**Bachelor of Computing Science (Honours)**

**Semester 4**



**Module:**

**Second Year Project**



***Hotel Reservation System***

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**Submission Date: 2nd May 2014**

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**Declaration**

The above named students declare that the content of this second year project is solely the work of the individuals whose names appear on this cover sheet. The work of any other authors has been cited and referenced in full.

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Part One

# *STANDARDS FOR USER REQUIREMENTS SEPCIFICATION*

# 1 Introduction

Discussed in this first part of the document are the User Requirements Specifications of a hotel reservation system. In order to gain valuable information on how best to design a system that potential users of our system would find best when booking a room in a hotel, a survey was produced. From this survey the results were evaluated and a set of user requirements were established. These requirements, such as guests having a means of logging into the system with the knowledge that the information is secure or changing their booking details were decided as essential for the system.

Having a set of user requirements then resulted in Use Case, Class UML Diagrams and Use Case Descriptions being produced to clearly define the idea of the system. Below (in section 3.2) are some descriptions of some of the key concepts of the system i.e. guest and administrator login, create a booking, check availability to mention a few. These would make up some of the main functionalities of the system to give the guests the ability to carry out these key functions.

Pseudo code was then written to try and explain the procedure in which the system will operate in simple and easy to understand terms, for ease of reference.

# 2 Interview of Key Users / Project Proposer – ML, TM

## 2.1 Interview Questions

Because the project team has a limited knowledge on the workings around hotel reservation systems, an interview with someone involved in this sector was determined to greatly enhance our knowledge of what was required by our system. By conducting the appropriate research before progressing any further, this would focus the group to the important factors of the project.

The interview questions were chosen from a much larger pool of questions which were collectively gathered from each member of the project group. The questions chosen are primarily focused on the functionality of the systems, such as the requirements needed by management for it to be useful. Along with this interview, a questionnaire was also created, to receive the views of both consumers and employees on how the system should perform.

The following questions are those which were picked by the group to be used in the interview with the interviewee.

*1. What kind of functionality would you like the system to perform?*

* Create a booking
* Update a booking
* Cancel / Delete a booking
* Receive regular reports on the availability of rooms
* Receive an overview report on the status of booked rooms
* Receive a notification when the hotel is near to capacity
* Have the ability to change/edit a booking
* Add/Remove details of specific rooms

*2. As a login system for employees, which method would be a better system?*

* Staff ID with password
* Username with password

*3. In the case that a password is forgotten, how would the system deal with this problem?*

* Lock-out after a certain number of attempts, administrator notified
* No lock-out period, password reminder
* Alternative method of login

*4. For users to login to the system, which method would be better?*

* Booking reference
* Username with password

*5. Would you need different tiers of access for employees?*

*6. Do you have anything extra to add that wasn’t asked already?*

## 2.3 Interview/Survey

Once the most important questions were chosen for the survey, a Google Docs questionnaire was forwarded to a number of people for feedback. Hard copies of the survey were also printed off to hand out to other participants, and the feedback of these has also been added to the final results.

The following is a transcript of an interview held with Mr Paul Murtagh who is the manager of the Shakespeare Hotel in Auckland, New Zealand. Receiving these informative responses from someone who has a vast amount of knowledge of hotel reservation systems was extremely helpful in our initial design process. As the interviewee works with a similar system on a daily basis, the group’s understanding of what the system should accomplish was also increased.

*1. What kind of functionality would you like the system to perform?*

* Create a booking
* Cancel/Delete a booking
* Receive regular reports on the availability of rooms
* Receive an overview report on the status of booked rooms
* Receive a notification when the hotel is close to capacity
* Have the ability to change/edit a booking
* Add/Remove details of specific rooms

**Answer:** All of the above, employees must have the ability to alleviate any problems a user may have, which would require access to particular functions on the reservation system.

*2. As a login system for employees, which method would be a better system?*

* Staff ID with password
* Username with password

**Answer:** Username with password as it’s of a personal preference easier to remember.

In case of security or reference it’s much easier to see a username who’s logged in to the system and who has made changes to a booking than seeing id 45 changed the booking.

*3. In the case that a password is forgotten, how would the system deal with this problem?*

* Lock-out after a certain number of attempts, administrator notified
* No lock-out period, password reminder
* Alternative method of login

**Answer:** The first option as it is to us a much more secure way of handling legitimate login errors as emails can and have been in the past hacked and we do not wish to expose our systems details especially our guests details to unauthorized personnel.

*4. For users to login to the system, which method would be better?*

* Booking reference
* Username with password

**Answer:** Username with password is the method we currently use for our own hotel groups personal system. Guests receive booking number references as part of their email confirmation and again referring to the previous questions emails can be compromised and we would hate for any of our clients stays to be disrupted by an outside influence.

*5. Would you need different tiers of access for employees?*

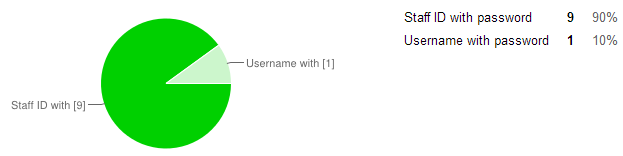
**Answer:** Yes Our reception staff have a level of access to system and can access Roughly 70% of the system, they can check in and check out our guests add or remove special items such as extra beds or rounds of golfs or Spa treatments etc. While Administrators (Effectively our Managers) can print reports on specific days or weeks, Remove bookings or users from the system, or add hotel facilities to the system.

*6. Do you have anything extra to add that wasn’t asked already?*

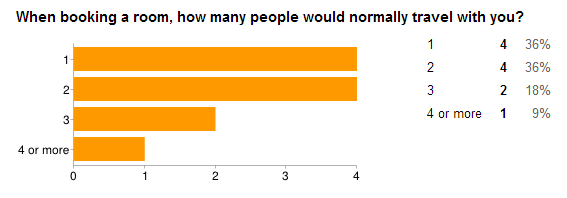
**Answer:** The above questions cover the core functionality as a system in our type of business would need to do. As a side though I from a personal view can’t emphasise how import clean and uncluttered layouts are a must, coupled with keyboard controls that can be used as instead of on screen buttons. Using the ‘f’ key to save or refresh a certain booking or report screen saves time. Tab/Enter when typing in required fields to progress to the next field also saves time clicking.

## 2.4 Evaluation of Results

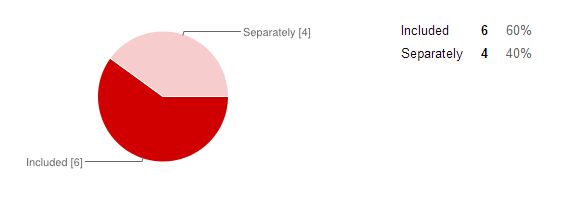
The results gathered from the survey were on track with what was expected. Most of the respondents agreed that using a staff ID as a login credential would be preferable over a username. This was mainly due to the fact that a username may be forgotten, but a staff ID is usually memorised by employees. Some users stated that there should be an alternative for logging into the system if the details are forgotten, which could be done using a security question or by contacting an administrator.

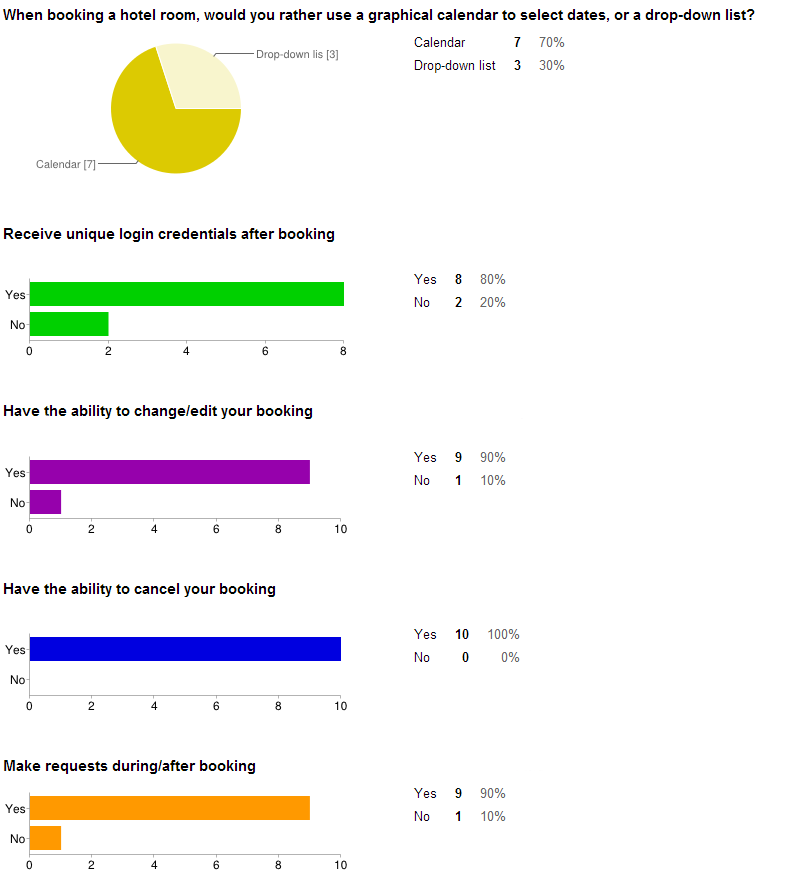


The results gave a good gauge for the type of rooms which should be available to the users, with 36% travelling with 1 or 2 other persons. This would indicate that a larger proportion of smaller rooms should be available to the users, and slowly decrease the quantity of larger rooms.



Close to two thirds of respondents decided that including extras in the base price of their booking is better than paying separately. This finding suggests that people only want to pay once, however some respondents chose separate for this question. An option to pay separately may be included in the system to accommodate these users.

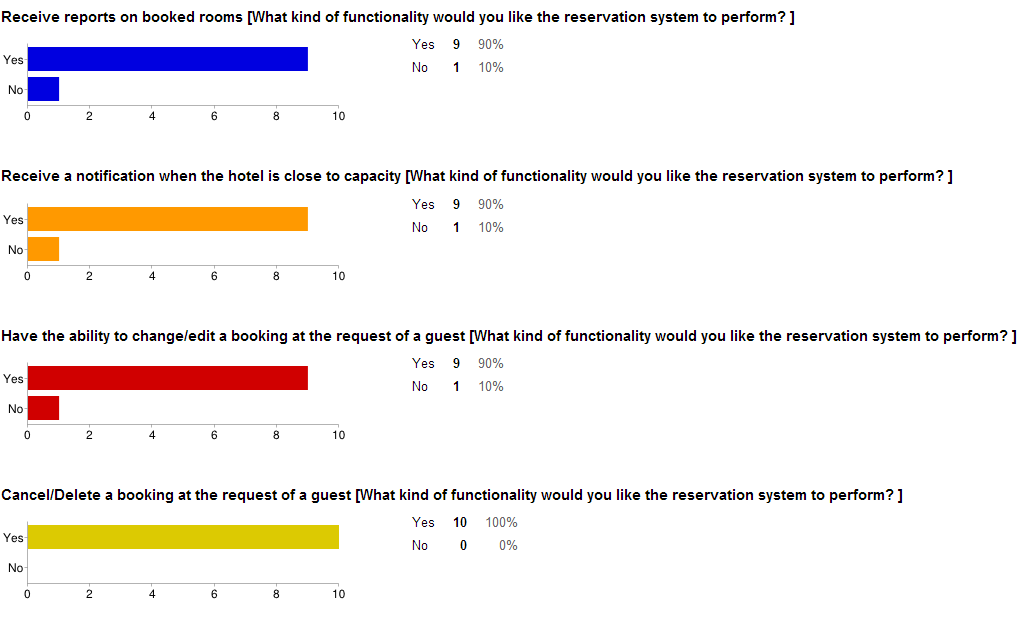


The users also decided that there should be options available before and after booking a room, whether it is a regular room or a function room. These responses showed all of us in the group what the end users are looking for, which was very similar to our expectations.

The following results are for users booking a function room in the hotel, which we thought would be a key function for users. The results showed that the majority of users want to have the ability to do multiple actions when booking a function room, something which we had planned to include in the system from the beginning.



Finally, the respondents were asked what kind of functionality they would want as part of the system, if they were an employee/management. A list of functions was presented to the users, with over 90% agreeing to most of the sample functions proposed in the survey.



# 3 User Requirements Capture for Proposed System – RK, ML, TM, DM

## 3.1 System Narrative

* When a user clicks onto our system via the Hotel Reservation icon on their desktop they will be brought to the initial screen which will give two options. A user who is already a member and therefore logs into the system or a new user who initially wants to browse the reservation system.
  + *Option 1: existing user* – This specific user will enter their username and password. If the information is entered correctly the user will be brought to the main screen of the application. From here the user will be able to access the user home screen, which is detailed in the next point. If the information inputted is incorrect a pop-up screen will notify the user of their mistake and ask them to re-enter their details. This notification will include the details which were entered by the user. Because an administrator has significant access privileges, the password should be stronger than a regular user. This special type of user logs into the system in the same fashion as a regular user.
  + *Option 2: A browser or new user* – This user will browse our system from the onset screen entering in type of room they are thinking of booking complete with a specific date via the calendar, number of nights they wish to stay and if any add-ons are required i.e. breakfast, dinner, a round of golf for instance. From here they will be taken to a check availability screen where a continue click can be pressed where it will take the user to a create account option. When the account creation is complete this user can then login to our system securely and be brought to the main user home screen.
* Within the user home screen we will have tabular buttons as per the following; create a booking tab, manage booking tab, calendar tab, help tab and manage account tab. If the user is an administrator, the tabs are slightly different. Manage booking, Manage Rooms, Manage Specials, Print Reports, Add Administrator and Manage Account.
  + Create a Booking – This option is available to all users who have successfully created an account in order to make a booking

1. Within this option the system will have a function that will allow the user to search through the types of rooms available at that current time. Search options in this section will narrow down the results for the user
2. Within this option the system will have a function that will allow the user to search the calendar to see if a specific room is available
3. Within this option the system will have a function that will allow the user to search for additional options. These additional options could vary from accessibility to in-room services such as irons, TV’s etc.
   * Manage Booking – This allows a user to update a booking, i.e. add an extra night, and add specials ( Allows the user look at additional features of their booking, i.e. breakfast, dinner, a round of golf or a spa treatment). As an administrator, this tab would hold many of the functions available to an employee, such as the ability to edit the booking. The administrator would be able to search for a particular booking with the username of a guest and edit it from this screen. Before saving the booking information after editing, a prompt should be displayed for the administrator to confirm the changes.
   * Calendar – This allows the user to view a calendar in order to determine if a room is available on a certain date.
   * Manage account – Change your password, update your personal details.
   * Add a Room – Administrator only, creates a new room with a set of details/options. Alternatively, a room which was removed can be re-added.
   * Remove a Room—Administrator only, removes a room from the list of rooms. Rooms may only be removed if they are vacant.
   * Update a Room – Administrator only, allows the administrator change the room type

* The system will need to print out a booking confirmation to the guest confirming the total cost, number of nights you wish to stay, what date you intend to stay, personal details such as home address, contact number etc.
* The system will also be required to print out reports from the administrator’s point of view. This report will contain important information such as weekly and monthly reports. Such as how much was made in a certain month or week in a certain calendar year or how many rooms or types of rooms were booked.

## 3.2 List of Requirements

**Must have from guest point of view**

3.2.1 Log into the system

3.2.2 Create a booking

3.2.3 Allow the user choose a date

3.2.4 Allow the user choose number of nights to stay

3.2.5 Allow the user choose how many rooms they require

3.2.6 Allow the user check availability

3.2.7 Allow the user choose what type of room they desire

3.2.8 Add another booking

**Could have from guest point of view**

3.2.9 Allow the user book additional options i.e. spa treatments, a round of gold, meals etc.

**Must have from administrator point of view**

3.2.13 Allow administrator log into the system

3.2.14 Allow administrator to add more rooms

3.2.15 Allow administrator remove rooms

3.2.16 Allow administrator update rooms

3.2.17 Allow administrator to add special offers depending on the season for example

**3.3.1 Log into the system**

An existing user will have a username and password which they will use to log into the system where they can perform a range of functions that suits their needs. A new user will be asked to create an account if they wish to perform actions other than browsing and checking availability of rooms.

**3.3.2 Make a booking**

This allows the user to book a room of their choice. The user accesses this option by clicking on the "make booking" tab on their home screen having logged in.

**3.3.3 Allow the guest choose a date**

This allows a guest to add the dates they wish to book a long with their room choice

**3.3.4 Allow the guest choose number of nights to stay**

This allows a guest to book the number of nights they wish to stay

**3.3.5 Allow the user choose how many rooms they require**

If the guest is travelling with quite a few people then the option to have more than one room is available to them

**3.3.6 Allow the user check availability**

A guest does not have to be logged in to check the availability of a room. A guest simply enters the room they want to book and the dates they plan on going and click the "check availability" tab, where the guest will be presented with information regarding the availability of their search

**3.3.7 Allow the user choose what type of room they desire**

This can be done when the guest is making a booking or browsing. The guest simply chooses from a list of rooms, what room they would like.

