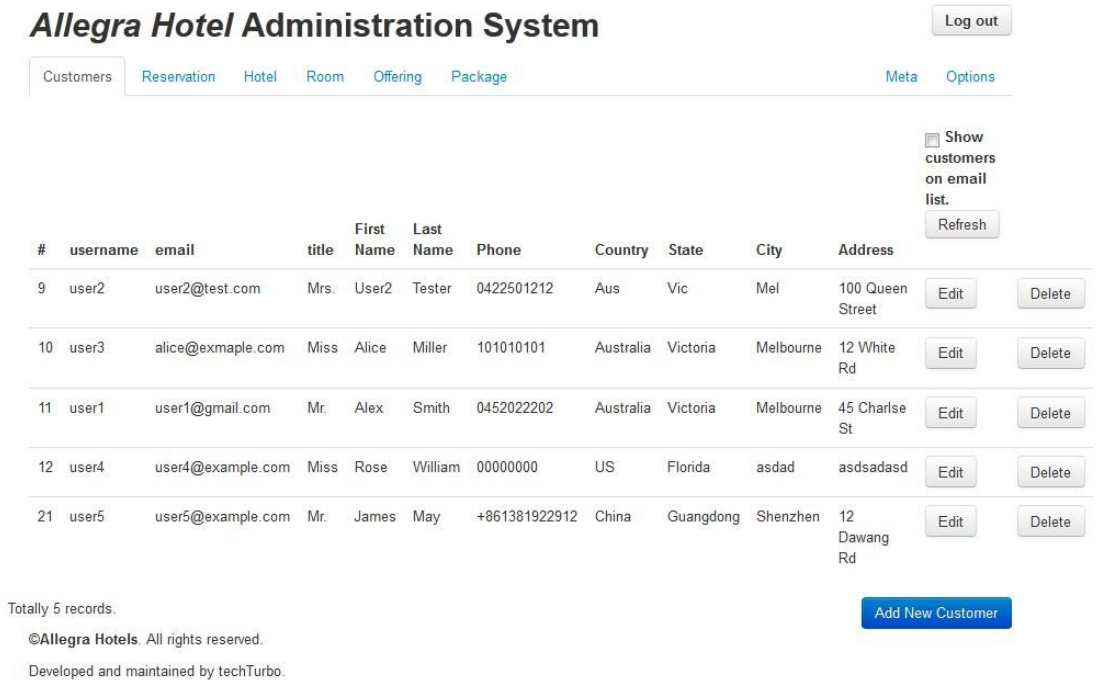


Welcome page:



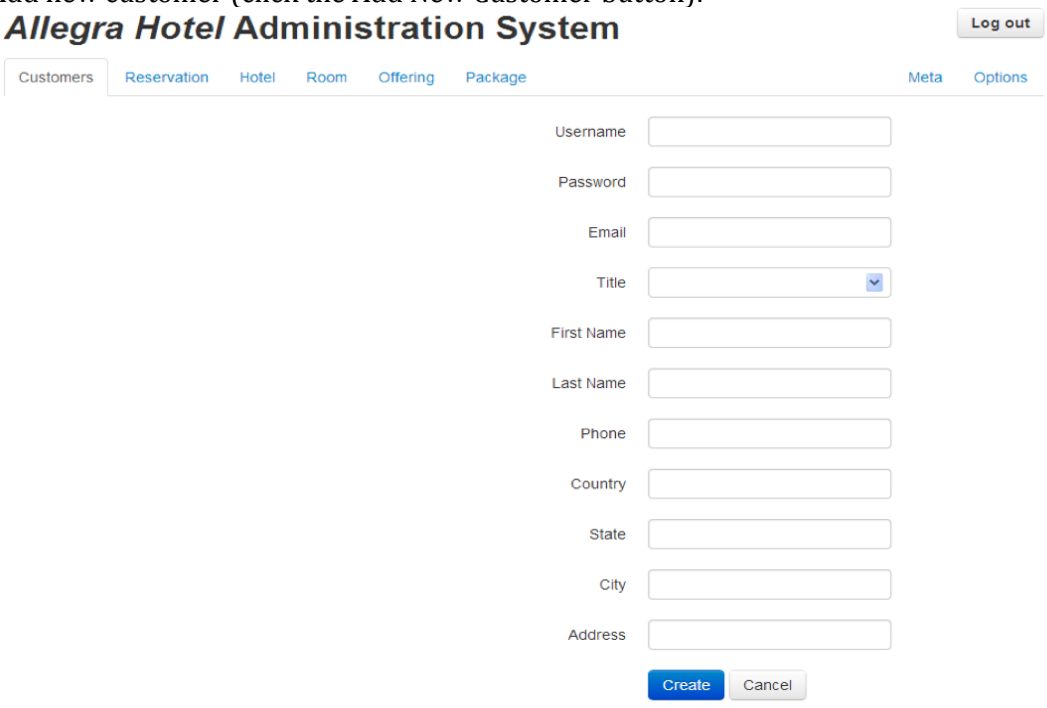
After the administrator successfully log in, the webpage will forward to the welcome page. The header menu bar contains all the data that the administrator can manage. The log in status is on the top right corner. The user can click Log out to quit the system and the web page will forward to the login page.

Customer manage page:

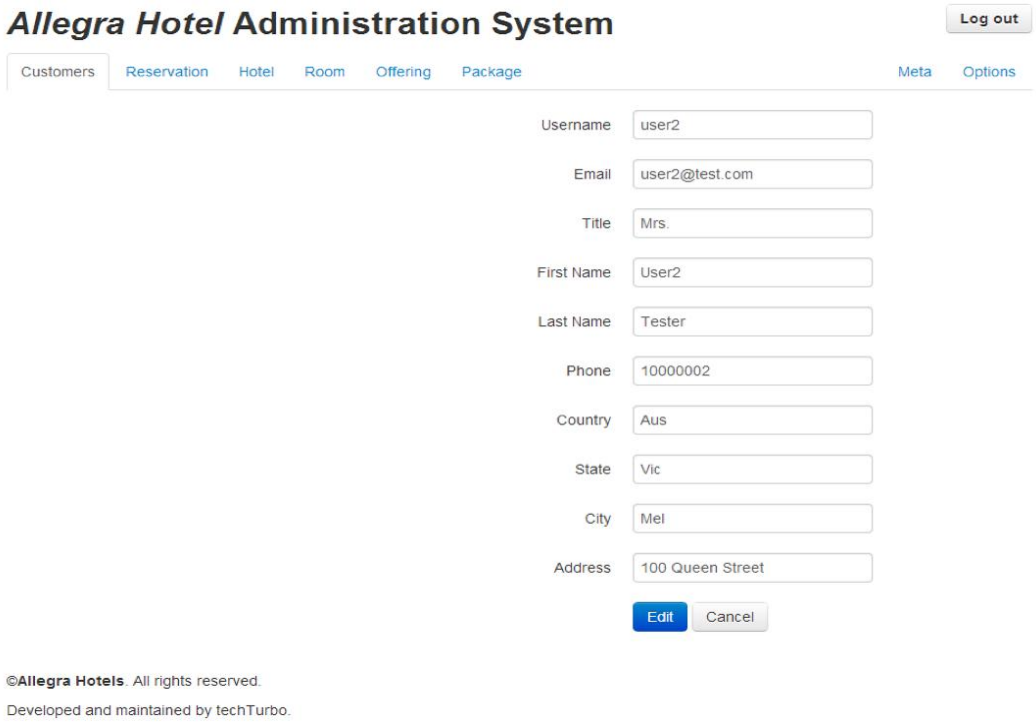


The customer manage page is used for managing the customer data, including the basic function of:

a. Add new customer (click the Add New Customer button):

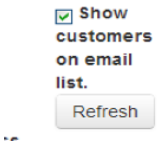


b. Edit existing customer information (click Edit button behind each customer):

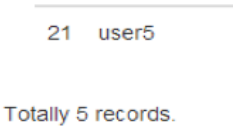


c. Delete customer (click the Delete button behind the customer details), the page will redirect to the list.

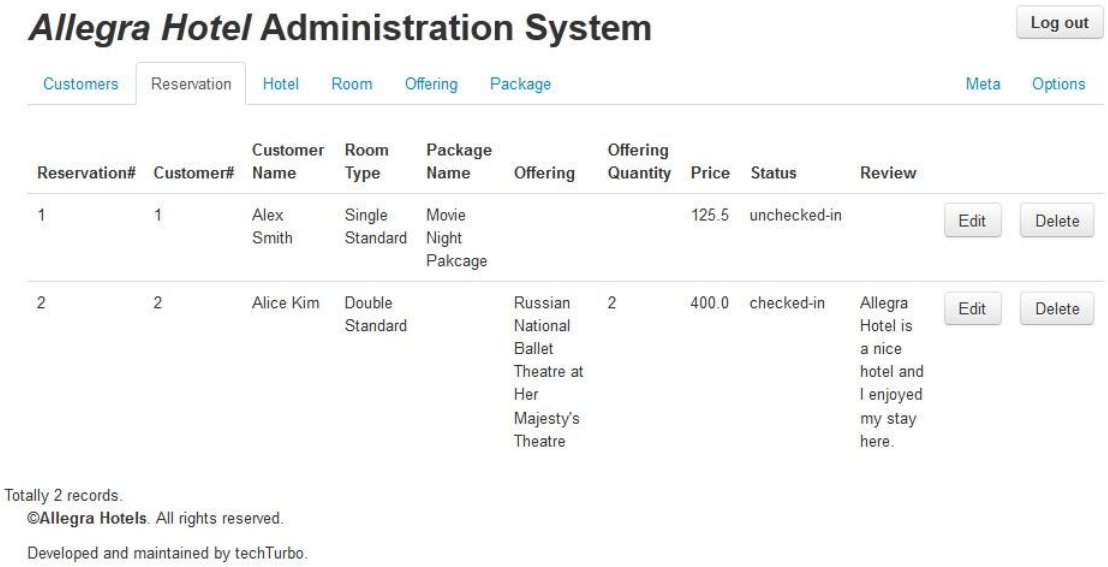
d. Show the on list customer information:
There is a check box on the right top corner that used to refresh the customer list to those only in the email list.



