<Hotel Reservation System>

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Requirements Specification and Analysis

<1.0>

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COMPUTER
SCIENCE AND
ENGINEERING

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REQUIREMENTS ANALYSIS DOCUMENT[1]

1. Introduction

1.1. Purpose of the System

The purpose of this project's generation is to show "Hotel Reservation" project's development step by step. This document
explains that the objects which will be used in the system and shows the relations between those objects clearly and in
different ways. In addition, this document is prepared for a reference to client for the next parts of the project.

1.2. Scope of the System

"Hotel Reservation" is a web site and developed for allowing user to search and find best hotel and make reservation online.
This web site allows two different ways of searching to the user. If the user wants he/she search a hotel in desired places or he/she can or search the best hotel for his/her criteria from advanced search according to check-in, check-out, room or numberof people. Furthermore, if he/she wants to make a reservation, firstly he/she has to register by email and password. After that he/she can make a reservation.Hotel users applies for register to the system. These applications are checked up from registrant and applications are accepted depends on the situation. Accounts are created by registrant for every hotel user. Hotel user can update the reservation of the rooms' status by entering the system. All of these processes are kept in the database. Moreover, the admin is the person who manages the system by observing the all processes and analyzing the situations by entering the system.

1.3. Objectives and Success Criteria of the Project

The purpose of the project is that the client can search for desired criteria fast and easily. In this project, the developers aimed some criteria for the pleasure of client. The most important one of these criteria is the ease of usage. Understandability and ease of the transition between the objects in the system are aimed. With the ease, the other criteria is the fastness of the transition process between the objects. These two criteria are the most important ones that's why these two criteria has been aimed for the client's benefit.

1.4. Definitions, Acronyms, and Abbreviations

HRS : Hotel Reservation System

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1.5. Overview

This document includes five parts ; introduction, proposed system(except packaging and legal), system models, glossary and references. This part contains some general information like objective and success criteria of the project and also some definitions and acronyms that are related to the project.This is a brand new system so there is no old system. Parts of this document explains all the features of our system.In the Overview part the system is explained in detail. Functional Requirements part tells about the use cases of the system.Everything related to activities of users explained. Obligations and boundaries are mentioned in Nonfunctional Requirement part. Finally, diagrams, use cases and scenarios are placed in System Model part.In the other part of this RAD, a glossary is shown about the whole system.And in the final part there is a References section.

2. Current System

There is no such current system to replace.

3. Proposed System

3.1. Overview

- The main functionality of our system is to simplify the hotel reservation process by helping the users to find their desired hotels and make their reservations, and provide a platform for the hotel users to inform the users about their hotels.

3.2. Functional Requirements

** Registration **

- A user shall register to the website, choosing the normal registration option. Afterwards, the user has to fill the user registration form which requires a user name, a name, a password, an email and a phone number.
- An hotel user shall register to the website, choosing the hotel registration option. After choosing the option, the hotel user has to fill the hotel registration form that requires an hotel name and a registration code which the registrar needs, to be able to verify the validity of the hotel.

** Log in / Log out **

- On the main page, the user should be given an option to log in to the website. This option should open the log in page. The user has to enter his/her user name and password. If the information's are wrong, the user should see an error message.
- If the user logged in to the website, he/she should see an option to log out on the main page.

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** Search / Advanced search / Hotel Information **
- On the main page, a user shall search for a hotel, according to several search options or with just a free-text search option. The search options are dates, price interval, destination and hotel type. A user should be able to do search with as many of the fields required.
- The user should be able to see the search results on the results page as a list. Each hotel fitting the user's search should be represented as an element within the list. Each element should include the hotel's name, type, location and price by default.
- If the user chooses an hotel from the result list, he/she should be directed to the hotel information page which contains photos of the hotel and some detailed information about the hotel.
      ** Reservation **
- On the hotel information page or the display reservations page, the user should be given the option to make a reservation. If the user logged in to the website, this option should display the hotel reservation form which requires the user to enter the reservation information that includes check-in and check-out dates, count of the people that will stay and count of the rooms that will be reserved. After filling this form, the user should be able to see a price according to the information he/she provided.
      ** Displaying/Editing/Canceling Reservations **
- On the main page, the user should be given an option to display his/her reservations. This option should open the display reservations page which should show the reservations as a list.
- The user should see the options of editing and canceling for each individual reservation. The user can edit the check-in and check-out dates, the count of people or the count of rooms through the edit reservation option or cancel the reservation through the cancel reservation option.
      ** Approving Hotel Registration **
- After an hotel registration, the registrar should be able to accept or refuse the application according to the validity of the registration code which the hotel user provided during the hotel registration process.
      ** Updating the Hotel Information **
- An hotel user should be able to update the information of his/her hotel.

3.3. Nonfunctional Requirements

Usability

-Understandable, short and helpful instructions should guide a user through his/her reservation process.
- Site functions that are not available to a user should not be displayed to him/her.
- The user should be able to log-in or register from all pages of the site he/she can access. If already logged in, the user should be able to log-out likewise.
- The search page should be easy to find or return to from different pages of the site.

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- The difference between 'Advanced Search' and 'Search' use cases should be seamless for the user.
- The search results provided for the user should be easy to understand and navigate. The user should be able to order the listed results according to different criteria.
- The user should be able to access the hotel he/she picked from the search results page through a single click.
- The hotel information page should have a link for easy access and share ability.

Reliability

- HRS should reliably give fitting results on a search.
- HRS should make no scheduling errors while making reservations.