**3.3.8 Add another booking**

When the guest is logged in they may add bookings to a booking they have already made. This is done in the same way a guest added their first booking. A guest simply selects the "make booking" tab and enters the required information to proceed with the booking.

**3.3.12 Allow the user book additional options i.e. spa treatments, a round of golf, meals.**

These could be special add-ons that are included in the guest room booking. They simply select what kind of special they want and the price is added to their room cost.

**3.3.13 Allow administrator to add more rooms**

The administrator will have the ability to add more rooms to the database as the hotel expands.

**3.3.14 Allow administrator log into the system**

Just like a guest the administrator will have a username and staff ID that allows them to log into the system. However the administrator has different capabilities when it comes to our system, therefore an administrator will see our system in a different view as opposed to a guest

**3.3.15 Allow administrator removes rooms**

The administrator can remove rooms from the system

**3.3.16 Allow administrator updates rooms**

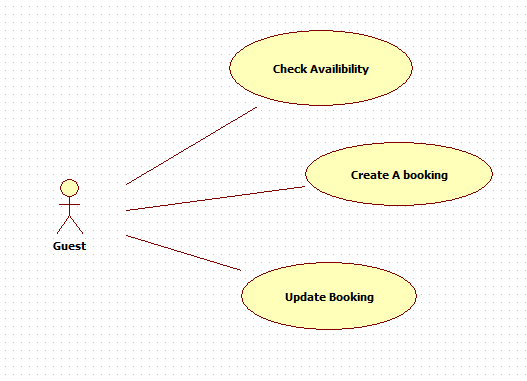
The administrator can change the room type and cost of a room and these changes will be saved in the database

**3.3.17 Allow administrator to add special offers depending on the seasons for example**

The administrator can change costs of a room depending on special offers that may occur due to time of year i.e. different seasons for instance Christmas, St. Patrick’s Day

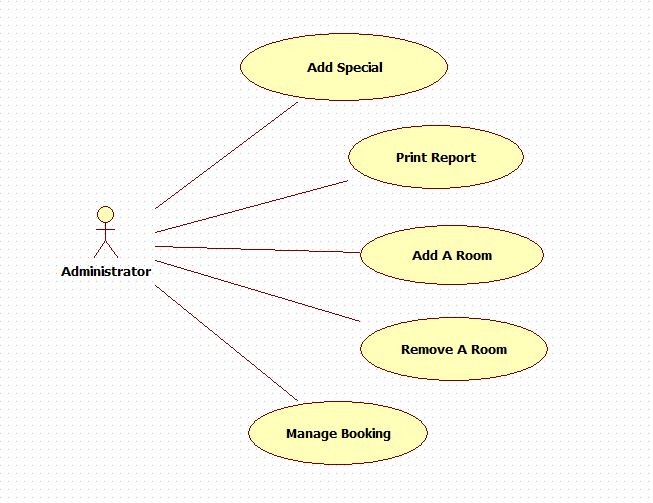
# 4 Use Case Model - DM, ML

## 4.1 Use Case Diagram



***Figure - 1***

## 4.2 Use Case Diagram



***Figure - 2***

## 4.3 Use Case Descriptions

|  |  |
| --- | --- |
| **Create A Booking** | |
| Use Case: | Create a Booking |
| Actor (s): | Guest |
| Goal: | The goal is for a guest to complete the task of making a booking within the system |
| Overview: | A guest can choose a room, provided the room is available. Once the system verifies that the room is available on the specific date in question then the system confirms that their room choice is valid and the guest can make a booking |
| Successful Scenario: | Step 1. Guest logs on with their username and password |
|  | Step 2. System verifies their details |
| Step 3. Guest chooses the tab rooms and chooses a room |
| Step 4. System checks availability of that particular room via the database |
| Step 5. System verifies availability for the room |
| Step 6. Guest chooses the calendar tab and chooses a day, month and year |
| Step 7. System checks the availability of that day via the database |
| Step 8. System verifies availability for that date |
| Step 9. Guest confirms the booking |
| Step 10. System issues a confirmation email and a confirmation message on-screen that the booking is complete and updates the database |
| Step 11. Guest logs out of the system |
| Alternative Scenario (s) |  |
| Alternative  Scenario 1: | Step 1  Guest enters incorrect password or username. Guest is prompted to try again |
| Alternative  Scenario 2: | Step 5  System confirms that the room picked is not available via an error message asking the guest to choose another room |

|  |  |
| --- | --- |
| **Check Availability** | |
| Use Case: | Check Availability |
| Actor (s): | Guest |
| Goal: | The goal is for a guest to be able to check the availability of a room for specific dates without having to log into the system (we are naming this user a browser) |
| Overview: | A guest launches the system and is presented with the option of searching for a room of their choice along with the dates they want. Once they proceed they will be presented with information regarding the availability of their room choice |
| Successful Scenario: | Step 1. Guest launches the system |
|  | Step 2. Guest enters an arrival date, month and year they wish to make a reservation for and press search to continue to see what rooms are available |
| Step 3. System checks the database to see what rooms are available on the specified dates |
| Step 4. Guest is presented with a list of rooms available for the date inputted into the system |
| Step 5. Guest decides to proceed to booking or continue browsing |
| Alternative Scenario (s) |  |
| Alternative  Scenario 1: | Step 3  The room the guest is looking to book on that particular dates are already booked and unavailable. The user then needs to re-decide their choice and choose another date |
|  | Step 4  The system then allows the guest to re-choose a room from the list available |
| Alternative  Scenario 2: | Step 5  The guest wishes to book this room and once they select the booking option will be required to create an account if they have not already done so. The guest will create an account and can proceed with their booking once they have an account |

|  |  |
| --- | --- |
| **Update Booking** | |
| Use Case: | Update Booking |
| Actor (s): | Guest |
| Goal: | The primary goal is for a guest to login the system to update their booking that they have previously made i.e. add an extra night |
| Overview: | A guest logs into their account. Choose the option of update their booking. Chooses a day (either the day before or after) the date they have already booked and investigates if this is available |
| Successful Scenario: | Step 1 Guest logs on with their username and password |
|  | Step 2 System verifies their details |
| Step 3 Guest chooses the option update booking |
| Step 4 Guest checks if the date required with the room they have already booked is available for a second night |
| Step 5 System verifies availability for the room in the database |
| Step 6 System checks the availability of that day in the database |
| Step 7 Guest confirms the update |
| Step 8 System issues a message that the booking is updated and updates the database |
| Step 9 Guest logs out of the system |
| Alternative Scenario (s) |  |
| Alternative  Scenario 1: | Step 2  The system verifies that the details provided are incorrect and prompts the guest to re-enter their details |
| Alternative  Scenario 2: | Step 5  The System verifies that the specific room is not available for two nights |
|  | Step 6  The guest is then returned to the manage booking screen |

|  |  |
| --- | --- |
| **Add A Room** | |
| Use Case: | Add A Room |
| Actor (s): | Administrator |
| Goal: | The goal is for the administrator to log into the system and add a specific type off room to your existing number of rooms. |
| Overview: | As administrator has the ability to add rooms to the Hotel Reservation System. Once the administrator has entered the details of the room he/she then proceeds to adding the room to the system by selecting this option that will be available to them |
| Successful Scenario: | Step 1 Administrator logs on with their username and password |
|  | Step 2 System verifies their details as per the database |
| Step 3 Administrator selects the option to add a room |
| Step 4 Administrator enters the rooms details and adds the room by choosing the appropriate tab |
| Step 5 System confirms the room has been added by issuing a message on screen |
| Step 6 System updates the database to allow for this addition information regarding rooms |
| Alternative Scenario (s) |  |
| Alternative  Scenario 1: | Step 1  Administrator enters incorrect password or username. Administrator is prompted to try again |
| Alternative  Scenario 2: | Step 4  The administrator has entered in conflicting details. The details of the room the administrator is trying to add could have the same room number as an existing room in the system. In this case an error message will be displayed |

|  |  |
| --- | --- |
| **Add Special** | |
| Use Case: | Add Special |
| Actor (s): | Administrator |
| Goal: | Allow the administrator add additional specials to the system to add substance and improve the existing system |
| Overview: | The primary goal is to allow the administrator add special deals in order to allow guests view and book these specials as part of their bookings |
| Successful Scenario: | Step 1 The administrator logs into the system with their staff identification and password |
|  | Step 2 The system checks the database and confirms the administrator details and allows the administrator login to the system |
| Step 3 The administrator selects the special option |
| Step 4 The system verifies the selection from the database |
| Step 5 The administrator adds the new special into the system for instance two nights stay for the price of one |
| Step 6 The system adds all these details into the database |
| Step 7 The system confirms via a pop up window that the new special has been added to the database |
|  | Step 8 The administrator tries to add the new special to a booking |
|  | Step 9 The system verifies the selection from the database |
|  | Step 10 The administrator now knows that the new special option will work for guests |
| Alternative Scenario (s) |  |
| Alternative  Scenario 1: | Step 6  If the administrator enters a special with a negative cost, the system informs the administrator of this error. A special could cost €0 or more but a negative value would not be permitted |
| Alternative  Scenario 2: | Step 1  Administrator enters incorrect password or username. Administrator is prompted to try again |

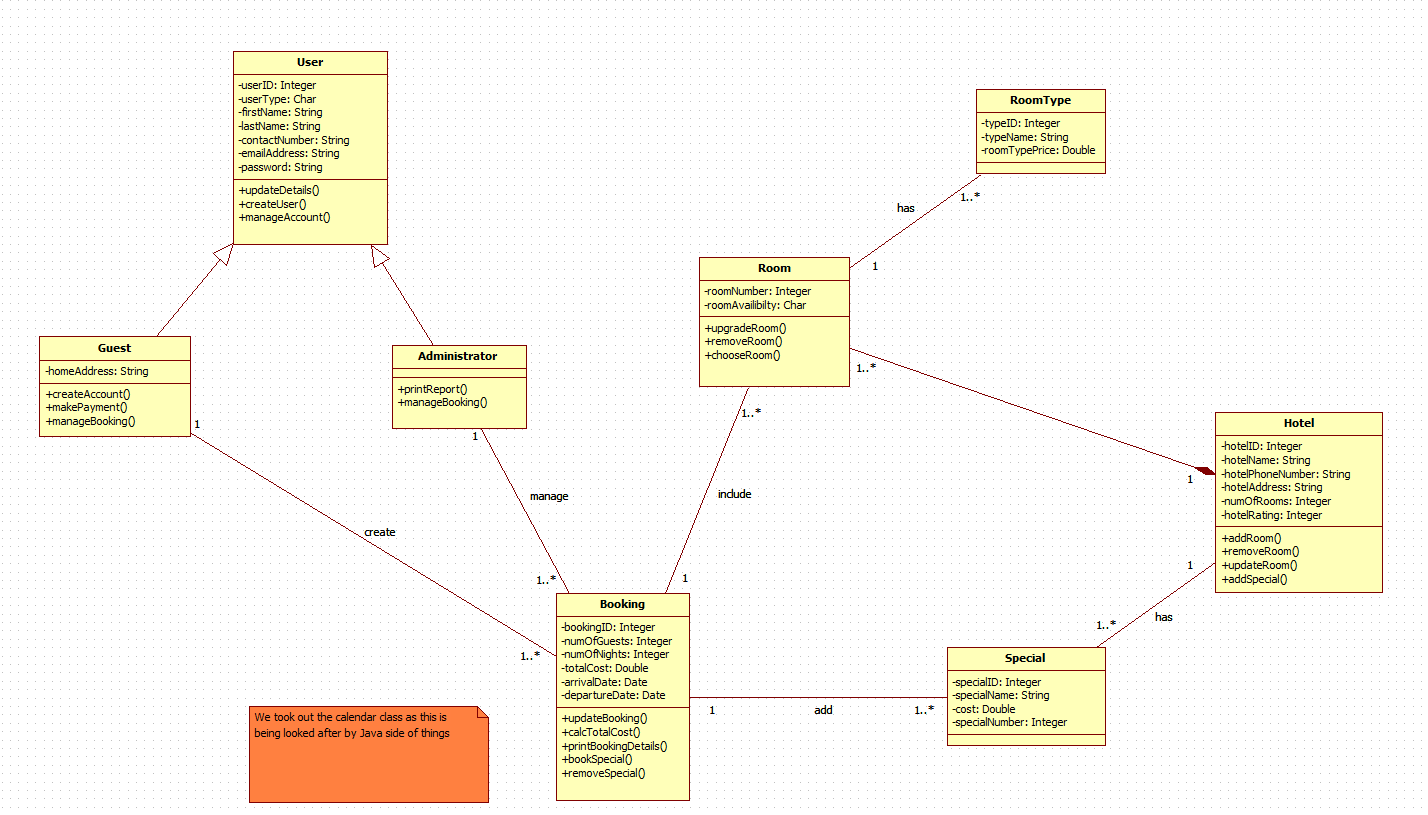
|  |  |
| --- | --- |
| **Manage Booking** | |
| Use Case: | Manage Booking |
| Actor (s): | Administrator |
| Goal: | The goal is for an administrator to manage the collection of bookings made by the guests |
| Overview: | Once the administrator has logged into the system they can view the bookings made by guests and has the ability to remove bookings or change a user’s room to another room for whatever reason |
| Successful Scenario: | Step 1 Administrator enters their login credentials |
|  | Step 2 The system verifies the details entered from the database and the administrator is logged into the system |
| Step 3 The administrator selects the ‘manage booking’ tab on the home screen |
| Step 4 The system retrieves this information from the database |
| Step 5 The administrator is presented with details of guests bookings |
| Step 6 The administrator selects a booking that they intend on removing and selects the remove option |
|  | Step 7 The system prompts the administrator if they wish to proceed with the removal of the booking |
|  | Step 8 The administrator selects ok and the database updates so that this room can be made available for selection again when other guests choose bookings |
| Alternative Scenario (s) | Step 6  A room has a bad water leak and the administrator wants to move a guests booking to another room. The administrator simply selects the guests booking and selects the update tab. The administrator will be presented with a new window that will allow him make changes to a guests booking. Once the changes have been made the administrator selects the save changes tab on the current window and the changes are save to the database |

|  |  |
| --- | --- |
| **Print Report** | |
| Use Case: | Print Report |
| Actor (s): | Administrator |
| Goal: | The goal is for an administrator to be able to print a report regarding they type of rooms booked in a certain month for instance. |
| Overview: | Having logged into the system the administrator should see an option allowing them view reports regarding different aspects of the system for example, the types of rooms booked in a certain month |
| Successful Scenario: | Step 1 Administrator logs into the system by entering their username and password |
|  | Step 2 The system verifies their details from the database |
| Step 3 The administrator selects the reports button |
| Step 4 The system verifies the selection from the database |
| Step 5 The administrator is presented with a list of reports |
| Step 6 The administrator selects the report he/she wishes to print |
| Step 7 The system retrieves the data from the database |
| Step 8 The administrator receives a printed copy of the report |
| Alternative Scenario (s) | Step 2  Administrator enters incorrect password or username. Administrator is prompted to try again |
|  | Step 3  If the administrator enters the details incorrectly a further 2 times, the account is disabled until a different administrator enables it. This is due to the access privileges an administrator account has over the reservation system. |

|  |  |
| --- | --- |
| **Remove a Room** | |
| Use Case: | Remove a room |
| Actor (s): | Administrator |
| Goal: | The goal is for an administrator to remove a room from the collection of rooms in the database |
| Overview: | Having logged into the system the administrator should see an option prompting them to remove a room if necessary. If selected a checkbox will be seen beside each room. Once the administrator has selected their room/s to remove the will need to confirm this removal by selecting confirm |
| Successful Scenario: | Step 1 Administrator logs into the system by entering their username and password |
|  | Step 2 The system verifies their details |
| Step 3 The administrator selects the ‘remove room’ button |
| Step 4 The administrator is presented with a list of rooms |
| Step 5 The administrator selects the room he wishes to remove and selects confirm |
| Step 6 The system confirms this and updates the database |
| Step 7 The administrator receives confirmation via a pop up screen |
| Alternative Scenario (s) | Step 6  If the administrator selects to remove a room which is currently occupied, a message will appear notifying the administrator of this situation |
|  | Step 7  The system rejects the remove room request, and returns the administrator to the list of rooms. |