On the left bottom corner, the total customer number is displayed



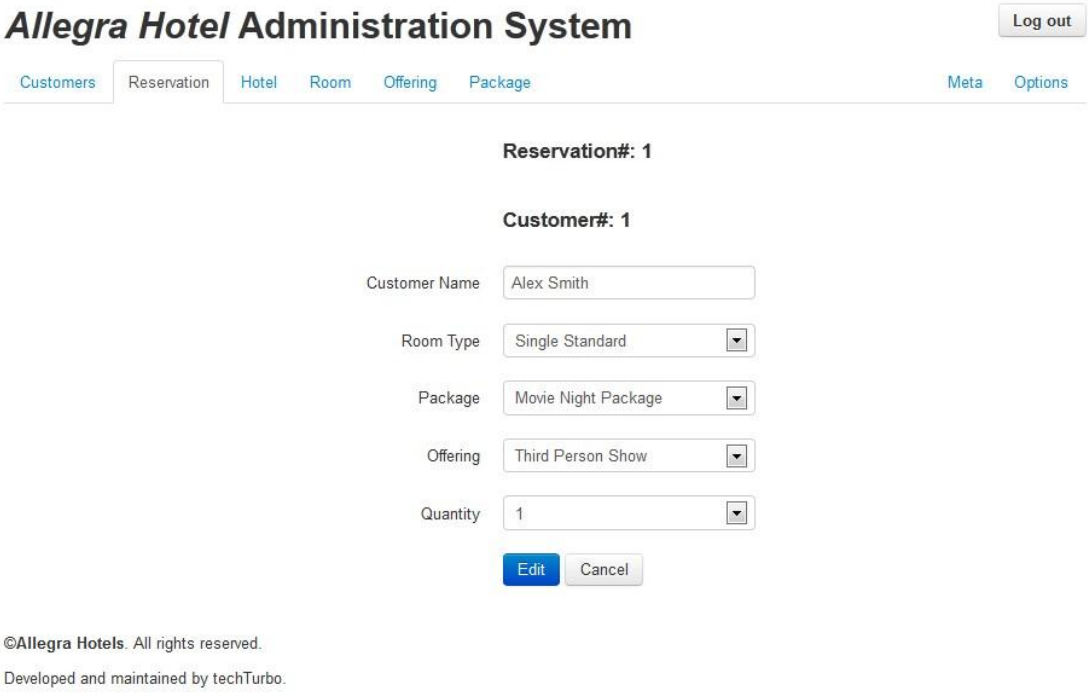
Reservation management page:



In this page, the administrator can view all the existing reservation made by the customer.

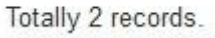
The reservation manage page is used for managing the reservation data, including the basic function of:

a. Edit existing customer information (click Edit button behind each customer):

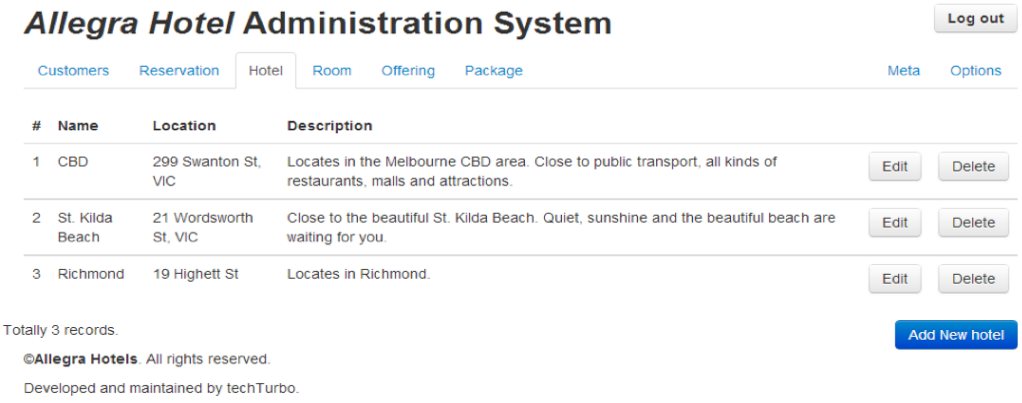


b. Delete an existing reservation

c. View the total records of reservations on the left hand corner:

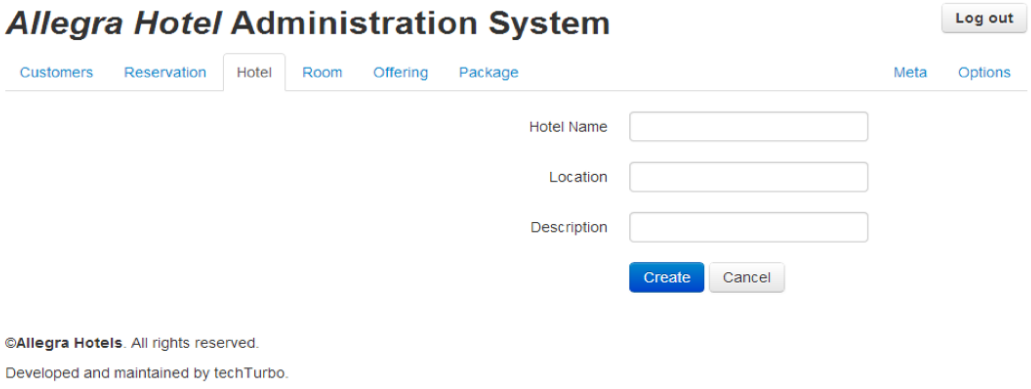


Hotel management page:

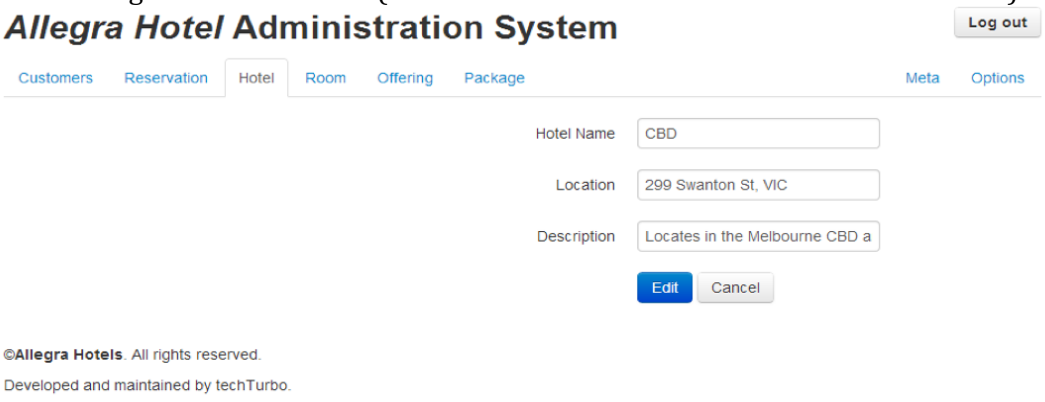


When click the Hotel tag in the navigation bar, all the hotel information are listed in the page, the administrator can perform the action of:

a. Add new hotel:

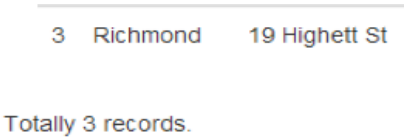


b. Edit existing hotel information (click the Edit button behind the hotel information):



c. Delete the hotel information (click the Delete button behind the hotel information), the page will redirect to the list.

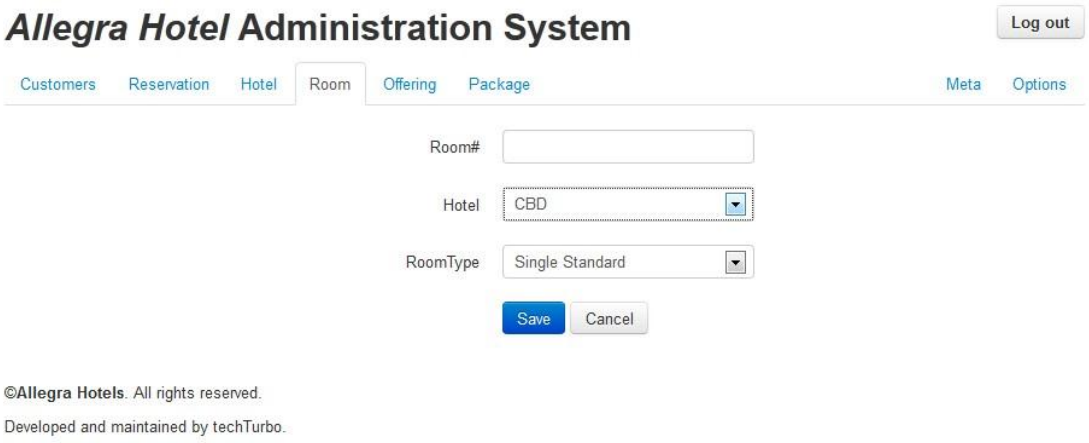
The total hotel number is displayed on the left bottom corner



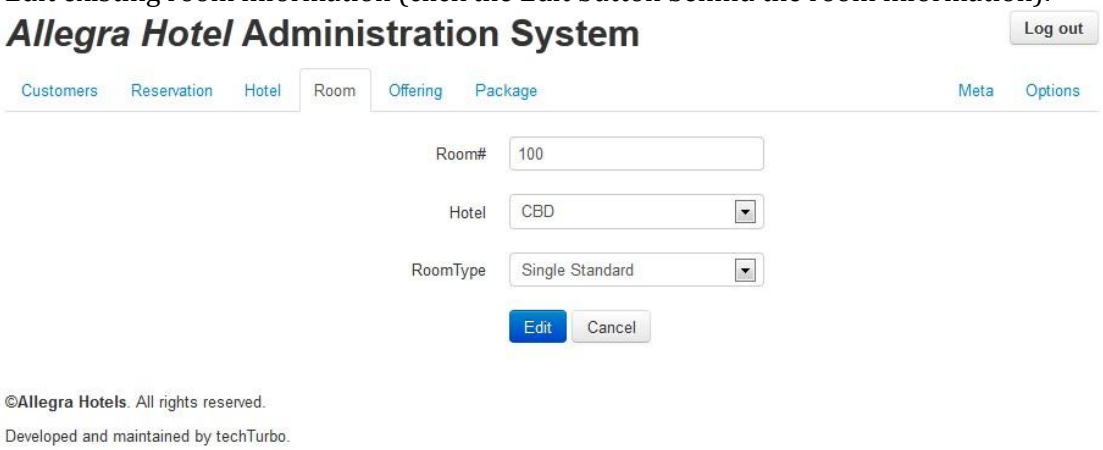
Room management page:

When click the Hotel tag in the navigation bar, all the hotel information are listed in the page, the administrator can perform the action of:

a. Add new room:



b. Edit existing room information (click the Edit button behind the room information):

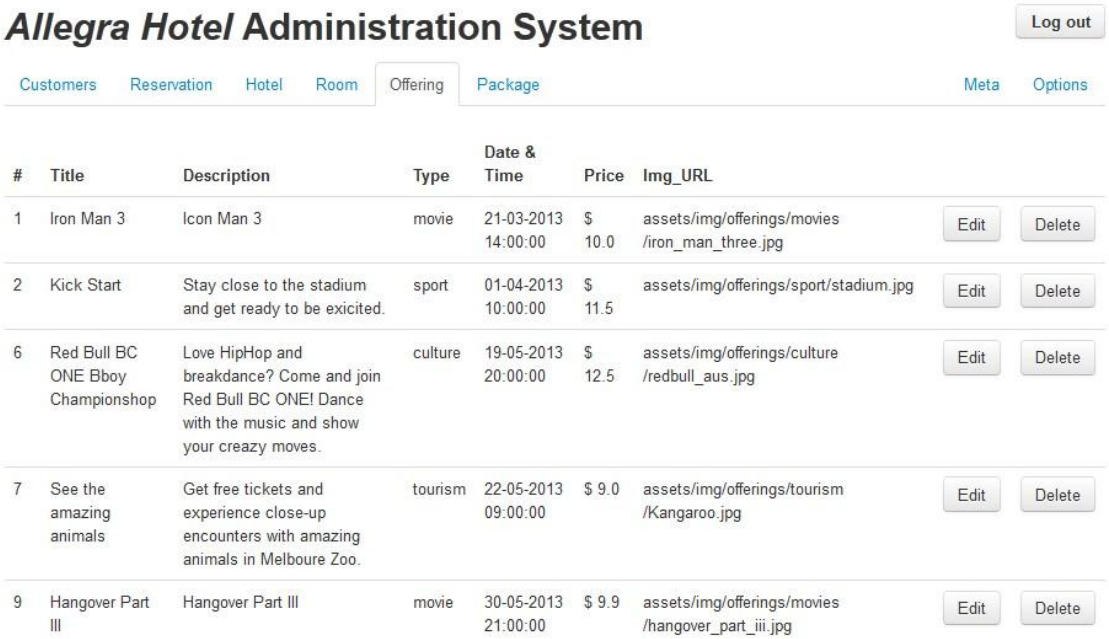


c. Delete the room information (click the Delete button behind the room information), the page will redirect to the list.

The total room number is displayed on the left bottom corner

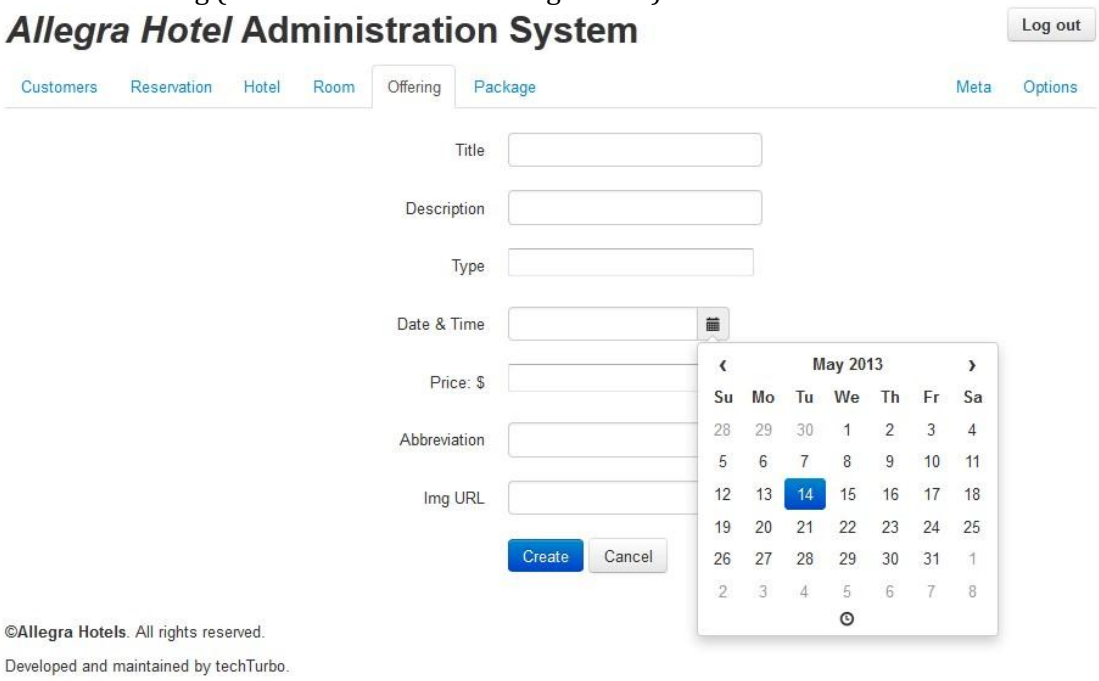
Totally 61 records.

Offer management page:

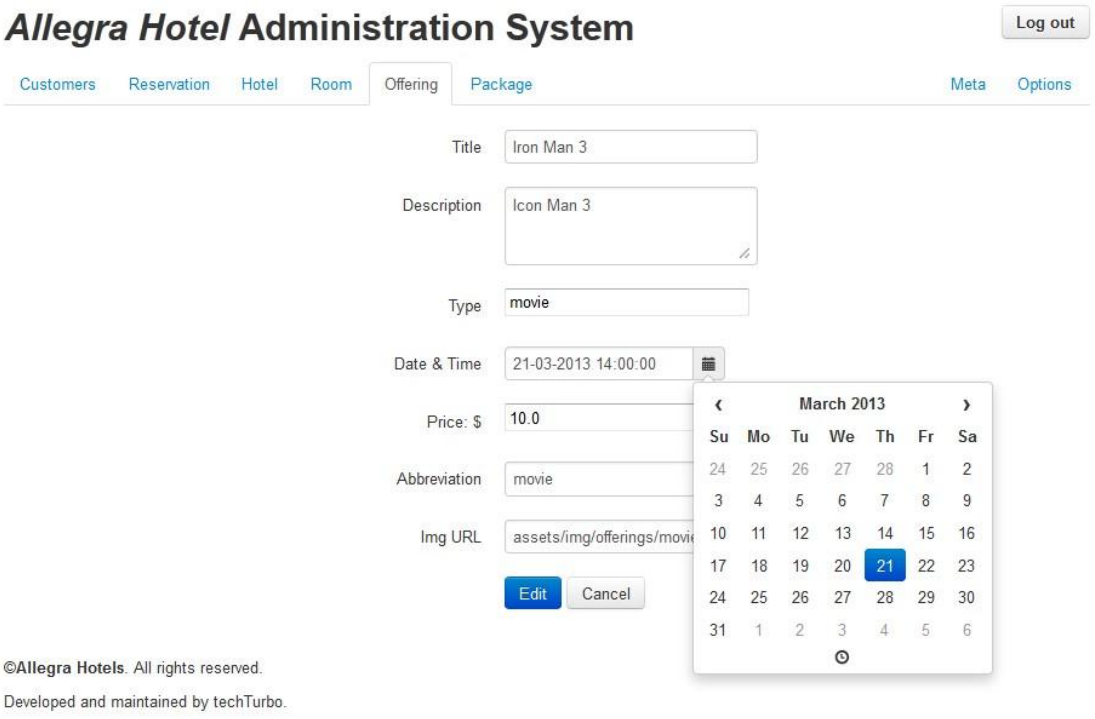


This page is used for manage all the offering information; it includes the basic function of:

a. Add new offering (click the Add New Offering button):



b. Edit existing offering information (click the Edit button behind the offering information):

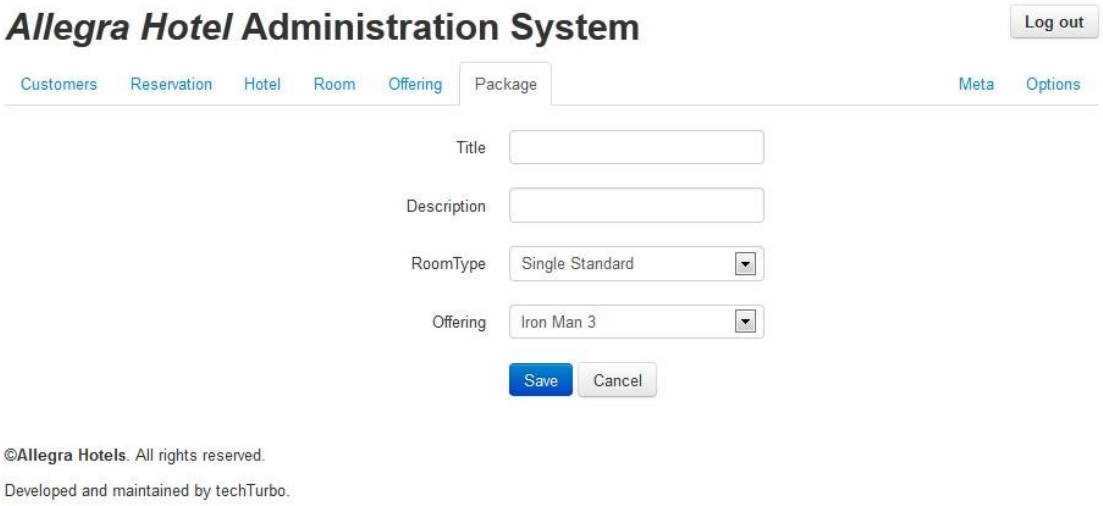


c. Delete the offering information (click the Delete button behind the offering information)
d. The total offering number is displayed on the left bottom corner.