# 5 Class Diagram Model – DM, RK

## 5.1 Class Diagram



***Figure - 3***

# 6 Document Key Processes – TM, RK, DM

## 6.1 Add a Room

// Administrator logs on with their unique staff ID number and password

Begin

login is verified

if verified

administrator selects add room option

window is loaded and administrator enters room details

add room button is pressed

data is validated

if valid

room is added to the database // room is now available to the user to reserve

display room added dialog

return to main administrator screen

if invalid

display warning message with room details displayed

if room rate is below min

if room floor does not exist

if room type does not exist

if room number is already in use

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

## 6.2 Print report

Begin

login is verified

if verified

from the main screen the administrator selects the report button

various report options are displayed

administrator selects a report option

the system runs the necessary queries on the database

result is returned

administrator can choose to print report

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

## 6.3 Remove a Room

// Administrator logs on with their unique staff ID number and password

Begin

login is verified

if verified

administrator selects remove room option

window is loaded and administrator enters room details

remove room button is pressed

data is validated

if valid

room is removed from the database // room is now not available to the guest to reserve

display room removed dialog

return to main administrator screen

if invalid

display warning message with room details displayed

if room rate is below min

if room floor does not exist / if room type does not exist

if room number is already in use

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

## 6.4 Add Special

// Administrator logs on with their unique staff ID number and password

Begin

login is verified

if verified

administrator selects add special option

window is loaded and administrator enters special details

add special button is pressed

data is validated

if valid

special is added to the database

new Special is now added to the specials list when user is booking

// special is now available to the user to reserve

display special added dialog

return to main administrator screen

if invalid

display warning message with special details displayed

if incorrect values entered into specific fields

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

## 6.5 Manage Booking

//User logs on with their unique user ID number and password

Begin

login is verified

if verified

user selects manage booking tab

window is loaded and user enters booking details

view booking button is displayed

booking button is pressed

data is validated

if valid

display booking details

show buttons update, delete, or go back

if update is pressed

display booking info window

user can edit relevant fields

display close, save changes buttons

if save changes is pressed

validate new booking info

if valid

update booking

return to the booking info window

if invalid

display warning message and highlight relevant fields

if room rate is below min

if room floor does not exist

if room type does not exist

if room number is already in use

return to booking info window

if close is pressed

exit booking window

if delete booking is pressed

display warning message are you sure you wish to delete ` this booking

prompt user yes or no

if yes

delete booking

rooms are made available again in the database

display confirmation window

return to manage booking window

if no

return to manage booking window

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

## 6.6 Check Availability

Begin

guest is presented with the start up screen

if guest is just a browser

guest enters the room they wish to book along with the their chosen dates

system checks the database to confirm availability

if room available

guest is notified of the availability of this room

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

guest continues to browse or exits

if guest has an account

guest enters their username and password

system verifies login details

if login successful

guest selects the make a booking tab

guest enters the room they wish to have along with the dates they wish to stay

system checks the database to confirm availability

if room available

guest is notified of the room’s availability

guest can proceed with booking this room

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

if login unsuccessful

guest is presented with a message telling them their login details are incorrect

End

## 6.7 Cancel booking

//guest logs on with their unique user ID number and password

Begin

login is verified by the system

if login is successful

guest is brought to the main window and chooses manage booking tab

the next window is loaded and the guest chooses the cancel booking option

the guest selects the booking they wish to cancel and proceeds by pressing the remove button

the remove booking data is validated

if valid

display pop up window (“Are you sure you want to cancel booking?”)

guest confirms and presses cancel booking

database updates

guest logs out of system

End

## 6.8 Create a Booking

Begin

User is presented with the start up screen

if user is browsing

user enters the room they wish to stay in along with the dates they wish to stay

system checks the database to confirm availability

if room available

user is notified of the availability of this room

user proceeds with booking this room by selecting book now

user is brought to a window where they are asked to create an account

user enters account information

if account doesn't exist

system adds the account to the database

user account is created

user proceeds to booking the room they had searched for by selecting book now

the system is updated and the booking is stored on the database

if account exists

user is presented with a message telling them that this account already exists

user enters new account information

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

user continues to browse or exits

if user has an account

user enters their username and password

system verifies login details

if login successful

user selects the make a booking tab

user enters the room they wish to have along with the dates they wish to stay

system checks the database to confirm availability

if room available

user is notified of the room’s availability

user proceeds with booking this room by selecting the book now tab

system verifies the booking and stores it to the database

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

user enters in new booking details

system checks the database to confirm availability

if login unsuccessful

user is presented with a message telling them their login details are incorrect

user enters their username and password

system verifies login details

End

## 6.9 Update booking

//guest logs on with their unique user ID number and password

Begin

login is verified by the system

if login is successful

guest is brought to the main window and they choose manage booking

the next window is loaded and the guest chooses the update booking option

the guest selects the booking they wish to update

the guest then needs to select a date i.e. before or after the day they already have booked to see if availably to stay two nights

if available

system will confirm and tell the guest

the guest can then confirm this updated booking and the system will update the database

if not available

the system will suggest to the guest to pick another room or another date

guest logs out of system

End

Part Two

# *STANDARDS FOR DESIGN SPECIFICATION*

# 7 Introduction

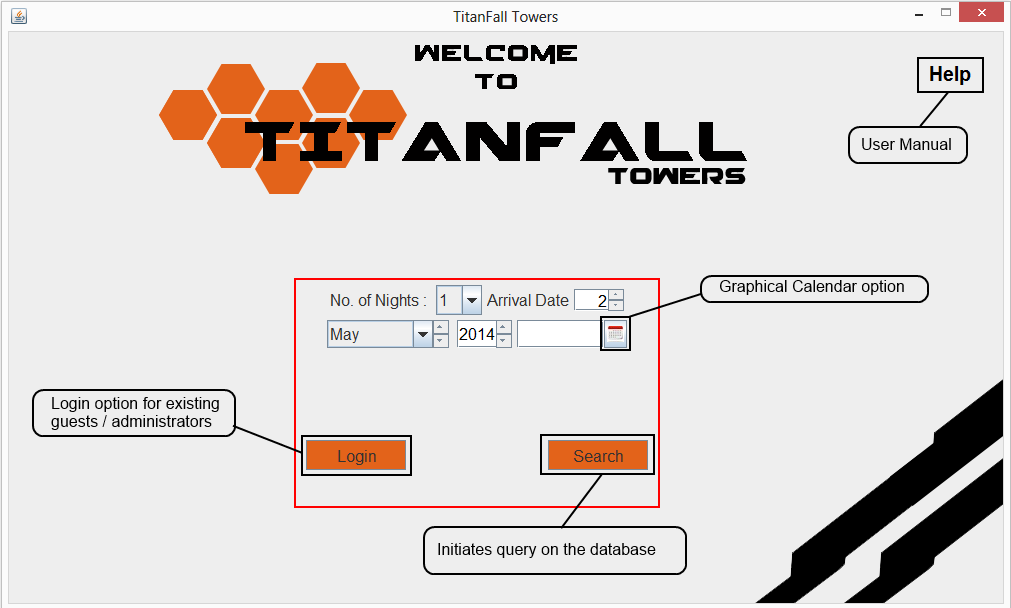
While using our results from the User Requirements Specification phase of the project, the design specifications have been drawn up accordingly. These requirements gave a framework of how the final result should function, what should be included/excluded etc. The design specifications required analysis for each screen in detail, with features such as the layout of each screen, what functions would each screen perform, and how the guest/administrator will interact with the system.

Use cases, Class diagrams and use case descriptions were all used to create both the screen design and the database design. Using these tools as part of our analysis made the process of creating tables and Entity-Relationship diagrams far more efficient.

In the following sections, a multitude of forms and input screens are displayed, showing the basic layout/features of each screen. Pseudo-code for each screen is also being included, to show the background workings behind each GUI in basic terms complete with an Entity Relationship Diagram to give an idea how the front end will correspond with the back end database.

# 8 Input Design RK, ML, TM, DM

## 8.1 Availability screen / Start Screen

******

***Figure - 4***

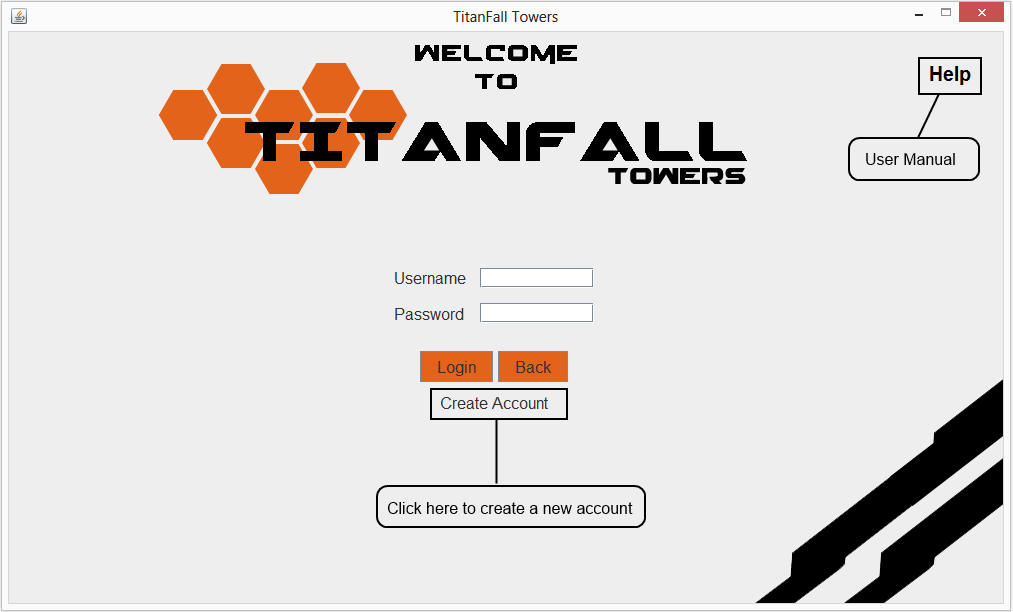
This is the first screen presented to every user of the system. This screen gives the ability to search for a room based on the user’s criteria, while also offering existing users to log in. Administrators can also use the same login screen as guests. This screen contains drop down menus for the number of nights, along with the date in drop-down form. Also included is a graphical calendar, which will open a calendar on the click of a mouse.

The design here is for the main functionality of the screen. This screen will be somewhat re-used through the system, much like the login screen. Guests will have the option to make a booking after logging in, where they will use the same layout to do so.

The search button will initiate the query on the database, with the parameters chosen by the guest. The results will be returned in a new screen, where the guest then confirms the booking and creates an account/ logs in.

The help button when click takes the user to the user manual via a website.

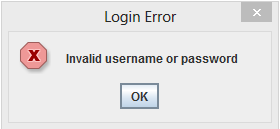
## 8.2 Login Screen

****

***Figure – 5***

This screen details how an existing user of the system would log in to the system. They enter their username and password which is disguised as a security feature. This data is then verified when the login button is pressed. If the login attempt should fail to authenticate the user will see a dialog box detailing where the information that they have provided has been incorrect.

The help button when click takes the user to the user manual via a website.

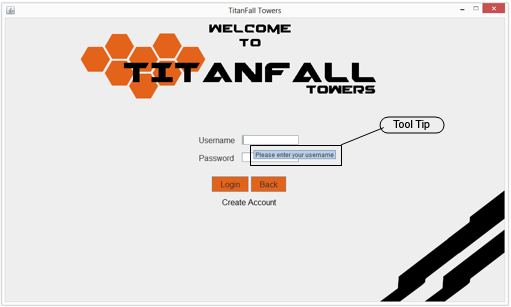


***Figure – 6***

Tooltips will be included in many of the screens for the system. We decided on including these to

help a new user navigate through the system as its widely used in a lot of programs such as Microsoft Word and Internet Explorer and by replicating this negate the users need to constantly refer to a long detailed user manual as this will put prospective users including administrators off using the system in the long term.

An example of a tooltip for this form would be when a guest hovers over the login button, a small box would become visible, detailing what the button does. For this login form, we included a clickable JLabel, “Create account” for new users of the system. If a guest clicks this, they will be redirected to the Create Account form to make a new account.



***Figure – 7***

This login form will be one of the main forms for the system, as the functions behind it must validate the user’s credentials. The form is also a pivotal point in the system due to the fact that an administrator and a guest will have different access privileges. This form must then differentiate between the two types of users, which will then display the correct screens for each type of user. This screen can be accessed from a number of different locations in the system, to allow users to log in at any stage if they are browsing when logged out.

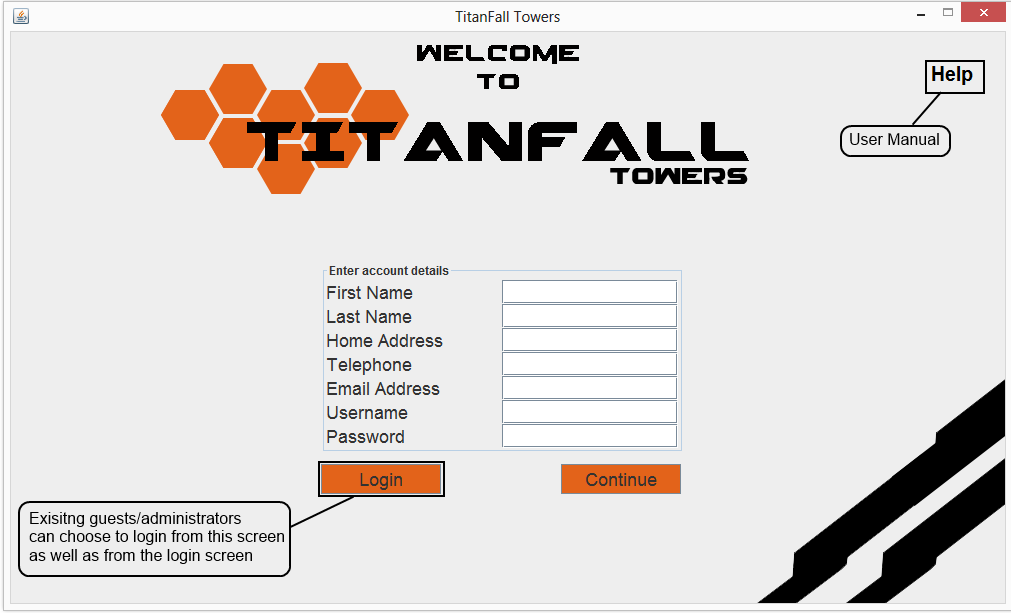
When creating a new account, the guest will be asked to create a username and password for that account. When they are creating a password, the guest will be entering the data into a password field, which masks the password from being plaintext (e.g. password = ⦁⦁⦁⦁⦁⦁⦁⦁) which could result in an accidental password. Caps lock may be active, or it could misspelled. For this reason, the guest would enter the password twice to confirm it. If the two values entered do not match, this error message would appear.

Althoughit would be easier to keep the password in plaintext form, someone could easily see the value being entered on the real guest’s monitor and then could easily gain access to their account.

Because our system will allow existing guests / administrators to log in at many different locations, this error screen will be associated to the login screen only. Once the guest has logged in, they would not be able to encounter this error.

If the username or password entered by the guest is incorrect, this output screen will be shown as a notification of the error. The output is not specific with which value is incorrect, this is to reduce the chances of someone gaining access to an account by discovering a username and then only having the password to crack.

## 8.3 User Create Account Screen

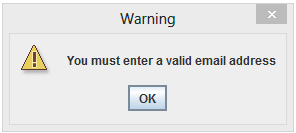
****

***Figure - 8***

In this form, a user who wants to create an account can do so by entering in their information and pressing continue where they are added to our database and can begin to do more things as an existing user. Once the user has created their account they are brought to their home screen where they will have the ability to do more things. The login button brings an existing user to the login screen where they can then enter their login details to gain access to the system. This login feature is accessible on every screen while browsing for a room, to allow existing users to log in at any time.

This form will take in all of the details for the guest, which are the main attributes for the guest user in the database. Tooltips will also be present in this form, giving a brief description for entries such as Username, email address and the password.

Input validation will be applied to this form, specifically to the email value and the username/password entered. The email address will require a “@” symbol, to validate that it is an email address and the phone number will require numbers.