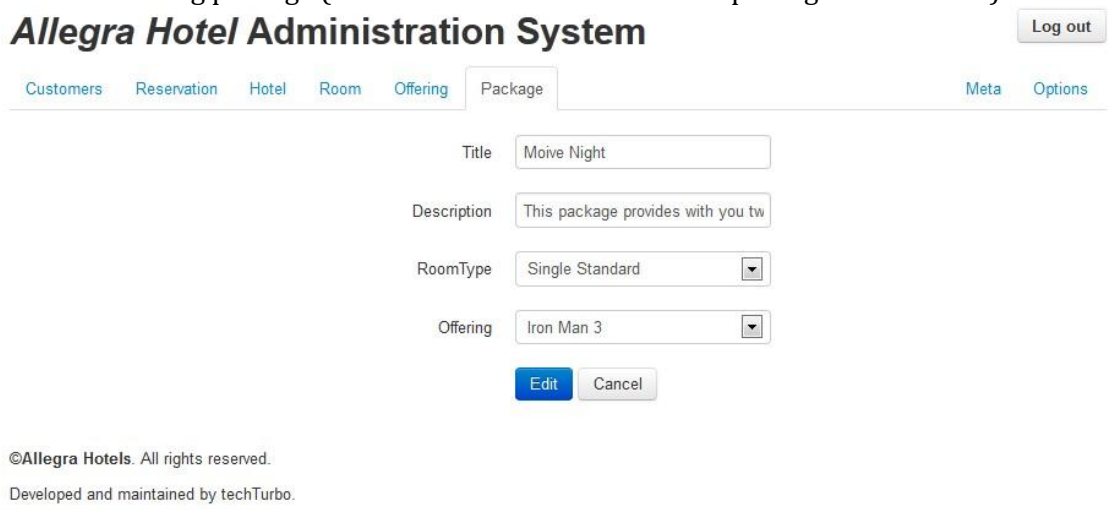
Package management page:

In this page, the administrator can manage the package information. It includes the basic function of:

a. Add new package (click the Add New Package button):

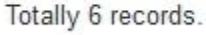


b. Edit existing package (click the Edit button behind the package information):

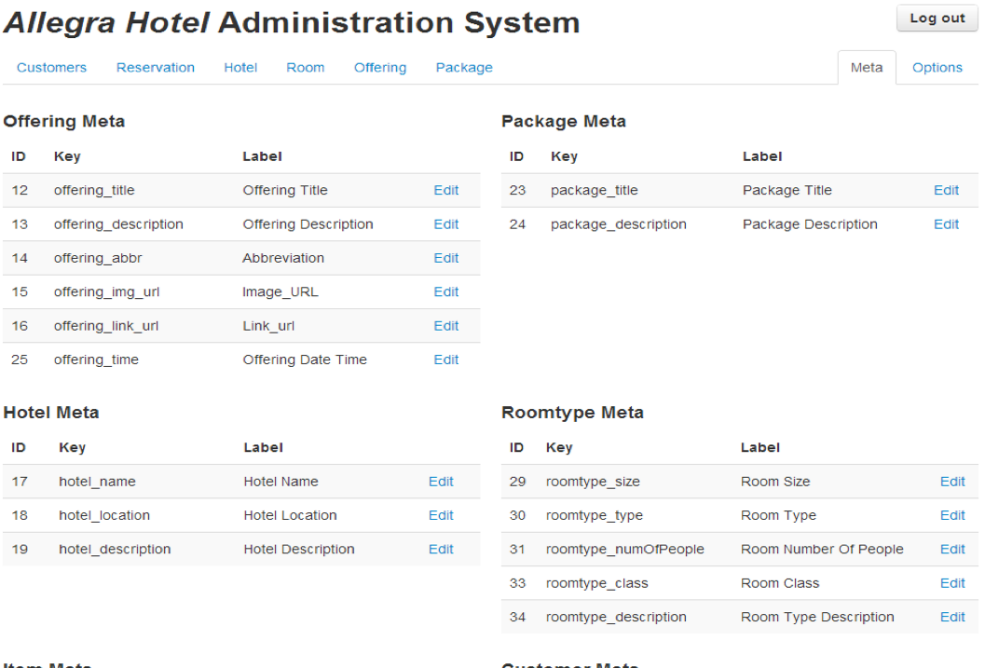


c. Delete the existing package (click the Delete button behind the package information):

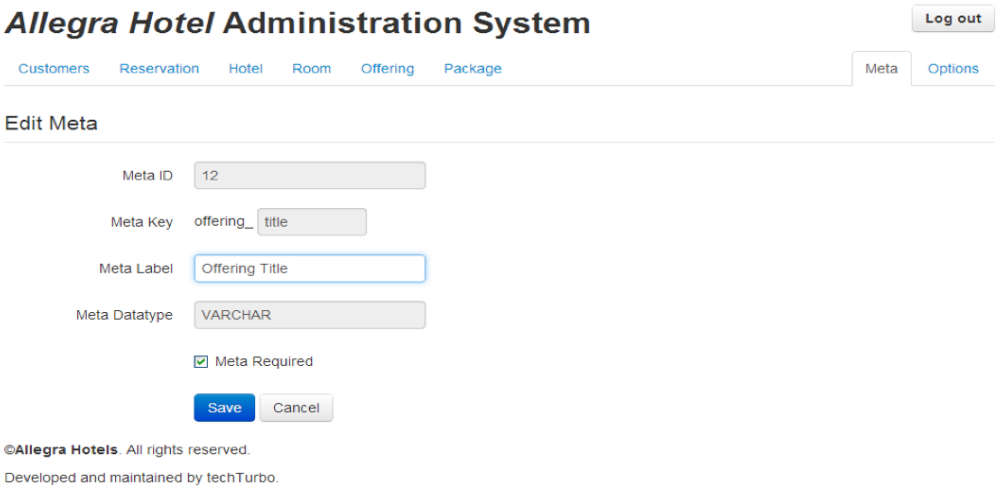
The total package number is displayed on the left bottom corner



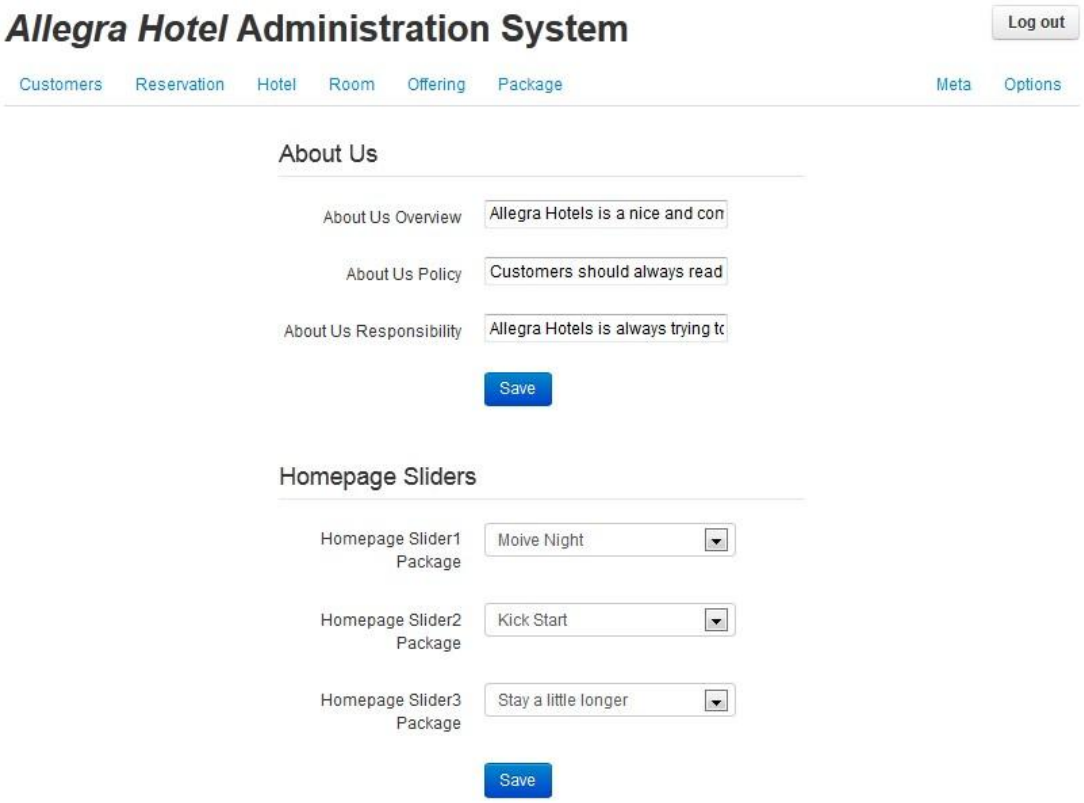
Meta data management page:



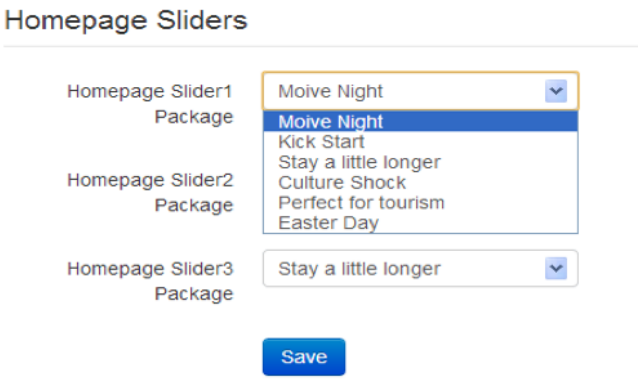
This page is for the administrator to change the Meta data in the database, because this is related to the key logic of the data flow, the administrators have limited operation for editing it. They can be regard as the attribute of a particular class. When the user click Edit button only the Meta label is allowed to change:



Option management page:



In this page, the user can change the Text on the About Us page in the About us block, meanwhile the Homepage Sliders block gives the user options to choose what to displayed on the homepage picture slide. The user needs to select the package in the dropdown list:



4. Installation guide

To install the website source code to a new server, you have to install the following software/services to ensure the proper functionality.