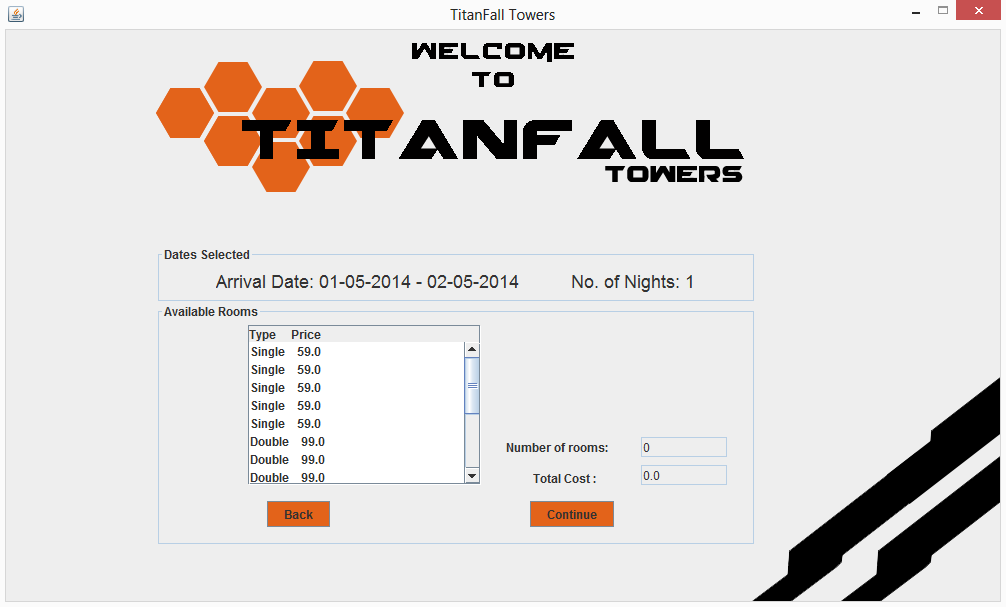
***Figure - 9***



***Figure - 10***

The username entered by the guest will be checked against the list of existing users to ensure there are no errors in the database. The password entered by the user will not be visible on the database should our system be hacked for security reasons as we have implemented a hashing function

## 8.4 Browser Search Screen

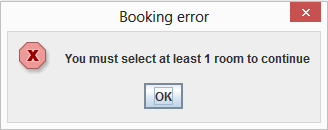
****

***Figure - 11***

This screen incorporates the concept we are looking for when a user has entered the dates they wish to stay. The dates and number of nights they are planning on staying are presented to them in the dates selected section of the screen.

In the middle of the screen will be a list of available rooms on the dates they have entered. The user can then select the room they wish to book by clicking on the specific room from the list and the number of rooms and total cost is also displayed on this screen. If the user is logged in then credit card details will be needed from the user. If the user has not logged in then they are brought to the log in screen, where they can log in or create an account.

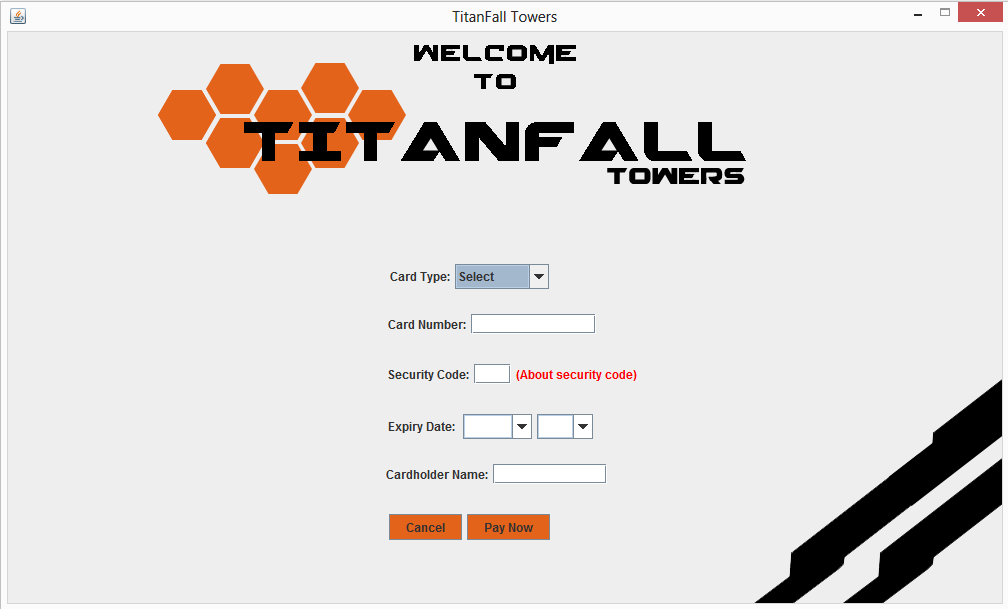
As explained above pressing continue will either require the user to enter their credit card details or bring the user to the log in screen. The back button simply brings the user back to the make a booking tab if they are logged in or back to the start screen where they can enter in new dates.



***Figure – 12***

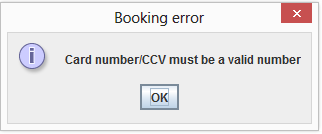
If however the user presses continue and forgets to select a room from the available rooms a pop up dialog box will remind them to select a room

## 8.5 Credit Card Screen



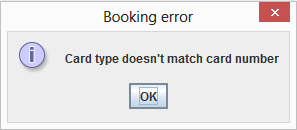
***Figure - 13***

The Credit Card input form requires the user to select their card type from a list of options and their card number. Their card number must be a legitimate card number otherwise an error will be presented to the user



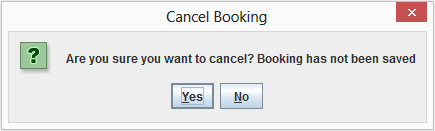
***Figure - 14***

The Luhn algorithm will be used to check the validity of the credit card number.



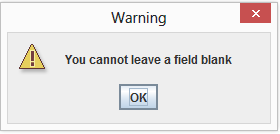
***Figure - 15***

The continue button confirms the user’s booking and stores it in the database as long as their credit card information is correct.



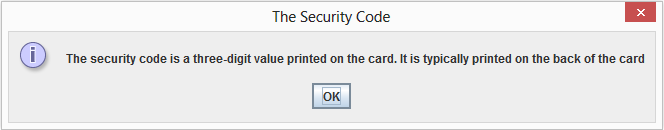
***Figure – 16***

The back button brings the user back to the availability screen where they can select a different room if they so wish however the following pop up window will appear before the user can continue.



***Figure – 17***

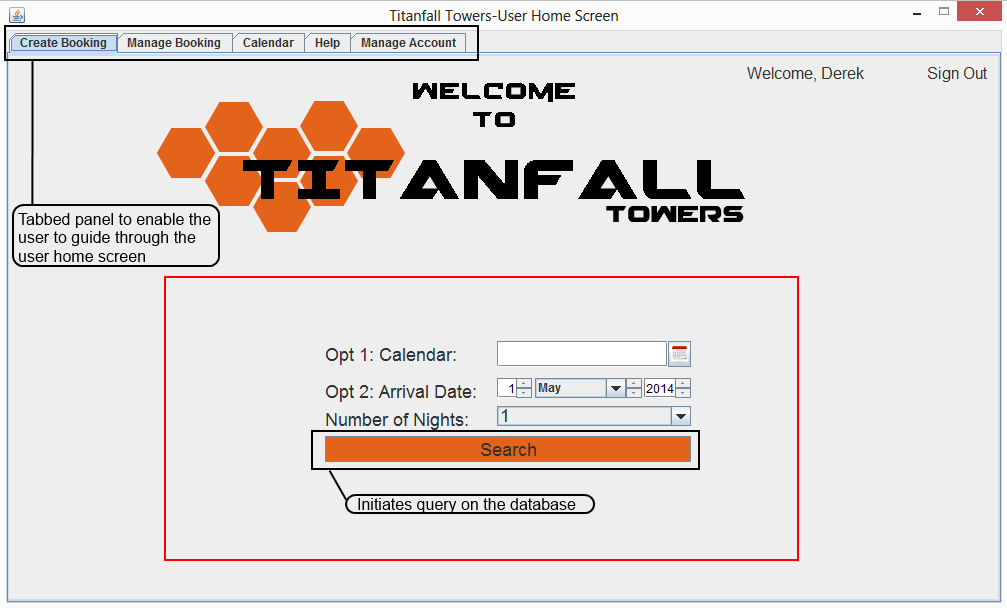
The above window appears if any text fields are left blank by a user as a handy reminder to the user.



***Figure - 18***

The above dialog window appears if the user clicks the “About security code” option on the credit card screen

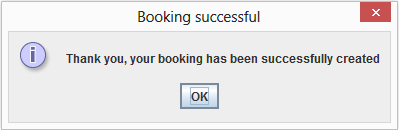
## 8.6 User Home Screen – Create Booking Tab

******

***Figure - 19***

This screen is one of the tabbed screens available after logging into the system. It’s very similar to the start screen, as it offers guests the ability to search for a room to book. The guest is again presented with drop down menus, and the option to view a graphical calendar.

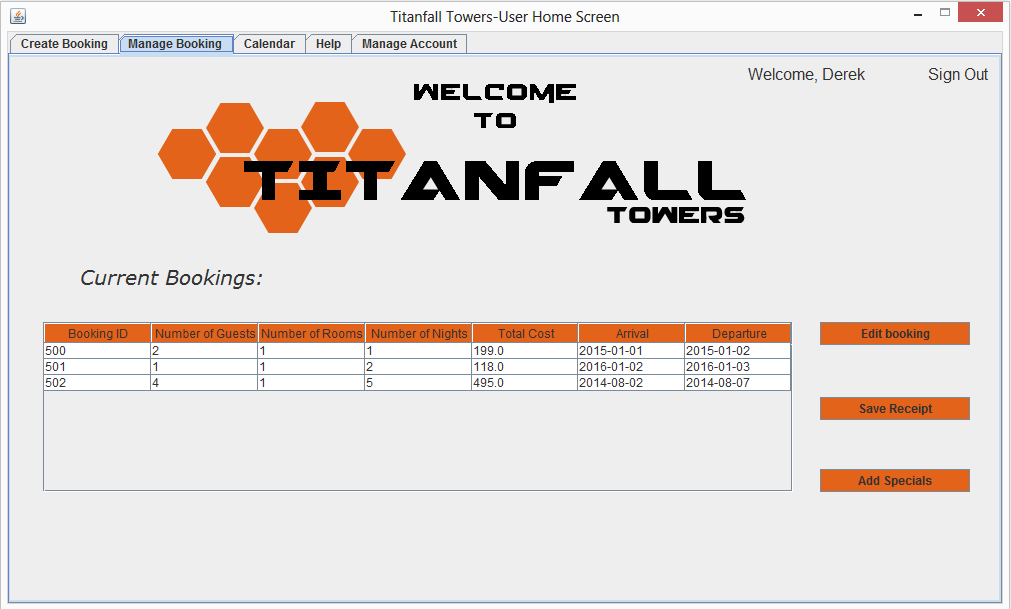
Shown in this screen are the other tabs, such as Manage Booking, Calendar, Help and Manage account. which display their specific contents when clicked. These tabbed panels reduce the amount of times a new screen is loaded, however each panel contains their specific functions etc. Tooltips will be included on this screen for the multiple tabs available at the top of the screen, giving a brief description of each tab.



***Figure - 20***

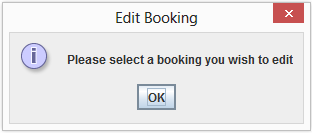
Once the guest has chosen the date of arrival, along with other details, they will then have to log in or create an account. Once this has been confirmed by the guest, this confirmation output screen is displayed. This small notification will just act as a confirmation for the guest that it has been successfully booked. This message is also an information message, whereas the previous outputs were warning messages.

## 8.7 User Home Screen - Manage Booking Tab

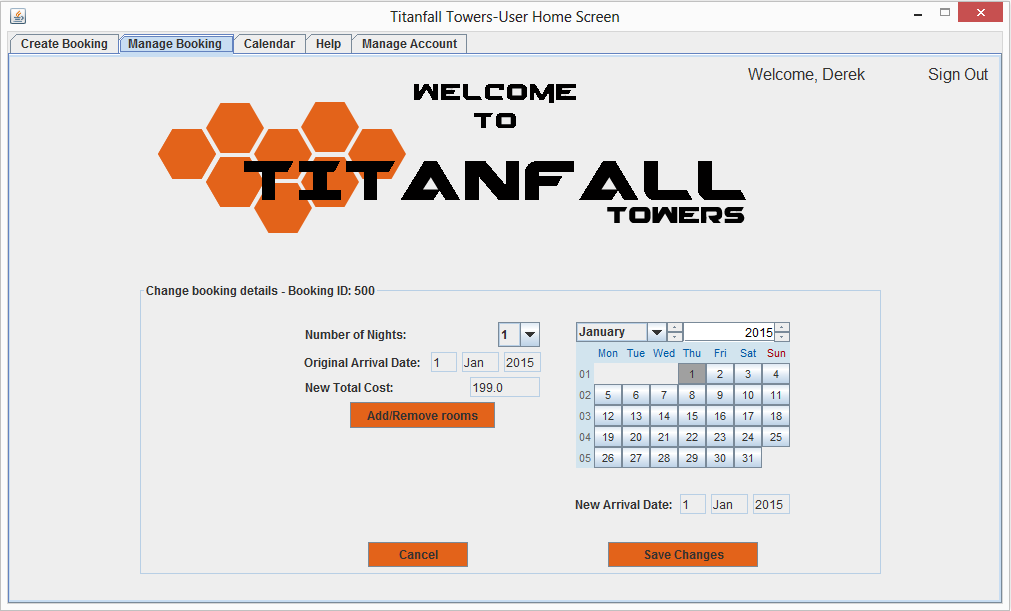
****

***Figure - 21***

This screen shows a list of current bookings for the user logged into the system. It gives the user the option to edit the booking, save a receipt and add specials to the bookings. If you press the edit booking button after selecting a booking from the list you will arrive at the following screen.

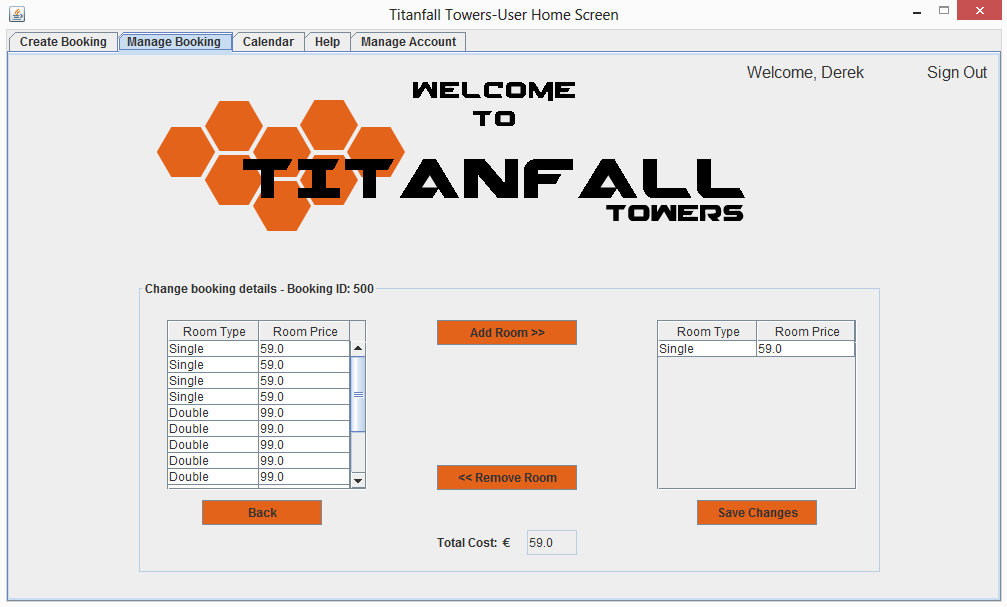


***Figure - 22***



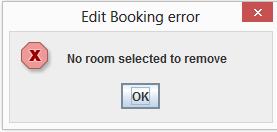
***Figure - 23***

This screen allows the user to change the number of nights to their booking complete with the option to add or remove rooms to this particular booking as per the following screen

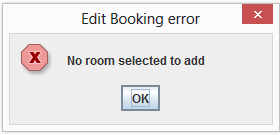


***Figure – 24***

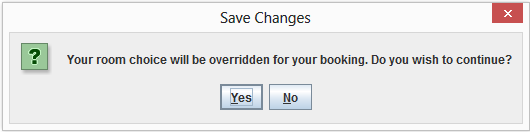
This screen allows the user add or remove rooms from their booking and save changes to their booking. The user chooses from the list on the left and presses the add room button or chooses from the list on the right and presses the remove button. If not rooms are chosen from either list the following error windows pop up to remind the user.



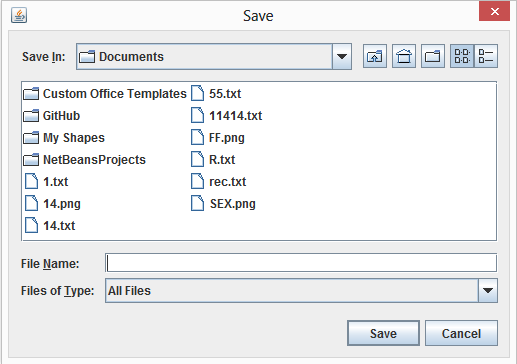
***Figure – 25***



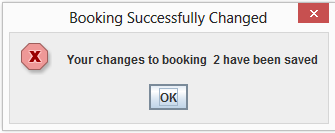
***Figure – 26***



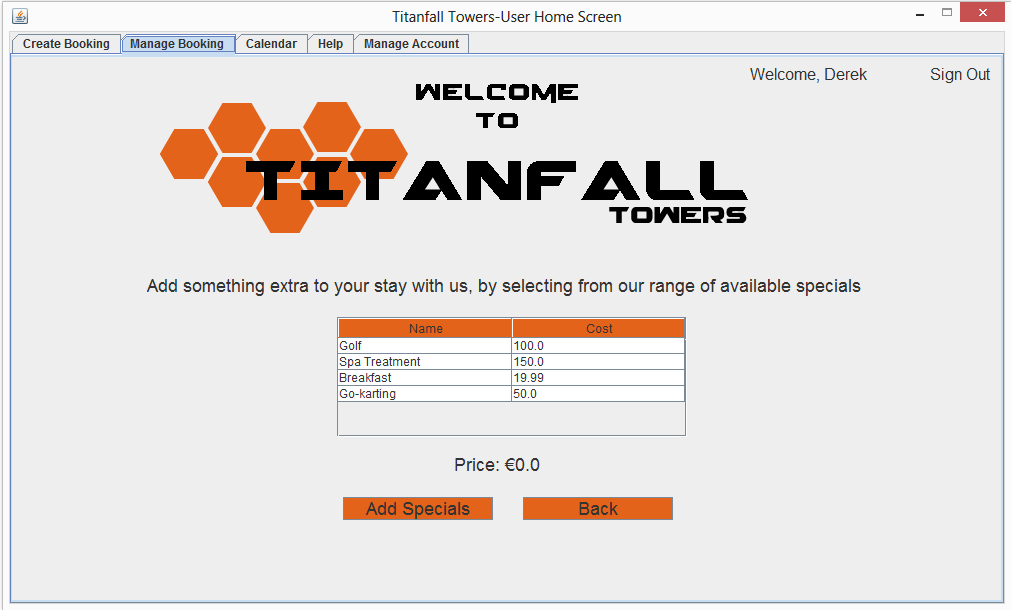
***Figure – 27***



***Figure – 28***

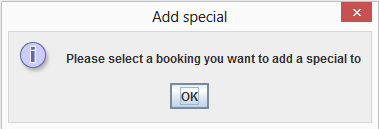


***Figure – 29***

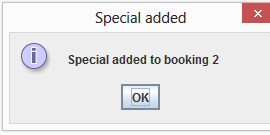


***Figure - 30***

This screen allows for the user to add specials to their booking by selecting from the choices available. As a special is chosen from the list, a price is presented to the user and this price is separate from their booking. Once the user is happy with the specials they have added the user selects the add specials button and the user is then brought to the credit card form where they will be required to enter in their credit card details. On completion of that, the specials selected are added to our database under the booking id of the user’s booking.

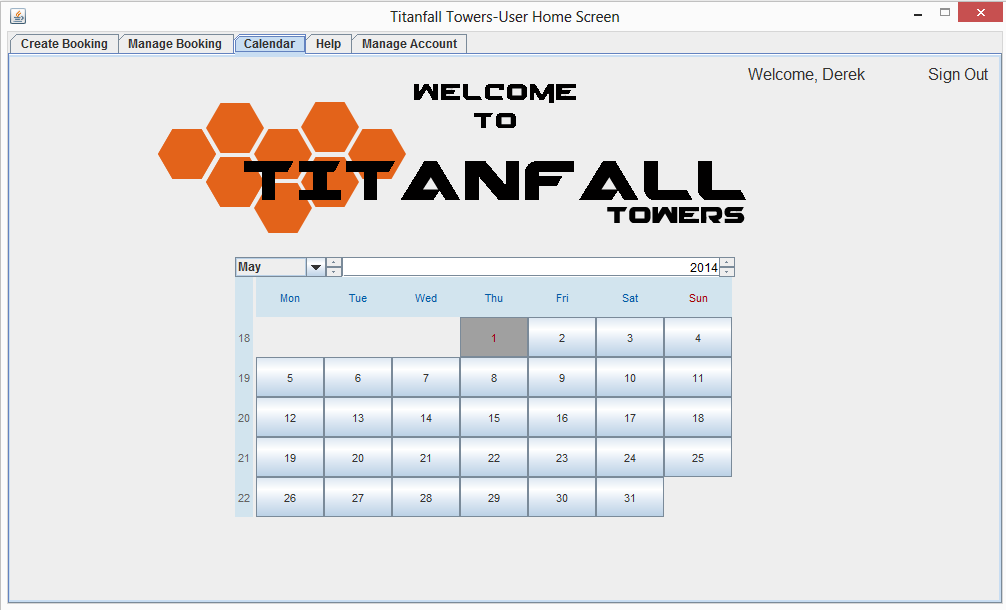


***Figure –*** ***31***



***Figure – 32***

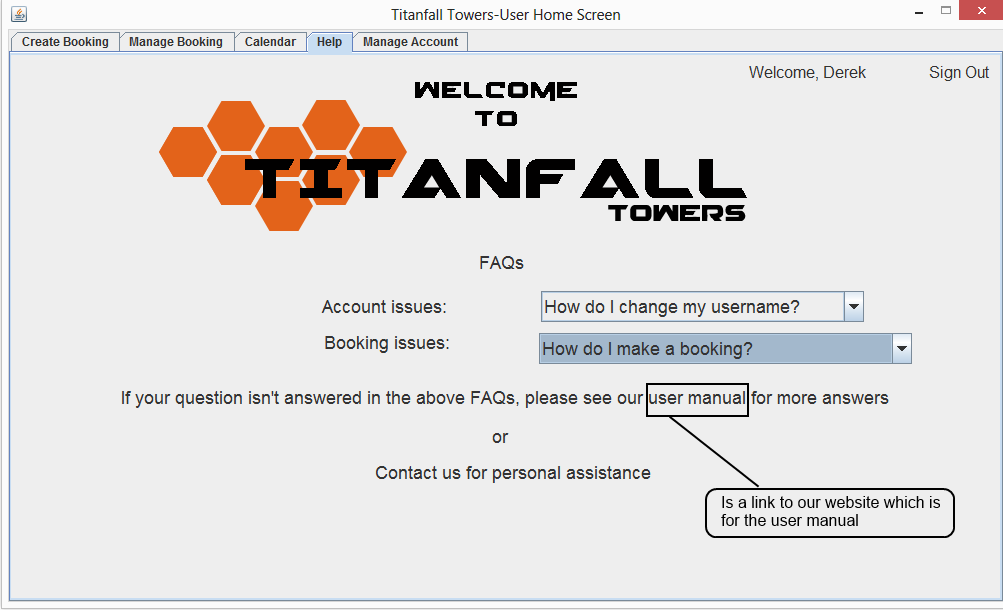
## 8.8 User Home Screen - Calendar Screen

****

***Figure - 33***

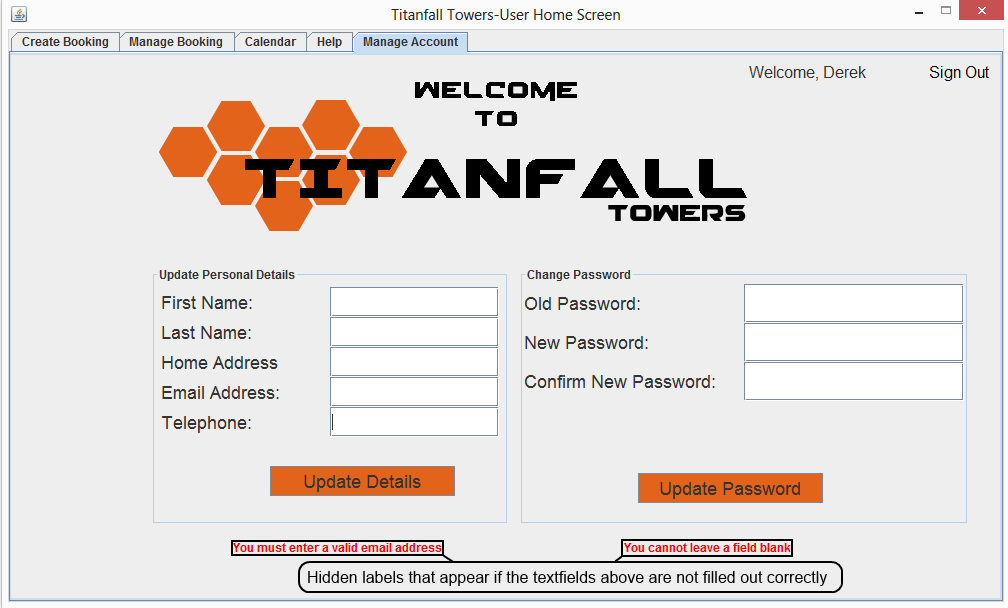
This particular screen just displays a calendar. We had intended to display upcoming events of the hotel on particular dates or any special rates, however we did not have enough time to implement it.

## 8.9 User Home Screen – Help Tab



***Figure -*** ***34***

## 8.10 User Home Screen - Manage Account Tab

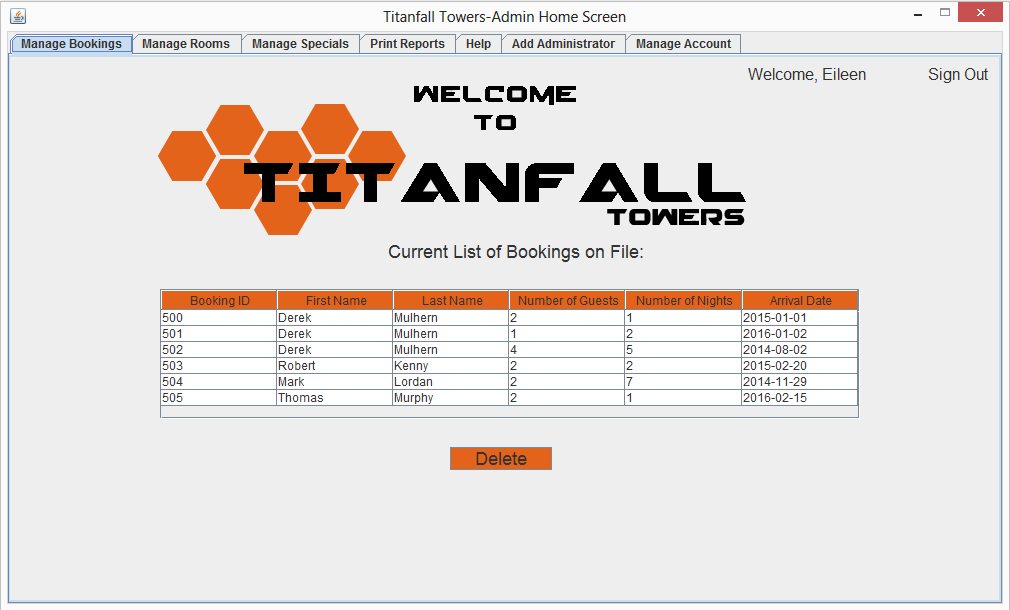


***Figure – 35***

The manage account screen is accessible to all users of the system. From this screen, a guest has the ability to edit their personal information, such as their name, email address, and their telephone number. These details would have been initialised when the user created their account, but they may need to edit some of these details at some point. This will keep the hotel guest records up to date.

Users may also update their password using the change password form on this screen. The old password must be entered when changing it, which will help prevent any malicious attacks on a user’s account.

## 8.11 Administrator Home Screen - Manage Booking Tab

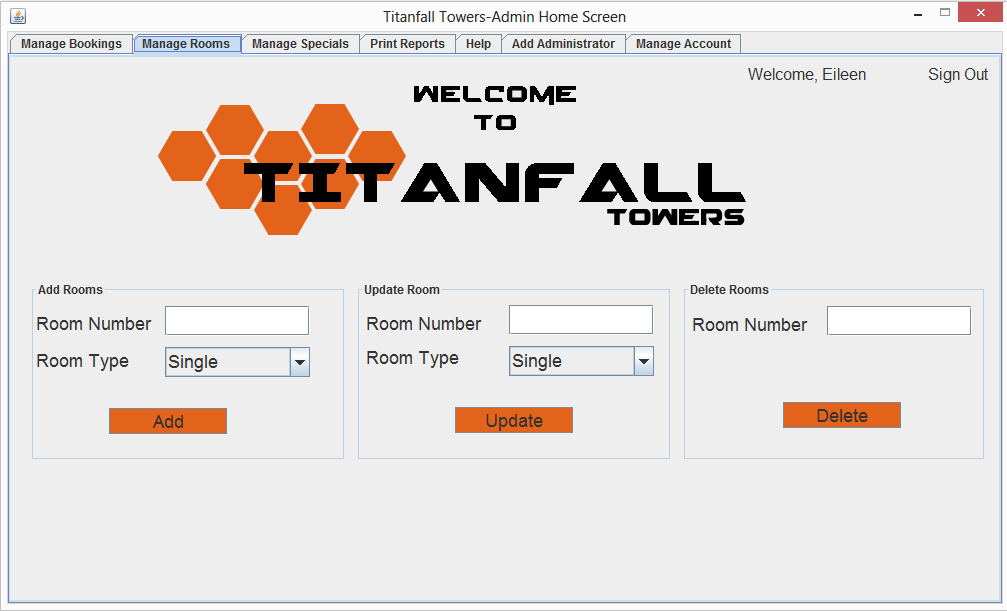


***Figure - 36***

This screen is the administrator home screen. It is very similar to the user home screen as in it is also a tabbed screen. Shown in this screen are the other tabs such as Manage Booking, Manage Rooms, Manage Specials, Print Reports, Help, Add Administrator and Manage Account.

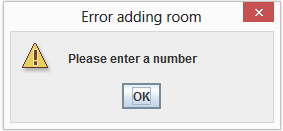
The administrator is presented with a list of the bookings made within the system and has the option to remove them from the database by pressing the delete button.

## 8.12 Administrator Home Screen - Manage Rooms Tabs

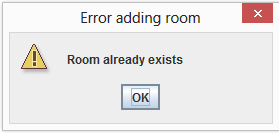


***Figure - 37***

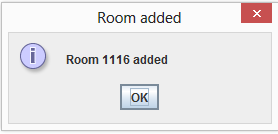
This screen allows an administrator to add, delete and update rooms in the system. The add option asks the administrator the type of the room and the room number. Having filled in this information correctly the administrator simply has to select the Add button and the room’s details are added to our database. The administrator will be presented with an error pop up screens if invalid details are entered into the room number text field however the administrator will be notified via a pop up screen notifying that a room has been added to the system.



***Figure – 38***

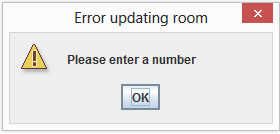


***Figure – 39***

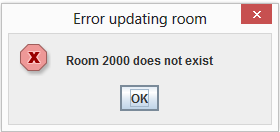


***Figure – 40***

The updating of a room involves the administrator entering in an existing room’s number and selecting a room type. The update button is pressed and the system checks to make sure the room number entered exists and if it does the room is updated according to the type entered. If the room number does not match an existing room then an error message is presented to the administrator.

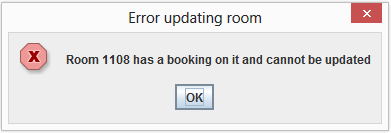


***Figure – 41***

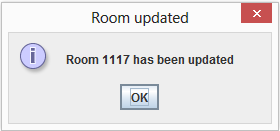


***Figure – 42***

We have also incorporated error checking on a room that has a booking already on the room trying to be updated as per the screen below.



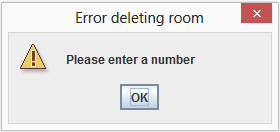
***Figure – 43***



***Figure – 44***

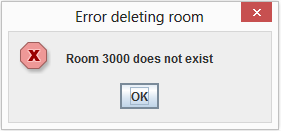
Confirmation that the room has been updated in the system

Deleting a room requires the administrator to enter the room number of an existing room within the database. Having entered the room number correctly the delete button is pressed and the system verifies this room number exists and the room is removed from the database. If however any invalid information regarding the room number is entered the administrator is presented with a various messages as per below.