- Apache 2.2.2 with PHP 5.4+
- MySQL 5.5+

This environment can be set up on either a Windows or *nix server which supports the software mentioned above. It is recommend to run install this website on a hardware with more than 2.5GHz of processing power and 512M of RAM, but not absolutely necessary.

1. To install the software, please follow the steps below:
2. Unzip the source code.
3. Copy index.php, .htaccess, application/, assets/, and system/ to your web root directory.
4. Create a user in the MySQL database system, and at the same time create a database for that user and grant the user full privilege.
5. Import the .sql file into the database you just create, and then you should have the latest database schema in your MySQL system.
6. Open file application/config/database.php, edit settings between line 51 and line 54, enter corresponding information that matches your database.

If you follow these steps and your system is configured using a default configuration, you should be able to have the website running without any problem. If your system is not using the default settings, then you may encounter different problems. Please refer to “5.4 Trouble shooting procedures” for more information.

5. Integration guide:

Because the current system is not flexible enough to export user and booking data, we would recommend to manually migrate the data to the new system, or to build an archive of the old system and completely get rid of the old system.

We would suggest to stop accepting all new reservations using the old system, and redirect them to the new one by creating either auto-redirection system or a link that they can manually click and jump to the new site. And when all old reservations has been checked out and completed, the new system should be able to handle all the future transactions.

6. Troubleshooting procedures

- The website says “cannot connect to the database”, what should I do?

To fix this problem, you have to check your web server’s connection to the database. Make sure you are entering the correct user name, password, database name, and the host name. And also please make sure that the user you specify is able to read and write the database. The file you have to edit is application/config/database.php.

- When I click some link on the website, it has 404 error, what is wrong?

Although our system is well tested before deliver, there are chances that the system may encounter 404 error when it operates. When you encounter a 404 page, most of the time is the wrong implementation of the .htaccess file. The file is configured as rewrite all the requrest to index.php, therefore your Apache server has to support URL rewrite. Please refer to Apache manual if you do not have URL rewrite turned on.

- I get some funny characters with input that is not English, how can I solve that?

Reason for that is because your MySQL server is not configured as the correct Encoding, and you have disabled the encoding setup by the SQL script. Please check your MySQL server settings and make sure that you can use the UTF-8 encoding. For data that has stored in the database, please refer to the MySQL manual to see how you can convert data encoding with stored data.

- I cannot log in to the Admin panel, my customer cannot log in to the My Account section, what is wrong?

Most likely the reason is that your system has “session” turned off. Because the website is heavily rely on the PHP session system, you have to have session turned on. Please refer to the PHP manual for more information about how to enable session. You may also set the time for how long each session is going to be valid.

- I cannot get the rooms and packages list when doing a reservation, it only says loading… what can I do?

As our website is built using AJAX technology, you may see the Loading… never goes away if you turned off your JavaScript. Please enable JavaScript on your browser. Please relax when you do that, JavaScript is a safe technology which you do not have to be afraid of if you are using a safe browser, Chrome, Safari and Firefox are recommended for all web browsing activities.

- I am using IE7 and the website looks strange and funny, what should I do?

Change your browser, seriously. You are using an extremely out-of-date browser which has many security flaws, problems and bugs. Our website has its built-in security system that will not work on IE7 and below, so please do not try to hack the code and make a payment.

7. Operational procedures

To ensure the system works properly, the following procedures need to be followed when the system administrators and operators use the system:

- The administrators and operators use the address of the administration site to enter the administration system. Then the correct username and password will be needed to log in to the administration system.
- After logging in, the user can click on each tag to perform certain operations.
- In Customers and Reservation section, the user should get the permission and confirmation from the related customer when editing the record of a customer and the customer's reservations.
- The Meta section in the administration system manages all the attributes of each entity table in the database. The user can view and edit the label of each Meta value recorded. When editing, the user should pay attention to the data that is being typed in, the value of the Meta label should be meaningful and match the Meta key.
- Any modification related to the appearance of the website, such as colours, font, size of a certain element etc., should be consulted with the development team.

8. Test plan

8.1 Test Items

User interface test:

This test covers the whole website interface. Some of the user experience enhance techniques have been implemented to the webpage like JavaScript, Ajax besides the pure HTML. The test should focus on whether or not these features can load properly to the webpage.

Front end website test:

The client side website is enable the user to create an account, search the room availability, add offerings to the package and make a reservation. Besides, it provides some useful information about the hotel introduction as well as some of the tourist guide in Melbourne. Therefore the navigation test of these main functions should be carried out first. The next step is to simulate the real use experience as a user to perform different scenarios for browsing the website. In that situation, the input validation is the key aspect to be tested. Different pairs of input data will be provided and look forward for the expected output. The last step is to test the security of the system in order to find whether the system is fault tolerance. Meanwhile the security strategy for the system is also evaluated at this stage.

Back end website test:

On the other hand, the administrator side is mainly functional to manage the data of the system. The back end of the system is more frequently interact with the database, the data entry validation is obvious important for the system. Some basic operations for the data like create, read, update and delete need to be tested. In the administrator page, the data that retrieve from the database should be correct, and some of the sensitive data that cannot be modified should be protected in a proper way.

Browser compatibility test:

Both the client and the administrator interact with the system through the web browsers. Different user may user different browser to get into the system. Therefore by running the system to different browsers, there might be some incompatibility for the

system that needs adjustment. And the developers should make the website as compatible as possible to most of the mainstream browsers.

8.2 Features to be tested

From a user perspective, this system mainly provides a platform for customers and Allegra hotel's staff to make a reservation and manage details of customers, reservations and packages respectively.

For the customer, this system can be used to reserve a room or accommodation packages, it also can be used to make a payment for their reservation. Furthermore, customer can rate this hotel's product online. More precise, at first, when a customer tries to reserve a room, he needs to select the room accord to some conditions such as destination, the date of stay (Check- In and Check - out dates), numbers of Travelers both Adults and Children. Here, the validation of the date needs to be tested, for example, if check-out date is before check-in date, an error notice should be displayed, because this situation is impossible. Secondly, when a customer tries to sign up an account on the website, he needs to enter his details as required in the sign up form. Here, some features need to be tested, firstly, whether the value that the customer have typed in is valid or not. If it is empty, a notice need to be displayed and this customer cannot sign up successful at that time; If the customer sign up with repeated username, an error message needs to be displayed, because repeated username will mix the database of customer details. After a customer signs up an account on this website successfully, then he can sign in with his username and password. At this time, the validation of the username and password need to be tested. If the customer enters empty or wrong value in username or password blank, an error message should be displayed. (make reservation)

For the staff, in order to manage customers' details, reservations and packages, the staff needs to log in the system, ``````````()

8.3 Features not to be tested

From the view of customers and Allegra Hotel staff, some features do not need to be tested. Specifically, the response time and throughput during typical user load will not to be tested. Additionally, the peak user load is not need to be tested as well, since there are many limitations for its testing, such as the lack of testing resources, the difficult of collect and analyze results, coordinate and synchronize multiple users, achieve test repeatability. The testing of problems that occur during long-term user activity can be ignored for users view either. At last, the system resources consumed by a single transaction also do not need to be tested from a user perspective.

8.4 Approach

Functional test:

1. Navigation test:
   - Navigate through the website to see if each link can navigate the user to the correct webpage. Record the failure page link.
   - Check the title of the each webpage.
   - Check the picture and logo display for each page.
   - Check the header and footer content and links.
   - Check the URL conform the correct page.
2. User Interface test:
   - Check whether each page conform to the same style.
   - Check the webpage size is consistence.
   - Check the words font and color.
   - Check the hover highlight effect.

- Check the picture position and the size correctness.

3. Input validation test:
   - Give different pairs of input to all the textbox and submit, compare the result with the expected result.
   - Check none input notification and the wrong input notification.
   - Check the data picker operation.
   - Check the checkbox and the dropdown list.
   - Check the incorrect input notification correctness.
4. Front end function test:
   - Provide the room search information to search the room availability.
   - Select a room and add some offerings to the package, then make a reservation.
   - Create an account during the reservation and user the username and password to login.
   - Change the login password and login again.
5. Back end function test:
   - Use the existing username and password to login to the system and log out.
   - View all the customer information; add a new customer from the administration page; edit existing customer information; delete an existing customer.
   - View all the reservation information; delete an existing reservation.
   - View all the hotel information; add a new hotel from; edit an existing hotel; delete an existing hotel.
   - View all the room information; add a new room; edit an existing room; delete an existing room.
   - View all the offering information; add a new offering; edit an exiting offering; delete an existing offering.
   - View all the package information; add a new package; edit an existing package; delete an existing package.
   - View all the Meta data; edit the Meta data.
   - Edit the option information and view the change in the front-end page.
6. Browser compatible test:

After configure the website, browse the website through different browsers and record the difference.

8.5 Responsibilities

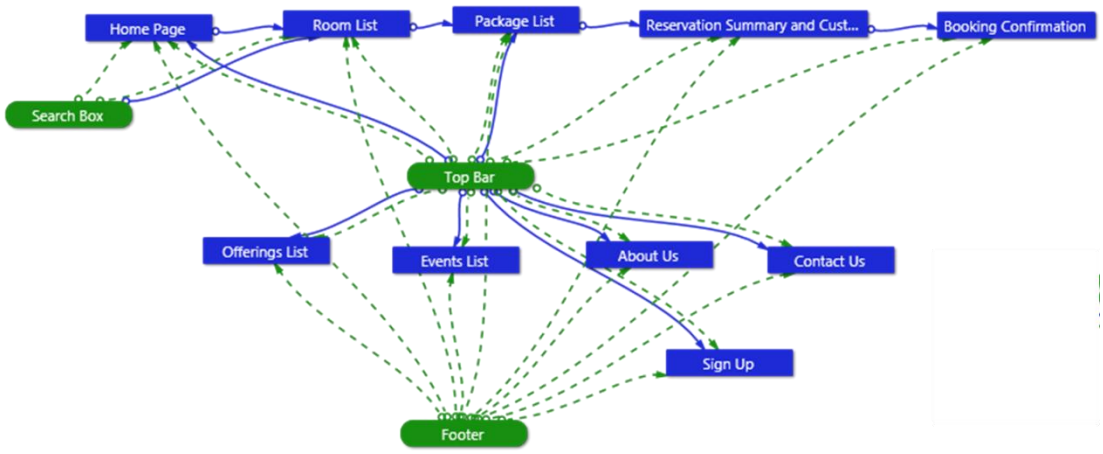
- Project test lead – Jacob (Xinyun Zhou) is responsible for oversight of testing on the project. He is also accountable for the processes used to ensure the quality of the deliverable.
- Testing Manager - Jacob (Xinyun Zhou) is accountable for conducting quality assurance testing and executing on the test plan.
- Test Designer – Jacob (Xinyun Zhou) and Daniel (Yingdong Zhang) are responsible for creating the test scripts, scenarios, test lives, and so on, that make up the tests to be performed.
- Test Approver – Alex (Guohua Li) and Pearl (Yuqing Xiong) are responsible for reviewing, validating, and approving the test materials created by the Test Designer.
- Tester – Alex (Guohua Li) and Pearl (Yuqing Xiong) are responsible for executing the test scripts, and reporting the results.
- Reviewer – Shan (Shantanu Datta) is responsible for reviewing reports from the testers and determining what subsequent actions will be taken.

8.6 Schedule

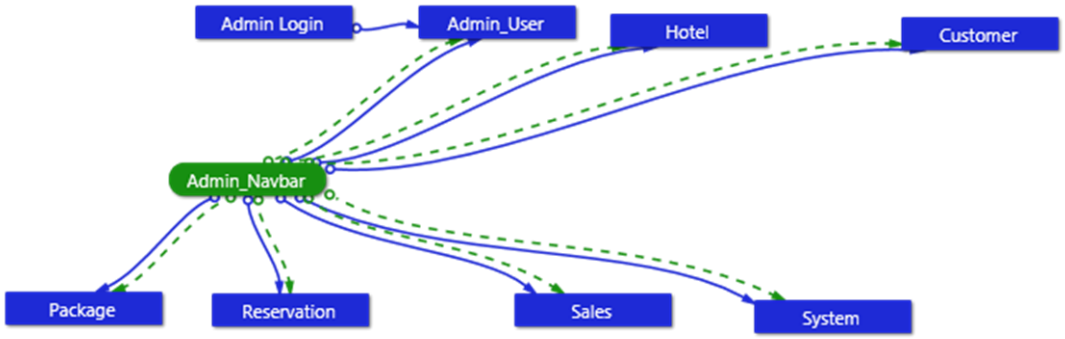
Test task	Test start date	Test end date
Navigation test	1st May 2013	2nd May 2013
Customer search room availability test	2th May 2013	3th May 2013
Customer login test	4th May 2013	6th May 2013
Reservation test	8th May2013	12th May2013
Administrator login test	7th May 2013	8th May 2013
Administrator change customer information test	9th May 2013	11th May 2013

8.7 Testing Tasks

1. Navigation test:
   In this section, the front-end website and the back-end website should be tested separately. The test can be conducted according to the site maps below.
   Front-end site map:



   Back-end site map:



2. Customer search room availability test
   This test task is to make sure the website can provide the correct result for the search room availability function. Both the valid an invalid data will be provided to the control field and submitted.

3. Customer login test:
   This test is to ensure that the login function for the customer is enabled.
4. Reservation test:
   This test should be performed after successfully searched the room. This section needs the user to click the buttons to select room and offerings to the package, and then follow the procedure to the confirmation and payment page. The input data can be tested here.
5. Administrator login test:
   This test is to ensure that the login function for the administrator is enabled.
6. Administrator change customer information test:

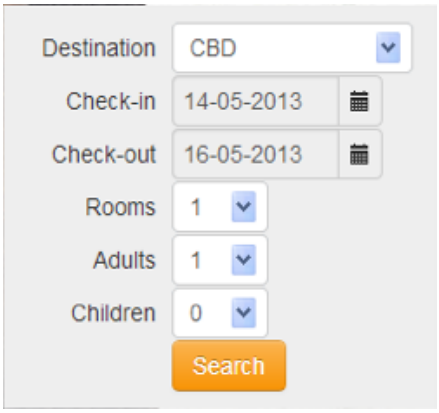
This test is to ensure that the change customer information function in the administrator side is valid. Meanwhile this test can also test the interaction for the webpage control field with the database.

8.8 Test Deliverables

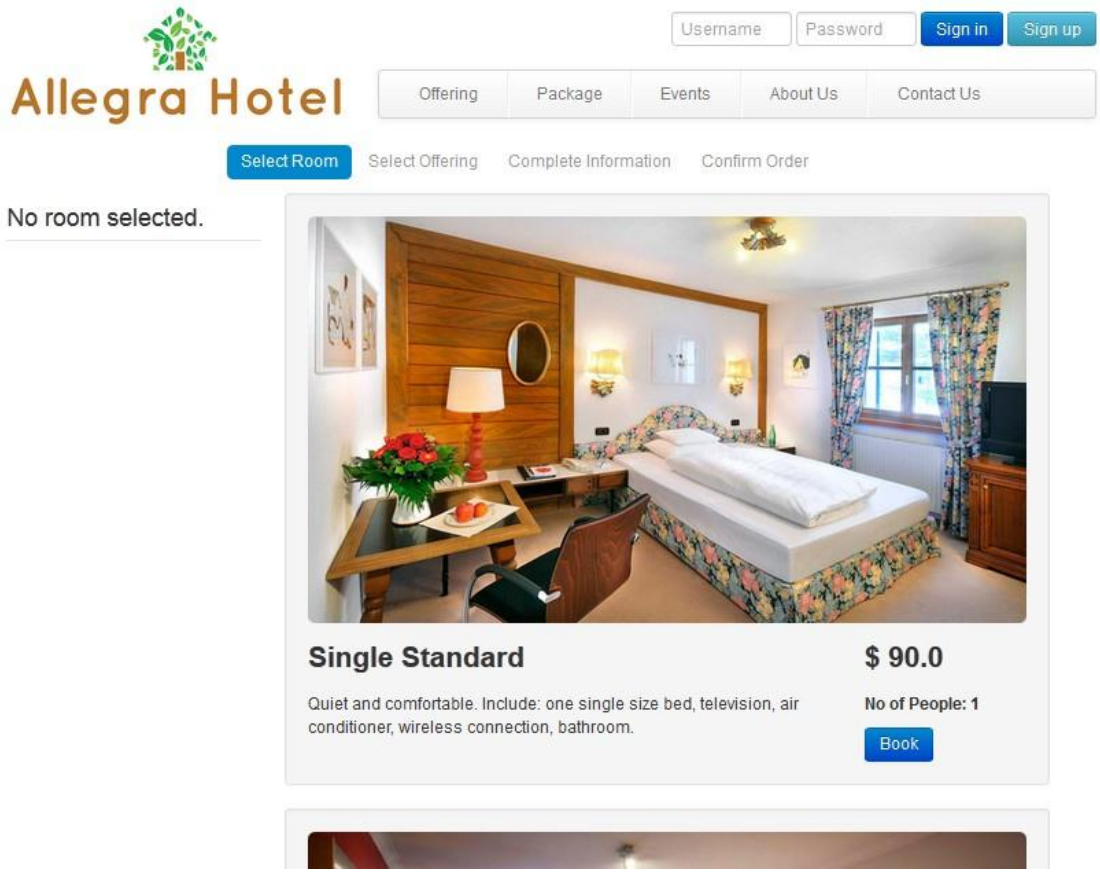
Test case 1:

Customer search the room availability

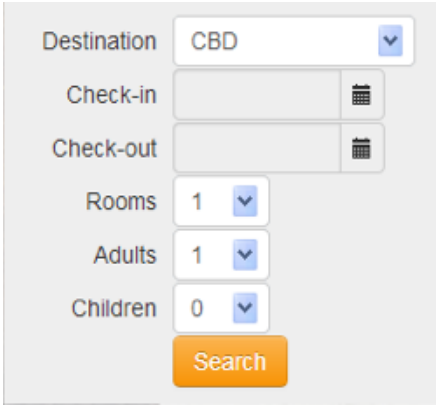
Valid information set:



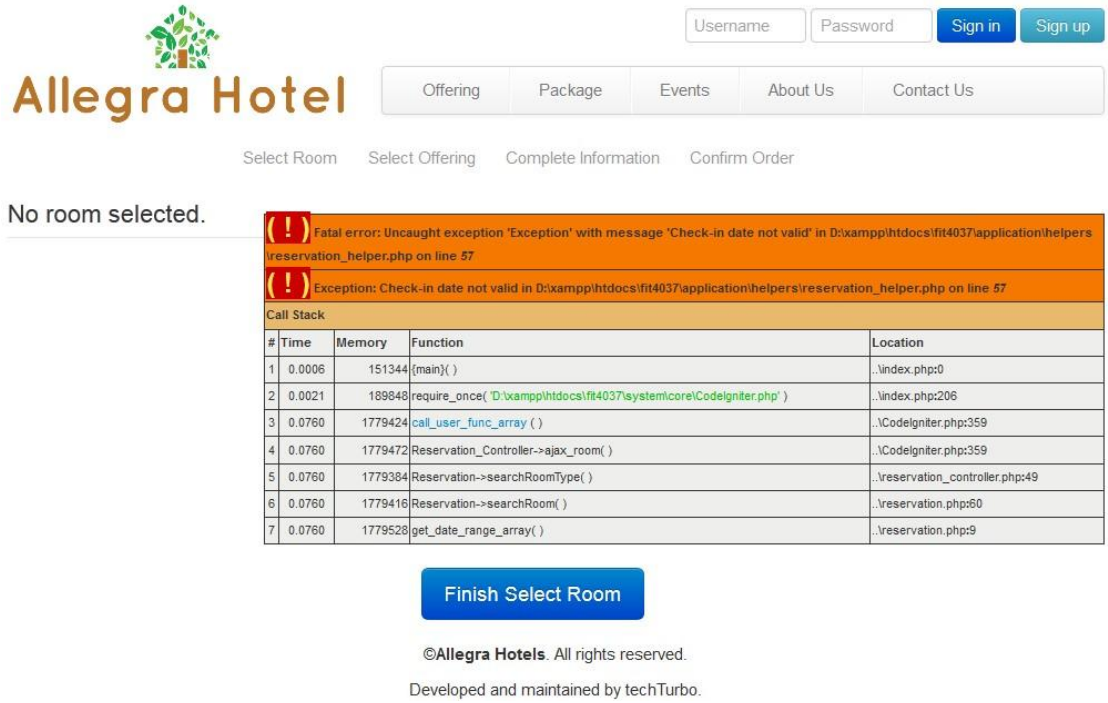
Result:



Invalid information set (leave by default):



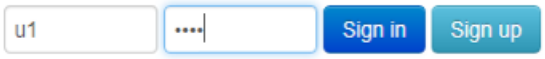
Result:



Test case 2:

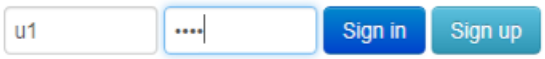
Customer login test:

Valid information set (Correct username and password):

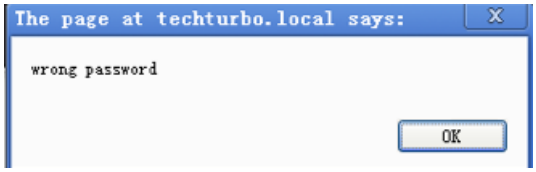


Result:

Invalid information set (Correct username, wrong password):

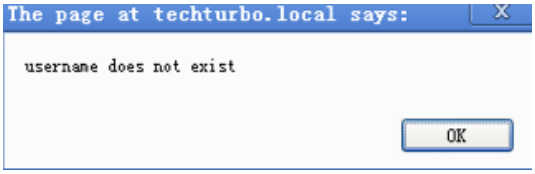


Result:

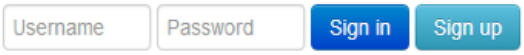


Invalid information set (no existing username):

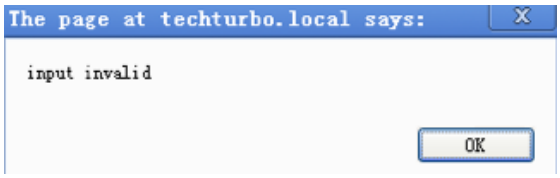
Result:



Invalid information set (none input):

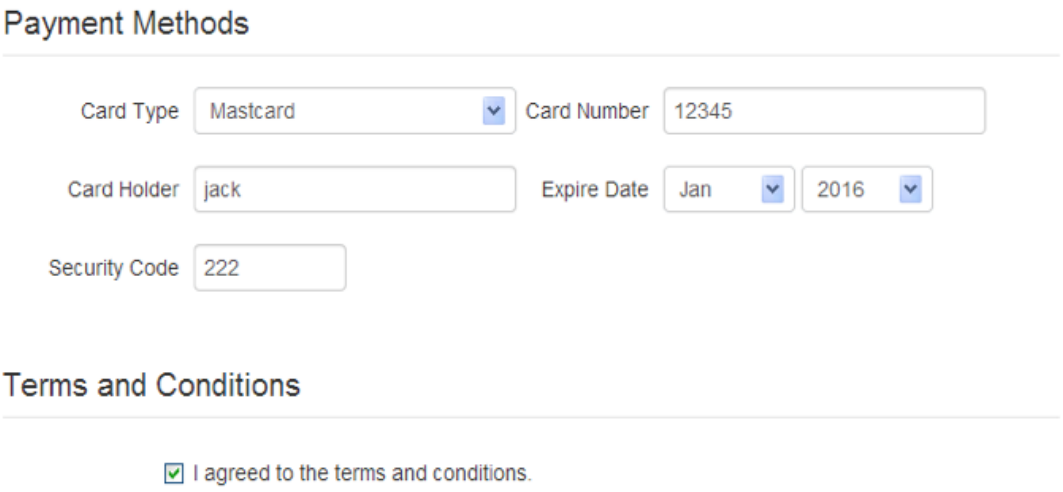


Result:

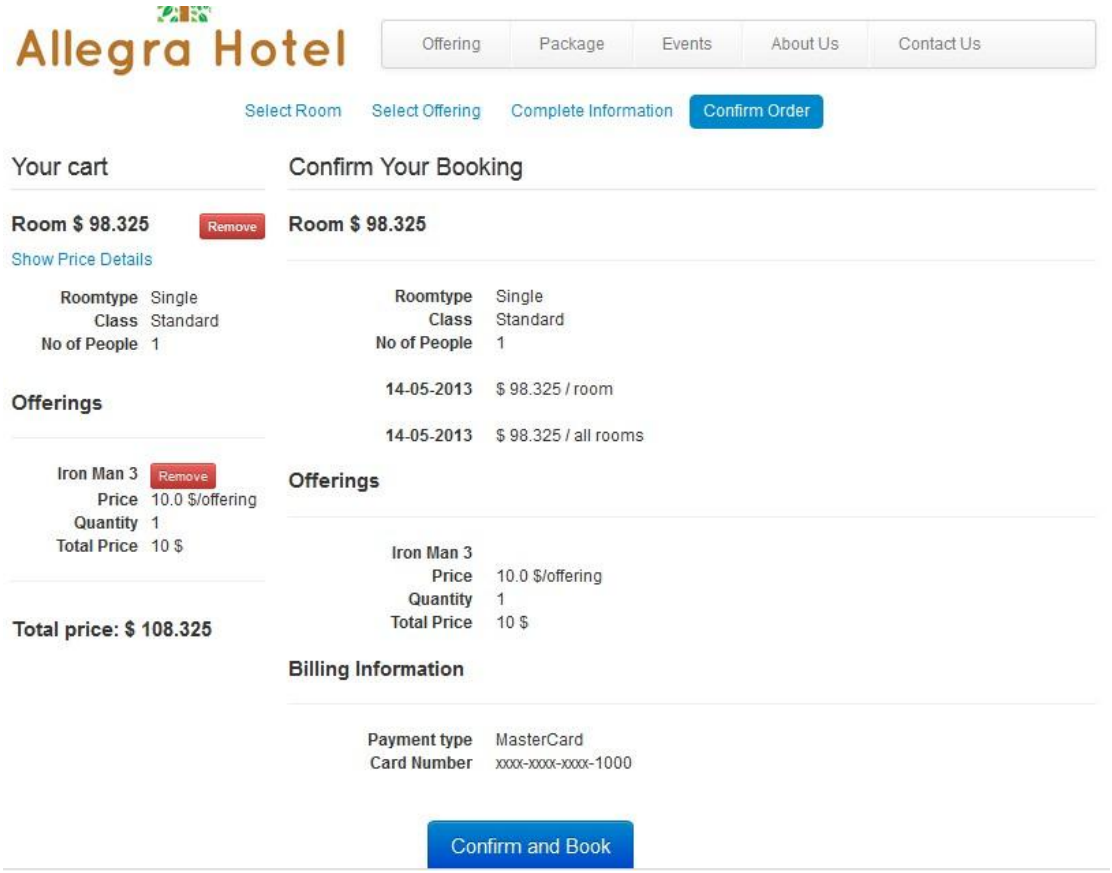


Test case 3

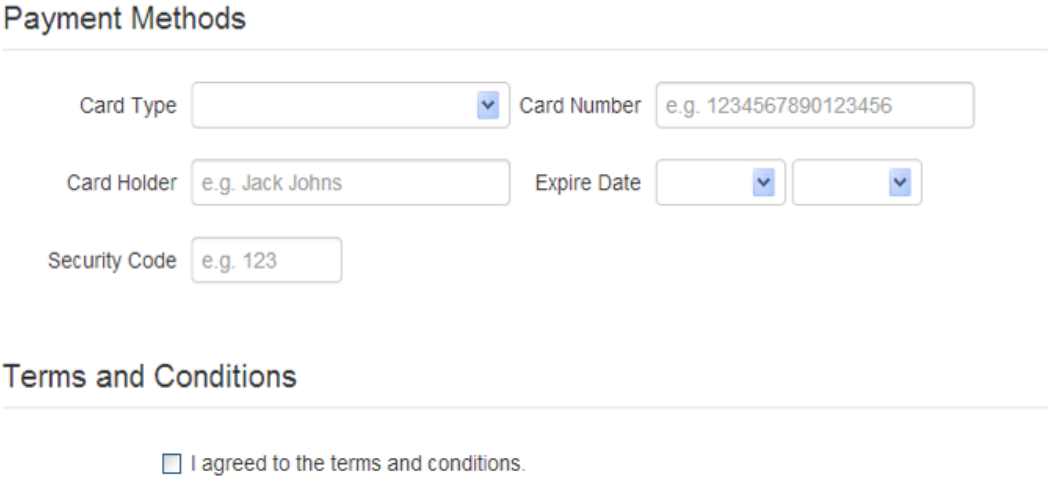
Valid payment input:



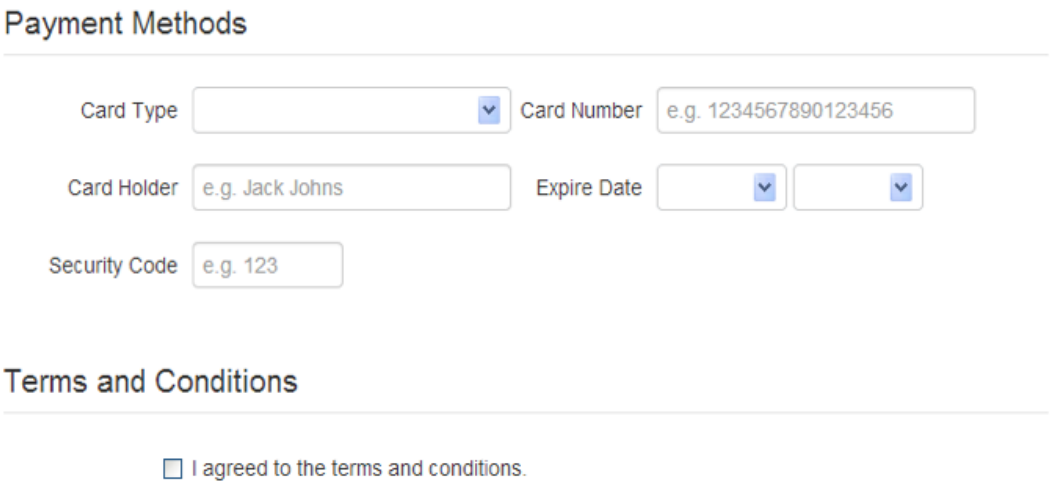
Result:



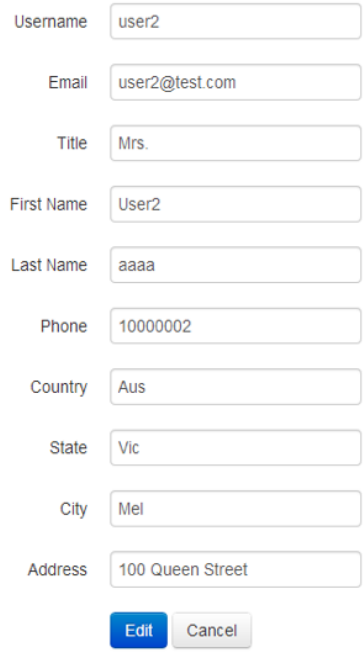
Invalid payment input (none input):



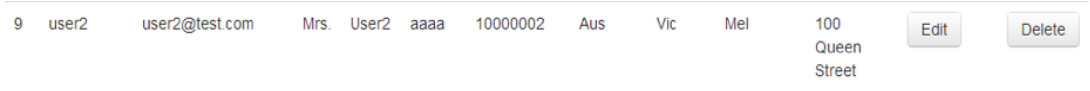
Result:
Stay in the current page:



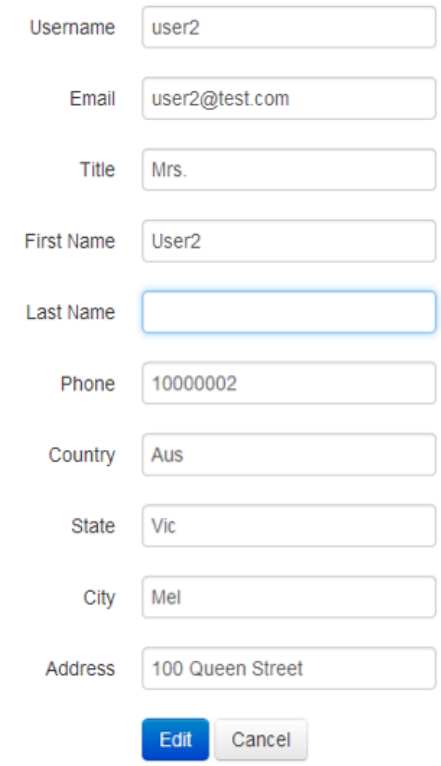
Test case 4
Edit existing customer information：
Valid change of the information:



Result:



Invalid change of the information:



Result:

8.9 Item Pass/Fail Criteria

During the testing process, there are a lot of conditions to determine whether a test has been successfully completed. First of all, testing environment is the most important condition for testing. More specific, the requirement of hardware and software for testing environment directly determine whether the test plan can be executed. Secondly, the arrangement of testing plays a vital role in completing a test as well. For example, if the time or tester is not enough assigned, a test is more likely uncompleted. Thirdly, the progress of testing also decides the completeness of a test. If testers do not follow the test schedule, it may cause that the test cannot complete on time, and other tests will be affected or delayed. Additionally, test tools also can be a condition to determine whether a test has been successfully completed, if these tools are not appropriate, the purpose of this test will be changed, and this test cannot be complete definitely.

8.10 Risks and Contingencies

Like most of other technical projects, the first risk we may come to is that the testing may be taken place in one environment, which has a high possibility to be slightly different from the development environment, and will be slightly different when the code is deployed in a production environment. There may be problems that not happen during the testing, but it may happen because of the changing environment. To address this problem, our testing is done in a really strict development environment, which will be able to identify the tiniest errors in the code and database. By doing this, when we move to the production server, the configuration will be slightly looser than the testing environment, which makes sure that the program will run correctly.

The next risk we may encounter is that when we successfully address the problem and has taken steps to fix that, what may happen is the new code we write to fix the issue may break other functionalities and tested features. To prevent the risk from happening, the team will implement the test multiple times to make sure every single error is fixed and not causing any other errors. At the same time, all errors fixes will be fixed and reviewed by all developers in the team before been added to the central repository. We can greatly benefit from that because everything is monitored and reviewed, so that the possibilities of breaking existing and tested functionality can be minimized.

Another risk that should pay attention to is that the thinking and operations of the people who is testing the software may be limited because of the fact that they are trained to use the software as it designed to be used, instead of a user that face the system for the first time. The problem of this is that some hidden risks will be very difficult to be dig out because that fact that they are following the way the system is designed to behave. To solve the problem so that the system can handle unexpected usage, future testing will also be taken by new users who has never seen the system before.

The final risk of the testing will be the fact that the system may face security threats because the skill of the developers and testers are limited so that not all the security flaws can be found and fixed. Although we are doing our best to prevent the attacks to the program, there may still be possibilities that there are security issues around the delivered code. We will take necessary steps such as including multiple people and security experts to test the program in the future, and we will also try to follow the design standard of common web applications to minimize the security issues that hide in the testing processes.

9. Appendix

9.1 Team meeting time sheets

Team Number	1	**Meeting No**	6		
Team name	techTurbo	**Meeting start time**	7/5/13, 16:00	**Location**	Tutorial Room
Attending	Jacob, Shan, Daniel, Alex, Pearl		**Apologies**	N/A	
Matter arising from previous minutes					
Issue from previous minutes		**Discussion**		**Outcome**	
N/A		N/A		N/A	
Confirmation of minutes from last meeting		Yes	**Confirmation of minutes signed off by**		Pearl
Signature					
Outcomes of meeting					
Agenda Item	**Discussion in brief**	**Outcome**		**Action: what, who and when**	
Implementation of the reporting	Use the data warehouse to store and collect data	Shan will be responsible to implement the reporting databases, Jacob and Daniel will try to implement the result on the website		WHO: All team members WHEN: by the next meeting	
Next deliverable	Work allocation	Pearl and Alex will be responsible for the docs, whereas Jacob and Daniel will provide support by creating corresponding features		WHO: All team members WHEN: by the next meeting	
Presentation	How to prepare for the presentation	No outcome due to time limit.		WHO: All team members WHEN: by the next meeting	
Meeting closed at	7/5/13, 19:00	**Next Meeting**	11/5/13, 10:00	**Minutes prepared by**	Jacob

Team Number	1	**Meeting No**	7		
Team name	techTurbo	**Meeting start time**	11/5/13, 10:00	**Location**	Level 3 Library
Attending	Jacob, Daniel, Alex, Pearl		**Apologies**	N/A	
Matter arising from previous minutes					
Issue from previous minutes		**Discussion**		**Outcome**	
N/A		N/A		N/A	
Confirmation of minutes from last meeting		Yes	**Confirmation of minutes signed off by**		Pearl
Signature					
Outcomes of meeting					
Agenda Item	**Discussion in brief**	**Outcome**		**Action: what, who and when**	
Programming	Naming convention and folder structure	All naming conventions and folder structure follows the PHP standard.		WHO: Jacob, Daniel WHAT: study PHP common conventions	
Deliverable	Difficulties and solutions	Jacob and Daniel has to speed up on the programming so that resources for writing the doc can be in place when needed		WHO: All team members WHEN: by the next meeting	
Communication	How to deal with lack of communication	As Trello is not real time, group members started to use Skype to communicate.		WHO: All team members WHEN: by the next meeting	
Meeting closed at	11/5/13, 23:00	**Next Meeting**	N/A	**Minutes prepared by**	Jacob