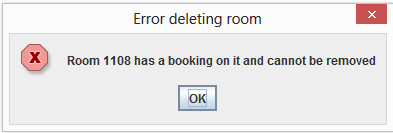
***Figure – 45***

If a room number entered that doesn’t exist the administrator will be presented with the following error message



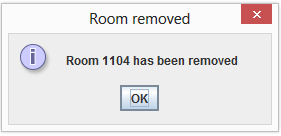
***Figure – 46***

If a room number entered which has a booking on the room then the administrator will be presented with the following error message



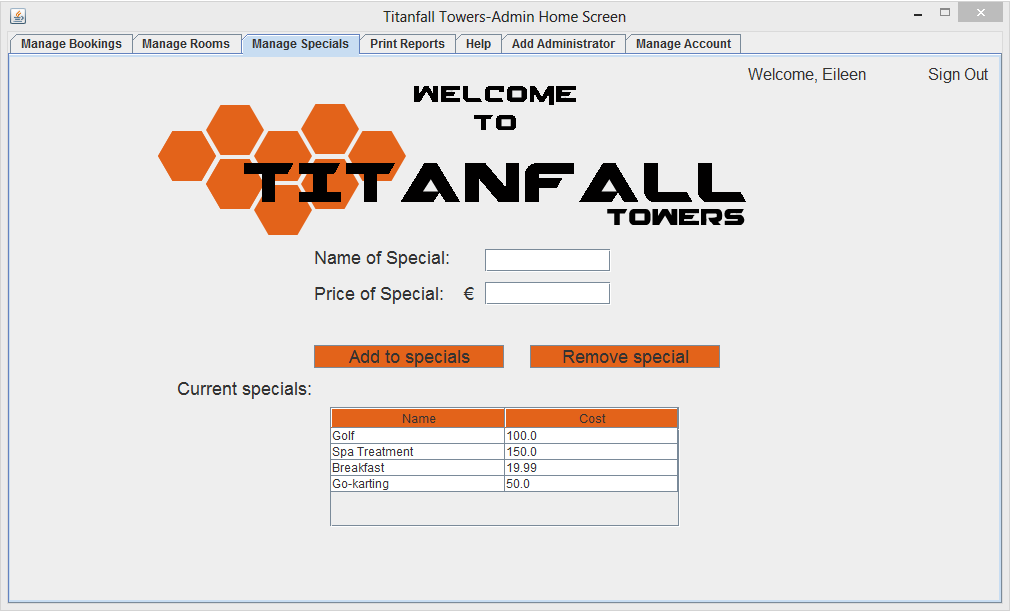
***Figure - 47***

Confirmation that the room has been removed from the system



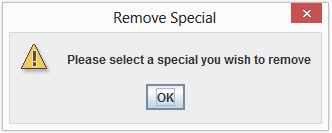
***Figure – 48***

## 8.13 Administrator Home Screen - Manage Special Tab

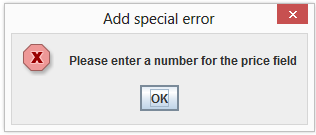


***Figure - 49***

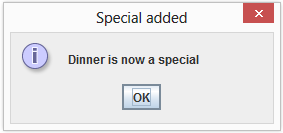
This Add Specials screen is for an administrator only. From this screen, an administrator has the ability to create a new special for guests to add to their booking. The name of the special and price are entered from this screen, which is then added to the list of current specials. Once a special is added, it then becomes an option for guests to choose. An administrator can also chooses to remove a special by pressing the remove special button.



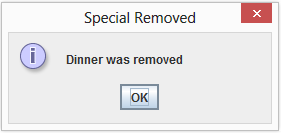
***Figure - 50***



***Figure - 51***

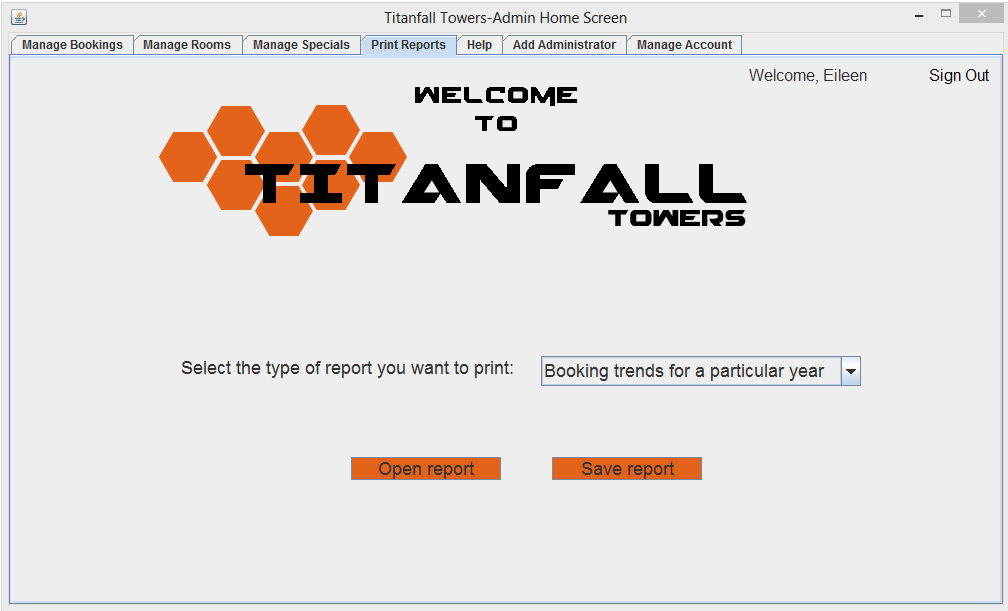


***Figure – 52***



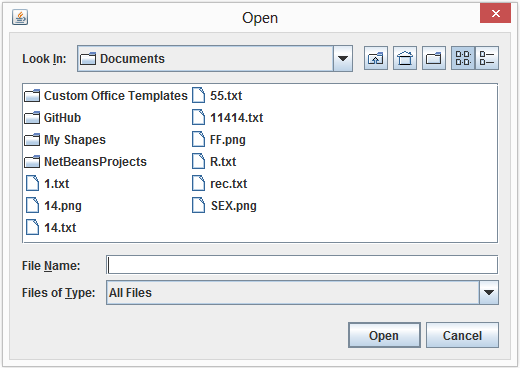
***Figure – 53***

## 8.14 Administrator Home Screen - Print Reports Tab

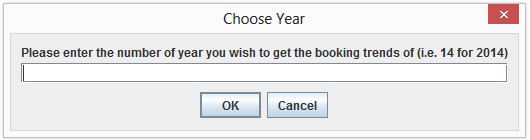


***Figure - 54***

When an administrator is logged in, the option of printing a report is available. The reports are for booking trends for a particular year, specials trends, room split pie chart, yearly booking XY graph and room breakdown report.

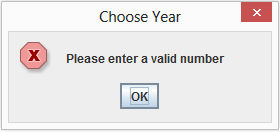


***Figure - 55***



***Figure - 56***

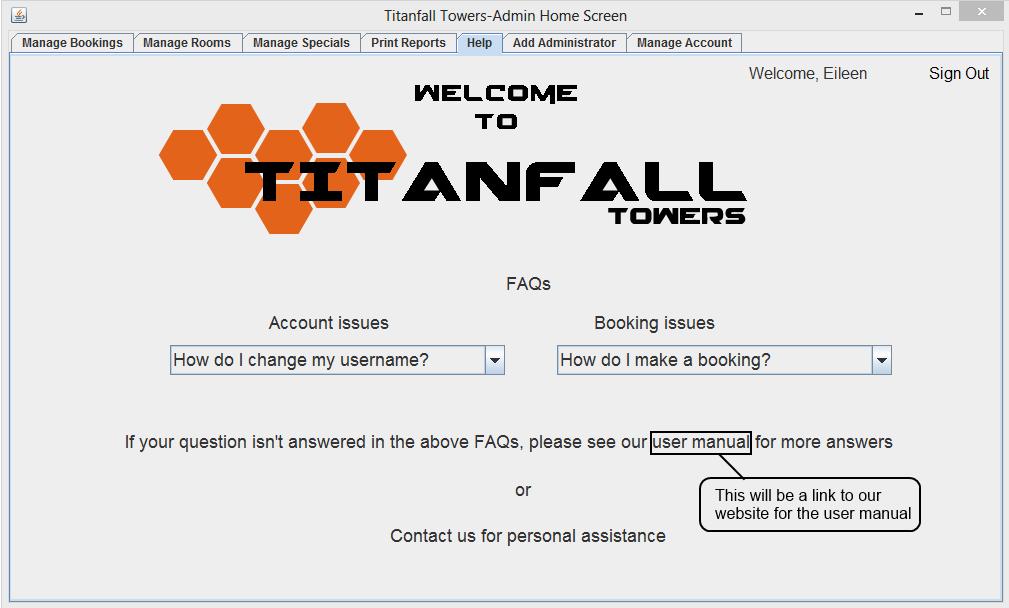
The administrator can save the report to a .txt file, which will be made locally. The administrator can then choose the Open Report button and the administrator can then select to open the report file.



***Figure - 57***

If any wrong data is entered in the choose year option pane asking for specific data the above screen is presented to the user.

## 8.14 Administrator Home Screen - Help Tab



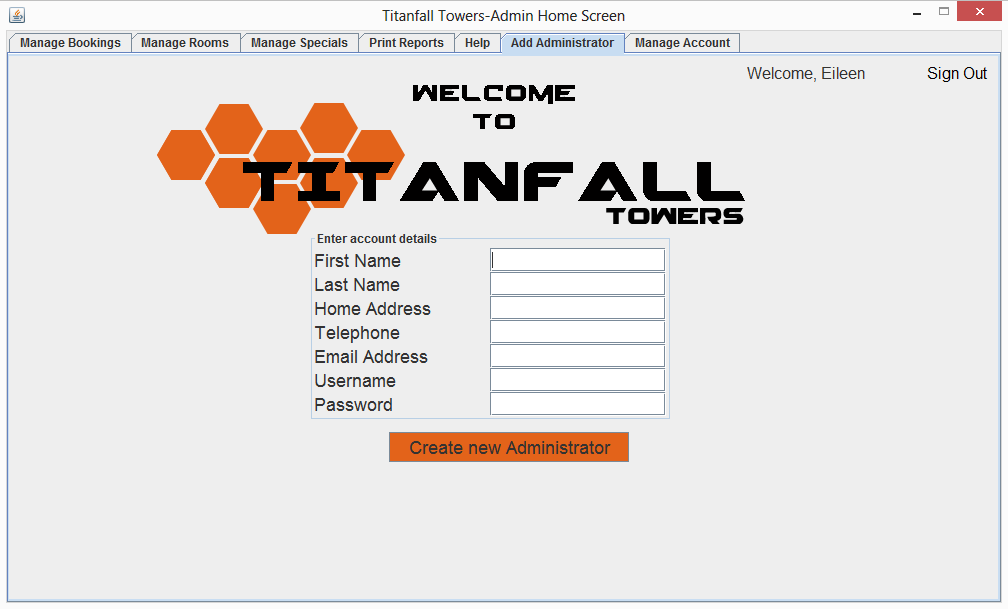
***Figure - 58***

The help screen shown above is part of the administrator side of the system. The help tab itself acts as a launcher for the user manual website that we can use to give a great amount of detail to each aspect. The two drop-down menus have an array of questions that might be asked frequently. When one of these options is chosen, the user manual website will be launched to that specific section, instead of the guest/administrator searching for their query manually.

If the question isn’t answered by these suggested solutions, the user can click on (please see our user manual for more answers) and be directed to the table of contents for the User Manual.

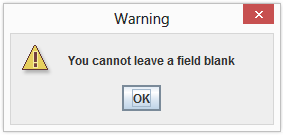
An alternative to using the user manual is to personally contact a member of staff in the hotel, which can be done by clicking the (Contact us for personal assistance) label.

## 8.15 Administrator Home Screen – Add Administrator Tab

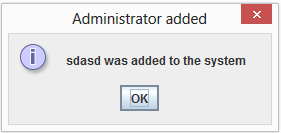


***Figure – 59***

This add administrator screen allows an administrator to add another administrator onto the system. This screen also has error checking as per the other screens such as the warning sign below and also confirms to the administrator that a new administrator has been added.

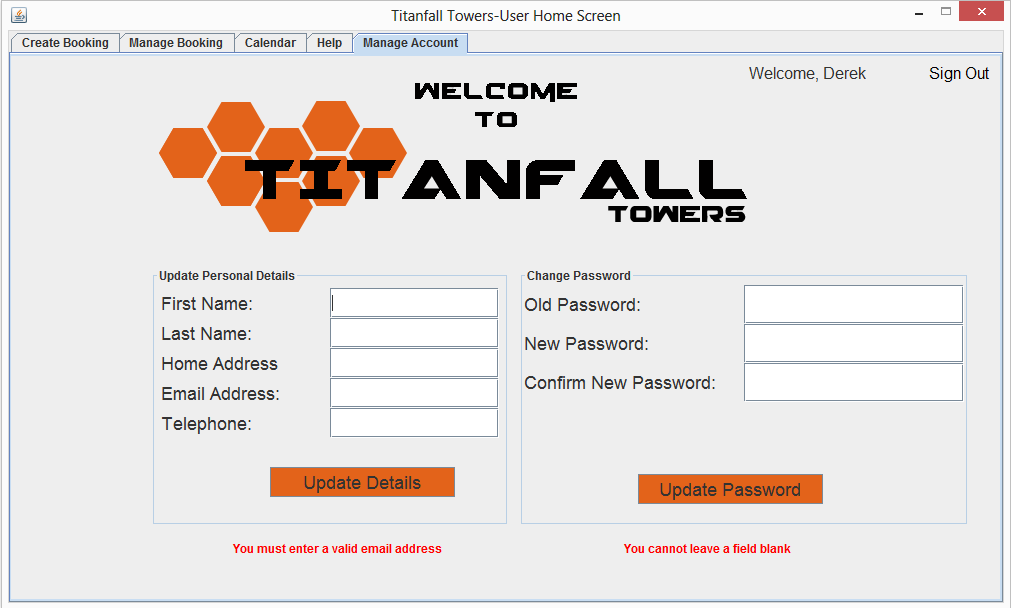


***Figure - 60***



***Figure – 61***

## 8.16 Administrator Home Screen – Manage Account Tab



***Figure – 62***

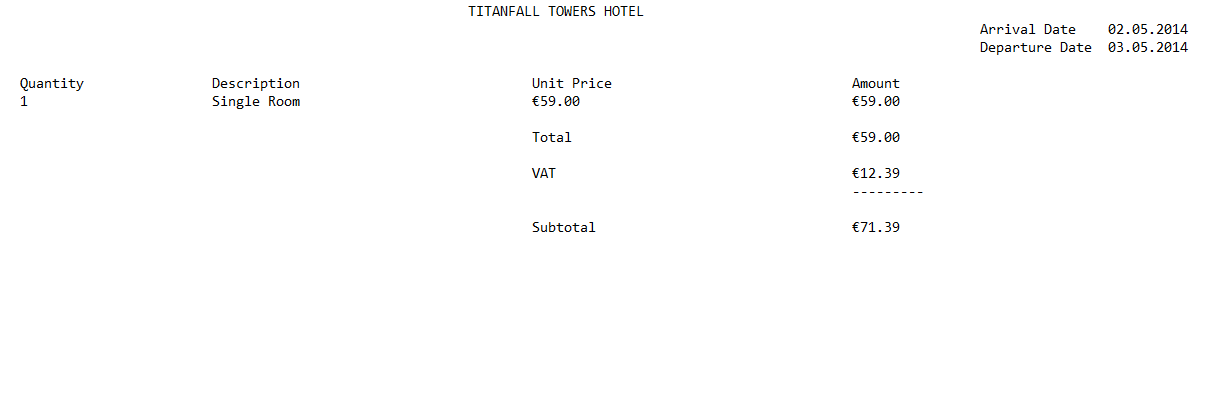
The administrator manage account screen is more or less the same as for a user. From this screen, an administrator has the ability to edit their personal information, such as their name, email address, and their telephone number. These details would have been initialised when the user created their account, but they may need to edit some of these details at some point. This will keep the hotel guest records up to date.

An administrators may also update their password using the change password form on this screen.

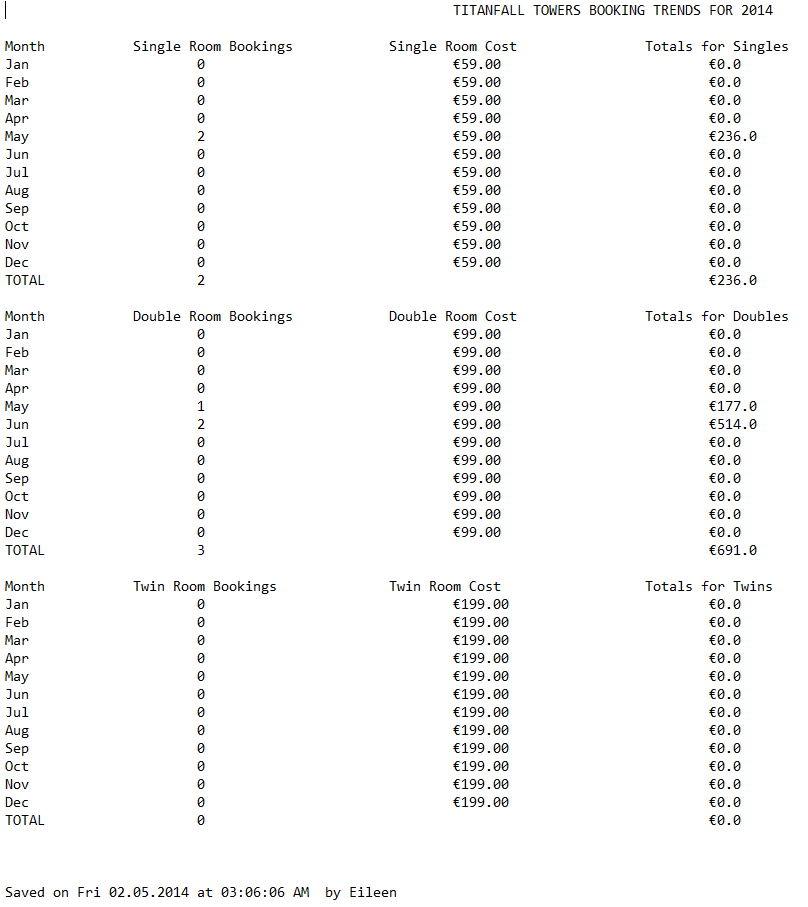
# 9 Output Design RK, ML, TM, DM

## 9.1 Report Layout (s)

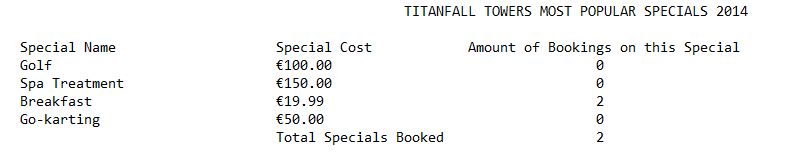
### 9.1.1 Guest Receipt



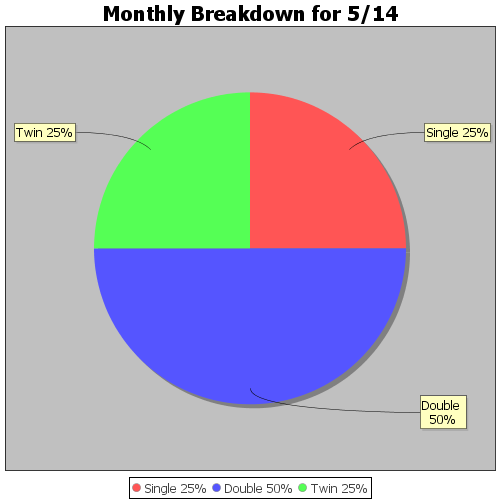
### 9.1.2 Booking Trends



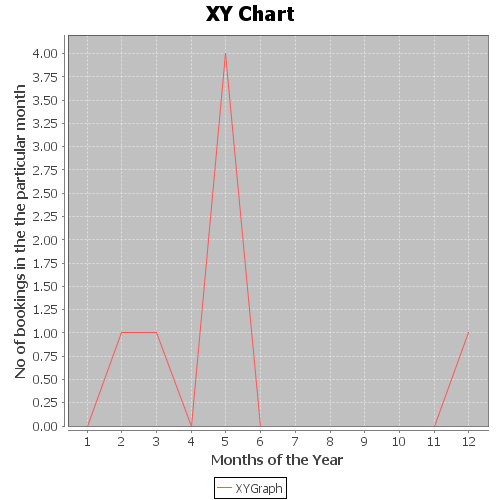
### 9.1.3 Special Trends



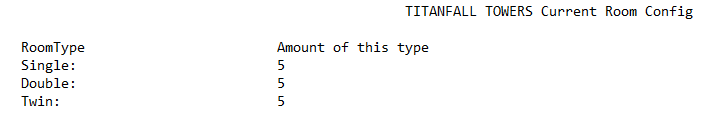
### 9.1.4 Pie Chart for Rooms Booked



### 9.1.5 XY Chart

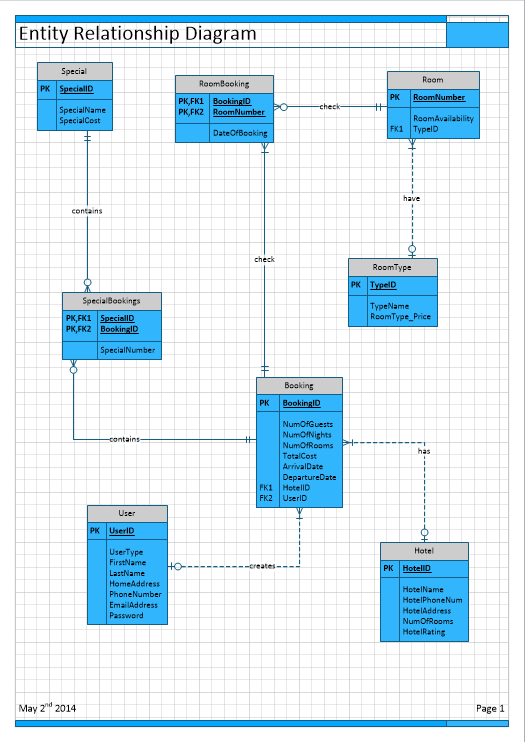


### 9.1.6 Room Breakdown Report



# 10 Database Design RK, ML, TM, DM

## 10.1 Entity Relationship Diagram



***Figure 63***

## 10.2 Table/Record Layouts

10.2.1 Booking Table

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **BookingID (PK)** | NumberOfGuests | NumOfNights | TotalCost | *Arrival Date* | *Departure Date* | *HotelID(FK)* | *UserID(FK)* |

10.2.2 Special Table

|  |  |  |
| --- | --- | --- |
| **SpecialID(PK)** | SpecialName | SpecialCost |

10.2.3 RoomBooking Table

|  |  |  |
| --- | --- | --- |
| ***BookingID(PK/FK)*** | ***RoomNumber(PK/FK)*** | DateOfBooking |

10.2.4 Room Table

|  |  |  |
| --- | --- | --- |
| **RoomNumber(PK)** | RoomAvailibility | Ty*peID(FK)* |

10.2.5 RoomType

|  |  |  |
| --- | --- | --- |
| **TypeID(PK)** | TypeName | RoomType\_Price |

10.2.6 User Table

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **UserID(PK)** | UserType | FirstName | LastName | HomeAddress | PhoneNum | EmailAddress | Password |

10.2.7 Hotel Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **HotelID(PF)** | HotelName | HotelNumber | HotelAdd | NumOfRooms | HotelRating |

10.2.8 SpecialsBookings

|  |  |  |
| --- | --- | --- |
| ***SpecialID(PK/FK)*** | ***BookingID(PK/FK)*** | SpecialNumber |

* **PK – Primary Key**
* **FK – Foreign Key**
* **PK/FK – Composite Key**

## 10.3 Column Data types / 10.4 Primary Keys/ Foreign Keys

#### User Table

Create table users

(

User\_ID varchar2 (50) NOT NULL,

UserType varchar2 (1) CHECK (UserType IN ('G ', 'A ')),

First\_Name varchar2 (50),

Last\_Name varchar2 (50),

Home\_Address varchar2 (50),

Phone\_Number varchar2 (50),

Email\_Address varchar2 (50),

UserPassword varchar2 (50) NOT NULL,

PRIMARY KEY (User\_ID)

);

#### Hotel Table

Create table hotels

(

Hotel\_ID number NOT NULL,

Hotel\_Name varchar2 (50),

Hotel\_PhoneNumber varchar2 (50),

Hotel\_Address varchar2 (50),

NumOfRooms number,

HotelRating number,

PRIMARY KEY (Hotel\_ID)

);

#### Booking Table

Create table bookings

(

Booking\_ID number NOT NULL,

Number\_Of\_Guests number NOT NULL,

Number\_Of\_Nights number NOT NULL,

Total\_Cost number (6, 2),

ArrivalDate date,

DepartureDate date,

Hotel\_ID number,

User\_ID varchar2 (50),

PRIMARY KEY (Booking\_ID),

FOREIGN KEY (User\_ID) REFERENCES users ON DELETE CASCADE,

FOREIGN KEY (Hotel\_ID) REFERENCES hotels ON DELETE CASCADE

);

#### RoomType Table

Create table roomtypes

(

Type\_ID number NOT NULL,

Type\_Name varchar2 (50),

RoomType\_Price number (5, 2),

PRIMARY KEY (Type\_ID)

);

#### Room Table

Create table rooms

(

Room\_Number number NOT NULL,

Room\_Availability char (1) CHECK (Room\_Availability IN ('T ', 'F '),

Type\_ID number,

PRIMARY KEY (Room\_Number),

FOREIGN KEY (Type\_ID) REFERENCES roomtypes ON DELETE CASCADE

);

#### RoomBooking Table

Create table roombookings

(

Room\_Number number NOT NULL,

Booking\_ID number NOT NULL,

DateOfBooking date,

PRIMARY KEY (Room\_Number, Booking\_ID),

FOREIGN KEY (Room\_Number) REFERENCES rooms ON DELETE CASCADE,

FOREIGN KEY (Booking\_ID) REFERENCES bookings ON DELETE CASCADE

);

#### Special Table

Create table specials

(

Special\_ID number NOT NULL,

Special\_Name varchar2 (50),

Special\_Cost number (5, 2),

PRIMARY KEY (Special\_ID)

);

#### SpecialBookings Table

Create table specialsbookings

(

Special\_ID number NOT NULL,

Booking\_ID number NOT NULL,

SpecialNumber number,

PRIMARY KEY (Special\_ID, Booking\_ID),

FOREIGN KEY (Special\_ID) REFERENCES specials ON DELETE CASCADE,

FOREIGN KEY (Booking\_ID) REFERENCES bookings ON DELETE CASCADE

);

# 11 Program Design – Pseudo Code RK, ML, TM, DM

### 11.1 Add a Room

// Administrator logs on with their username and password

Begin

login is verified

if verified

administrator selects add room option

window is loaded and administrator enters room details

add room button is pressed

data is validated

if valid

room is added to the database // room is now available to the user to reserve

display room added dialog

return to main administrator screen

if invalid

display warning message with room details displayed

if room rate is below min

if room floor does not exist

if room type does not exist

if room number is already in use

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

### 11.2 Print report

Begin

login is verified

if verified

from the main screen the administrator selects the report button

various report options are displayed

administrator selects a report option

the system runs the necessary queries on the database

result is returned

administrator can choose to print report

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

### 11.3 Remove a Room

// Administrator logs on with their username and password

Begin

login is verified

if verified

administrator selects remove room option

window is loaded and administrator enters room details

remove room button is pressed

data is validated

if valid

room is removed from the database // room is now not available to the guest to reserve

display room removed dialog

return to main administrator screen

if invalid

display warning message with room details displayed

if room rate is below min

if room floor does not exist / if room type does not exist

if room number is already in use

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

### 11.4 Add Special

// Administrator logs on with their username and password

Begin

login is verified

if verified

administrator selects add special option

window is loaded and administrator enters special details

add special button is pressed

data is validated

if valid

special is added to the database

new Special is now added to the specials list when user is booking

// special is now available to the user to reserve

display special added dialog

return to main administrator screen

if invalid

display warning message with special details displayed

if incorrect values entered into specific fields

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

### 11.5 Manage Booking

//User logs on with their username and password

Begin

login is verified

if verified

user selects manage booking tab

window is loaded and user enters booking details

view booking button is displayed

booking button is pressed

data is validated

if valid

display booking details

show buttons update, delete, or go back

if Update is pressed

display booking info window

user can edit relevant fields

display close, save changes buttons

if save changes is pressed

validate new booking info

if valid

update booking

return to the booking info window

if invalid

display warning message and highlight relevant fields

if room rate is below min

if room floor does not exist

if room type does not exist

if room number is already in use

return to booking info window

if close is pressed

exit booking window

if delete booking is pressed

display warning message are you sure you wish to delete ` this booking

prompt user yes or no

if yes

delete booking

rooms are made available again in the database

display confirmation window

return to manage booking window

if no

return to manage booking window

if invalid login

display error message on screen

display login window with attempts remaining

if attempts remaining = 0;

display warning message ("Too many invalid logins, Please contact administrator services")

End

### 11.6 Check Availability

Begin

guest is presented with the start up screen

if guest is just a browser

guest enters the room they wish to book along with the their chosen dates

system checks the database to confirm availability

if room available

guest is notified of the availability of this room

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

guest continues to browse or exits

if guest has an account

guest enters their username and password

system verifies login details

if login successful

guest selects the make a booking tab

guest enters the room they wish to have along with the dates they wish to stay

system checks the database to confirm availability

if room available

guest is notified of the room’s availability

guest can proceed with booking this room

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

if login unsuccessful

guest is presented with a message telling them their login details are incorrect

End

### 11.7 Create a Booking

Begin

User is presented with the start up screen

if user is browsing

user enters the room they wish to stay in along with the dates they wish to stay

system checks the database to confirm availability

if room available

user is notified of the availability of this room

user proceeds with booking this room by selecting book now

user is brought to a window where they are asked to create an account

user enters account information

if account doesn't exist

system adds the account to the database

user account is created

user proceeds to booking the room they had searched for by selecting book now

the system is updated and the booking is stored on the database

if account exists

user is presented with a message telling them that this account already exists

user enters new account information

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

user continues to browse or exits

if user has an account

user enters their username and password

system verifies login details

if login successful

user selects the make a booking tab

user enters the room they wish to have along with the dates they wish to stay

system checks the database to confirm availability

if room available

user is notified of the room’s availability

user proceeds with booking this room by selecting the book now tab

system verifies the booking and stores it to the database

if room is not available

a window telling the user that this room is unavailable with these dates is displayed

user enters in new booking details

system checks the database to confirm availability

if login unsuccessful

user is presented with a message telling them their login details are incorrect

user enters their username and password

system verifies login details

End

### 11.8 Update booking

// Guest logs on with their username and password

Begin

login is verified by the system

if login is successful

guest is brought to the main window and they choose manage booking

the next window is loaded and the guest chooses the update booking option

the guest selects the booking they wish to update

the guest then needs to select a date i.e. before or after the day they already have booked to see if availably to stay two nights

if available

system will confirm and tell the guest

the guest can then confirm this updated booking and the system will update the database

if not available

the system will suggest to the guest to pick another room or another date

guest logs out of system

### 11.9 Check Availability

Validate information in Listener for submit button.  
//This method returns a Boolean  
USER selects dates and amounts of rooms. (Passed into Constructor).  
BEGIN  
Local Variable rooms Found is set to 0  
/\* This will control the search process. It will search through the rooms.  
For the specified dates until rooms found matches rooms requested (from Constructor) or the whole list has been searched through \*/  
For Every Floor  
check every room on that floor  
for every room check the rooms datelist  
if the date requested is in the datelist  
rooms found is incremented  
remove this date from that rooms datelist  
room[i]/room.get(i) is added to the list   
of found rooms which will be added to the booking details.  
if (Rooms requested == Rooms Found)  
return true to the Browse Screen  
// The booking button listener will call this method   
// If true is returned it will allow the screen to progress to the Booking Screen  
if (rooms requested != rooms found)  
return false  
//This will trigger a warning message that will be displayed on the Browse Dates Screen

End

# 12 Test Design RK, ML, TM, DM

## 12.1 Test Case Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 1 | Search (not logged in + no account) | Selected dates and nights | Availability screen with correct dates | Availability screen with correct dates | Pass |
| 2 | Login | Username and password | Create booking on user tabbed screen | Create booking on user tabbed screen | Pass |
| 3 | Login and Search | Username and password, selected nights and dates | Create booking on user tabbed screen and then Availability screen with correct dates | Create booking on user tabbed screen and then Availability screen with correct dates | Pass |
| 4 | Book room in the past | Selected dates, number of nights | JOptionPane to inform user that arrival date cannot be in the past | JOptionPane to inform user that arrival date cannot be in the past | Pass |
| 5 | Book room too far into the future | Selected dates, number of nights | User is unable to select date greater than 2 years from the current system date. | User is unable to select date greater than 2 years from the current system date. | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 6 | Search and create account | Selected dates and nights, valid - first name, last name, home address, telephone, email, username, password | Availability screen with correct dates and then create account screen. After account made , brought to credit card screen | A Availability screen with correct dates and then create account screen | Pass |
| 7 | Create account | Valid - first name, last name, home address, telephone, email, username, password | Create booking on user tabbed screen | Create booking on user tabbed screen | Pass |
| 8 | Verify Create Account –Blank field | Blank field in JTextField | JOptionPane informing user of blank field | JOptionPane informing user of blank field | Pass |
| 9 | Verify Create Account – Invalid Email | Email without @ symbol | JOptionPane informing user of invalid email | JOptionPane informing user of invalid email | Pass |
| 10 | Verify Create Account – Invalid telephone number | Text in telephone field instead of number | JOptionPane informing user of invalid telephone number | JOptionPane informing user of invalid telephone number | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 11 | Verify Create Account – Already existing username | Username that already exists in the system | JOptionPane informing user of error | JOptionPane informing user of error | Pass |
| 12 | Help link on start screen | Click help text | Browser opened to table of contents of help site | Browser opened to table of contents of help site | Pass |
| 13 | Availability screen – Book selected rooms (Logged in) | Selected multiple rooms from JList | User passed to the credit card screen to confirm booking | User passed to the credit card screen to confirm booking | Pass |
| 14 | Verify booking – Credit card screen | Valid 16 digit credit card number, card type, CCV number, Expiry date, holder name | JOptionPane confirming booking, then brought to user tabbed screen | JOptionPane confirming booking, then brought to user tabbed screen | Pass |
| 15 | Verify details- Credit card – incorrect card number | False credit card number (less than 16 digits) | JOptionPane informing user of incorrect card number | JOptionPane informing user of incorrect card number | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 16 | Verify details- Credit card – incorrect card number | False credit card number (greater than 16 digits) | JOptionPane informing user of incorrect card number | JOptionPane informing user of incorrect card number | Pass |
| 17 | Verify details- Credit card – incorrect card number | False credit card number (Checked by Luhn algorithm) | JOptionPane informing user of incorrect card number | JOptionPane informing user of incorrect card number | Pass |
| 18 | Verify details- Credit card – incorrect card type | Selected MasterCard and enter Visa card number | JOptionPane informing user of card type not matching card number | JOptionPane informing user of card type not matching card number | Pass |
| 19 | Verify details- Credit card – Blank field | Valid information on all option except 1 field | JOptionPane informing user of blank field | JOptionPane informing user of blank field | Pass |
| 20 | Check back button function – Availability screen (Not logged in) | Select back button | User brought back to Start screen | User brought back to Start screen | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 21 | Check back button function – Availability screen (Logged in) | Select back button | User brought back to create booking screen on User Tabbed Screen | User brought back to create booking screen on User Tabbed Screen | Pass |
| 22 | Check back button function – Login screen (While searching) | Select back button | User brought back to Availability screen with the correct dates | User brought back to Availability screen with the correct dates | Pass |
| 23 | Check back button function – Login screen (from Start Screen) | Select back button | User brought back to Start screen | User brought back to Start screen | Pass |
| 24 | Check cancel button on credit card screen | Select Cancel button | User presented with JOptionPane to confirm their choice, then brought back to Create Booking panel on User tabbed Screen | User presented with JOptionPane to confirm their choice, then brought back to Create Booking panel on User tabbed Screen | Pass |

# 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 25 | View list of bookings | Select manage booking tab from user tabbed screen | JTable populated with bookings of that particular user, but only bookings in the future | JTable populated with bookings of that particular user, but only bookings in the future | Pass |
| 26 | Add special/Edit booking / Save receipt without selecting booking | Select either add special / save receipt / edit booking button | JOptionPane informing user that they must select a booking | JOptionPane informing user that they must select a booking | Pass |
| 27 | Add special to booking | Select a booking and then add special button. On specials panel, the user selects a specials and clicks add special button | User is presented with a list of specials to add to their special. When they select one or more and click add special, it is added to that booking and the price is updated accordingly | User is presented with a list of specials to add to their special. When they select one or more and click add special, it is added to that booking and the price is updated accordingly | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 28 | Change number of nights on booking (no clash of other booking) | Select new number of nights on edit booking panel, save changes button | JOptionPane to confirm changes, user clicks yes and the booking is updated accordingly | JOptionPane to confirm changes, user clicks yes and the booking is updated accordingly | Pass |
| 29 | Change number of nights on booking (clash with other booking) | Select new number of nights on edit booking panel, save changes button | User confirms changes ,JOptionPane informs the user that one or more rooms are unavailable for the selected dates | User confirms changes, JOptionPane informs the user that one or more rooms are unavailable for the selected dates | Pass |
| 30 | Change arrival date of booking (no clashes of other booking) | New arrival date | JOptionPane to confirm changes, user brought back to manage booking screen and booking updated accordingly | JOptionPane to confirm changes, user brought back to manage booking screen and booking updated accordingly | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 31 | Change arrival date of booking (clash with other booking) | New arrival date | User confirms changes ,JOptionPane informs the user that one or more rooms are unavailable for the selected dates | User confirms changes ,JOptionPane informs the user that one or more rooms are unavailable for the selected dates | Pass |
| 31 | Add rooms to booking | Selected new room, add button, save changes | JOptionPane to confirm changes, user brought back to manage booking screen and booking updated accordingly | JOptionPane to confirm changes, user brought back to manage booking screen and booking updated accordingly | Pass |
| 32 | Save Receipt for booking | Save receipt button, file location | JFileChooser presents local folder space to user for file location selection. File saves successfully | JFileChooser presents local folder space to user for file location selection. File saves successfully | Pass |
| 33 | Access Calendar tab | Select calendar tab | Calendar displays successfully | Calendar displays successfully | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 34 | Access help screen | Select help tab | Help screen with links to user manual displays successfully | Help screen with links to user manual displays successfully | Pass |
| 35 | Access correct section of user manual using JComboboxes | Select different combobox options | Browser opens to correct section of user manual | Browser opens to correct section of user manual | Pass |
| 36 | Change personal information | Valid data for each field | JOptionPane confirming personal details changed | JOptionPane confirming personal details changed | Pass |
| 37 | Verify data - Change personal information | Blank field in one or more text fields | Red text appears on the panel informing the user about the error | Red text appears on the panel informing the user about the error | Pass |
| 38 | Verify data - Change personal information | Invalid email address (missing @ symbol) | Red text appears on the panel informing the user about the error | Red text appears on the panel informing the user about the error | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 39 | Verify data - Change personal information | Invalid telephone number | Red text appears on the panel informing the user about the error | Red text appears on the panel informing the user about the error | Pass |
| 40 | Change password | Correct old password, new password | JOptionPane confirming password has been changed | JOptionPane confirming password has been changed | Pass |
| 41 | Verify data – Change Password | Incorrect old password, new password | Red text appears on the panel informing the user about the error | Red text appears on the panel informing the user about the error | Pass |
| 42 | Verify data – Change Password | Old password, not-matching new password | Red text appears on the panel informing the user about the error | Red text appears on the panel informing the user about the error | Pass |
| 43 | Search for available rooms on a date with bookings | Selected dates, number of nights | Rooms with a booking on them that clash with the selected dates are removed | Rooms with a booking on them that clash with the selected dates are removed | Pass |

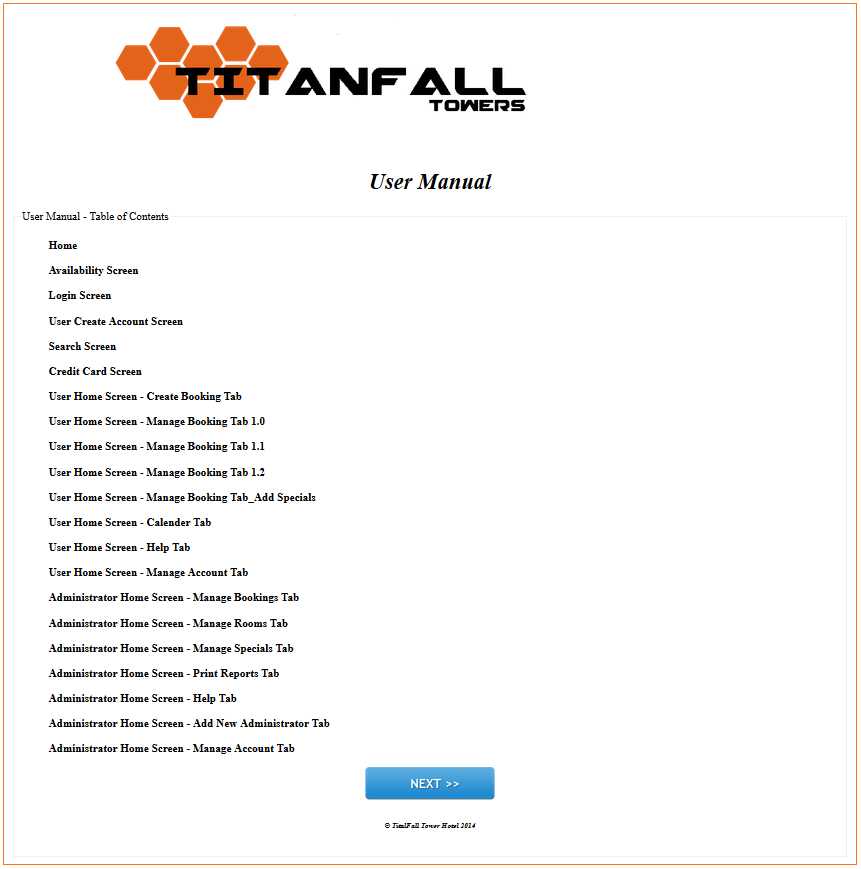
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 44 | Search for available rooms on a date when hotel is fully booked | Selected dates, number of nights | JOptionPane displayed to inform user of the problem, displays yes/no option | JOptionPane displayed to inform user of the problem, displays yes/no option | Pass |
| 45 | Sign out | Select sign out option | User is signed out of the system | User is signed out of the system | Pass |
| 46 | Delete booking (Administrator) | Select booking to delete, delete button | Booking is deleted | Booking is deleted | Pass |
| 47 | Add room  (Administrator) | Room number, room type | Room added to system, JOptionPane to confirm | Room added to system, JOptionPane to confirm | Pass |
| 48 | Verify – Add Room | Room number that already exists | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |
| 49 | Verify – Add Room | Invalid room number | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |
| 50 | Update Room (Administrator) | Room number, room type | Room updated, JOptionPane to confirm | Room updated, JOptionPane to confirm | Pass |
| 51 | Verify – Update Room | Room number that doesn’t exist | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 52 | Verify – Update Room | Invalid room number | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |
| 53 | Delete Room (Administrator) | Room number | Room removed from system, JOptionPane to confirm | Room removed from system, JOptionPane to confirm | Pass |
| 54 | Verify – Delete room | Room number that doesn’t exist | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |
| 55 | Verify – Delete room | Invalid room number | JOptionPane informing the administrator of the error | JOptionPane informing the administrator of the error | Pass |
| 56 | Add Special (Administrator) | Name of special, price of special | JOptionPane confirming addition of special to list | JOptionPane confirming addition of special to list | Pass |
| 56 | Verify – Add special | Blank field | JOptionPane informing administrator of blank field | JOptionPane informing administrator of blank field | Pass |
| 57 | Verify – Add Special | Invalid price value | JOptionPane informing administrator of error | JOptionPane informing administrator of error | Pass |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No** | **Test** | **Inputs** | **Expected Output** | **Actual Output** | **Result** |
| 58 | Remove special | Selected special | JOptionPane confirming deletion of special, list updated | JOptionPane confirming deletion of special, list updated | Pass |
| 59 | Print report – Save correct report | JCombobox selection, year/ month | Input fields to enter year/month , filechooser to save report | Input fields to enter year/month , filechooser to save report | Pass |
| 60 | Add administrator | Valid first name, last name, address, telephone, email , username , password | JOptionPane confirming the addition of a new administrator | JOptionPane confirming the addition of a new administrator | Pass |
| 61 | Verify – add administrator | Blank field(s) | JOptionPane informing administrator of blank field | JOptionPane informing administrator of blank field | Pass |
| 62 | Verify - add administrator | Invalid email address | JOptionPane informing administrator of invalid email (missing @) | JOptionPane informing administrator of invalid email (missing @) | Pass |
| 63 | Verify - add administrator | Invalid telephone | JOptionPane informing administrator of error | JOptionPane informing administrator of error | Pass |

# 13 Documentation Design RK, ML, TM, DM

## 13.1 Design of User Manual



Our User manual can be access via Java. We decided to incorporate the user manual into the program and especially for the help screens for both a user and an administrator. We believed this added more value to the system

# 14 References

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# 15 Appendices

## Appendix A - Questionnaires

#### Mairead Conlon Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year |  |
| 3-5 times per year | ✓ |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 |  |
| 2 | ✓ |
| 3 |  |
| 4 or More |  |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price |  |
| Separate payment | ✓ |

1. *When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar |  |
| Drop down list | ✓ |

1. *Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking |  | ✓ |
| Have the ability to change/edit your booking | ✓ |  |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

1. *When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type | ✓ |  |
| Specify the number of guests expected | ✓ |  |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity | ✓ |  |
| Have the ability to change/edit a booking at the request of a guest |  | ✓ |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

#### Jack Frost Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year |  |
| 3-5 times per year | ✓ |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 | ✓ |
| 2 |  |
| 3 |  |
| 4 or More |  |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price |  |
| Separate payment | ✓ |

*4. When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar | ✓ |
| Drop down list |  |

*5. Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking |  | ✓ |
| Have the ability to change/edit your booking | ✓ |  |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

*6. When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type | ✓ |  |
| Specify the number of guests expected | ✓ |  |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity | ✓ |  |
| Have the ability to change/edit a booking at the request of a guest | ✓ |  |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

Main thing is to keep it simple and straight forward. Most times I just want to know the price and see pictures of the room & hotel

#### Ray Gallagher Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year | ✓ |
| 3-5 times per year |  |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 |  |
| 2 | ✓ |
| 3 |  |
| 4 or More |  |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price | ✓ |
| Separate payment |  |

1. *When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar |  |
| Drop down list | ✓ |

1. *Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking | ✓ |  |
| Have the ability to change/edit your booking | ✓ |  |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

1. *When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type | ✓ |  |
| Specify the number of guests expected | ✓ |  |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity | ✓ |  |
| Have the ability to change/edit a booking at the request of a guest | ✓ |  |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

#### Aidan Kiernan Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year | ✓ |
| 3-5 times per year |  |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 |  |
| 2 | ✓ |
| 3 |  |
| 4 or More |  |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price | ✓ |
| Separate payment |  |

1. *When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar | ✓ |
| Drop down list |  |

1. *Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking | ✓ |  |
| Have the ability to change/edit your booking | ✓ |  |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

1. *When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type | ✓ |  |
| Specify the number of guests expected | ✓ |  |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity | ✓ |  |
| Have the ability to change/edit a booking at the request of a guest | ✓ |  |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

For users to be able to add on special features like a round of golf

#### Edward Lam Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year |  |
| 3-5 times per year | ✓ |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 | ✓ |
| 2 |  |
| 3 |  |
| 4 or More |  |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price |  |
| Separate payment | ✓ |

1. *When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar | ✓ |
| Drop down list |  |

1. *Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking | ✓ |  |
| Have the ability to change/edit your booking |  | ✓ |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

1. *When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type |  | ✓ |
| Specify the number of guests expected |  | ✓ |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity |  | ✓ |
| Have the ability to change/edit a booking at the request of a guest | ✓ |  |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

#### Martina O’Connor Questionnaire

1. *As a customer, how often would you book a hotel per year?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Never |  |
| 1-3 times per year |  |
| 3-5 times per year | ✓ |
| 5+ times per year |  |

1. *When booking a room, how many people would normally travel with you?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| None |  |
| 1 |  |
| 2 |  |
| 3 | ✓ |
| 4 or More | ✓ |

1. *When booking a hotel room, would you like to add extras to the base price during booking, or pay for them separately?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Included in base price | ✓ |
| Separate payment |  |

1. *When booking a hotel room, would you rather use a graphical calendar, or a drop-down list to select dates?*

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Graphical calendar | ✓ |
| Drop down list |  |

1. *Would you like to be able to perform the following while booking a room?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive unique login credentials after booking | ✓ |  |
| Have the ability to change/edit your booking | ✓ |  |
| Have the ability to cancel your booking | ✓ |  |
| Make requests during/after booking | ✓ |  |

1. *When booking a function room, would you like to be able to perform the following?*

**Please answer yes/no.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Specify the event type | ✓ |  |
| Specify the number of guests expected | ✓ |  |
| Request catering/refreshments | ✓ |  |
| Specify the time/duration of the event | ✓ |  |

1. As an employee, what kind of functionality would you like the reservation system to perform?

**Please answer yes/no to the following.**

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Receive reports on booked rooms | ✓ |  |
| Receive a notification when the hotel is close to capacity | ✓ |  |
| Have the ability to change/edit a booking at the request of a guest | ✓ |  |
| Cancel/Delete a booking at the request of a guest | ✓ |  |

1. As an employee, would you rather use a staff ID or a username to log into the system?

**Please tick the appropriate box.**

|  |  |
| --- | --- |
| Staff ID with password | ✓ |
| Username with password |  |

1. Any other comments

# 16 System Usernames and Passwords

Guests

* Username : 01 Password: P1
* Username : 02 Password: P2
* Username : 03 Password: P3
* Username : 04 Password: P4

Administrator

* Username: 05 Password: A1