Performance

- HRS should be able to complete a search in no more than 3 seconds, 100% of the time.
- HRS should be able to complete a log-in in no more than 3 seconds, 100% of the time.
- The system should be up %95 of the time (network failures disregarded).
- The system should be connected to the Internet.

Support ability

- The site should be easy to extend. It should be coded in a way that it is allows for easy implementation of new functions.
- The site should have a test environment for local testing of it's functions.

Implementation

The front end software related with the system should be written using HTML, CSS and Java script while the back end is written using My SQL.

Interface

- To use HRS, you require a Web browser. The system should display perfectly on supported Web browsers, which are:
Google Chrome
Mozilla Firefox

Packaging

This project has no packaging issues.

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Legal

This project has no legal issues.

3.4 System Models

Scenarios

Scenario Name   : Searching in Detail

Participating Actors: Halil: User

Flow of Events   : 1. Halil wants to search for hotels in Alexandria for 3 people,
                            seperated in to two rooms.
                         2. Halil opens the main page.
                         3. Halil types 'Alexandria' in the search bar.
                         4. Halil choses 3 for 'People Count' choice and 2 for the 'Room
                            Count' choice.
                         4. Halil clicks the 'Search' button.
                         5. System lists hotels whose locations are Alexandria and fit
                            Halil's information.
                         6. After deciding on a hotel, Halil clicks it's 'Information Page'
                            button.

Scenario Name   : Searching in Detail

Participating Actors: Halil: User

Flow of Events   : 1. Halil wants to search for hotels in Alexandria for 3 people,
                            seperated in to two rooms.
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                         3. Halil types 'Alexandria' in the search bar.
                         4. Halil choses 3 for 'People Count' choice and 2 for the 'Room
                            Count' choice.
                         4. Halil clicks the 'Search' button.
                         5. System lists hotels whose locations are Alexandria and fit
                            Halil's information.
                         6. After deciding on a hotel, Halil clicks it's 'Information Page'
                            button.

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Senario Name: Cancel Reservation
Participating Actor Instances: Çağla: User

Flow of Event:

1. Çağla wants cancel reservation so she click the cancel button on the reservation page.
2. System cancels the reservation and displays a cancel reservation success message.

Scenario Name   : Making a login error

Participating Actors: Tang: Admin

Flow of Events   : 1. Tang wants to login to the website.
2. Tang opens the MainPage.
3. Tang clicks the 'Login' button and gets redirected to the login page.
4. Tang enters his username and password but makes a mistake and enters a wrong username. He clicks the 'Confirm' button.
5. System checks Tang's information and sees no registered users with the entered username.
6. The System displays an error dialog that says "No such username exists." Tang closes the dialog window.
7. Tang enters his username correctly but this time, makes a mistake entering his password and only enters it's last 3 characters. He clicks the 'Confirm' button.
8. System checks Tang's information and sees that the given username's password does not match the stored one.
6. The System displays an error dialog that says "Wrong password." Tang closes the dialog window.
4. Tang enters his username and password - both correctly - and clicks on the 'Confirm' button.
5. After checking the given username and password, System logs Tang in to the website.

Senario Name: Edit Reservation
Participating Actor Instances: Çağla: User

Flow of Event:

1. Çağla clicks the edit button to edit the reservation that she did before.
2. System opens the reservation form.
3. After the edition reservation form is loaded Çağla did any changing that she want.
4. Then, Çağla click the confirm button on the reservation form.
5. System makes the change bu initiating check availability and if system gets a yes, completes

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Senario Name: Make Reservation
Participating Actor Instances: Çağla: User

Flow of Event:
        1.Çağla clicks the make reservation button.
        2.System opens a reservation form.
        3.Çağla fills the fields of the reservation form after the reservation form
        window loaded.
        4.System displays the price to user.
        5.After seeing the price of the reservation Çağla thinks that the
        price is convinient and cliks the OK button.
        6.System checks availability of the information on the form and if
        available confirms the reservation .
        7.If not available, system displays an make reservation error message and displays
        the reservation form again with problem highlighted areas and user changes the
        information on the form then continues with step 5.

Scenario Name   : Displaying the reservations

Participating Actors: Ece: User

Flow of Events   : 1. Ece has some reservations and she wants to see them all in one place.
              2. Ece opens the main page and clicks the Display Reservations button.
              3. System opens the Display Reservations page which contains all of Ece's
                 reservations as a list.

Scenario Name:Let's add our hotel to the hotel registration system!

Participating Actor Instance(s):Ayşe:HotelUser - Mehmet:Registrar

Flow of Events

1)Ayşe's wanted to add her hotel to hotel registration system so she called Mehmet and said I want to add my hotel to your webpage.
2)Mehmet has given a register code to Ayşe and said use this code while registering.
3)Ayşe visited the main webpage,saw the register button on the upper right of the screen and clicked on it.
4)The registration page opened and Ayşe selected Hotel Register option.
5)Hotel registration form appeared and Ayşe filled the form including the code she took from Mehmet.
6)Ayşe clicked on complete button and a message appeared "Your registration has taken"

Scenario Name   : Logining to the website

Participating Actors: Ece: User

Flow of Events   : 1. Ece wants to login to the website.
              2. Ece opens the main page.
              3. Ece clicks on the login button and that opens the login page.
              4. Ece enters her username and password and clicks on the confirm button.
              5. After checking the username and password, System logs Ece in to the website.

Scenario name   : Loging out from the website

Participating Actor: Ece: User

Flow of Events   : 1. Ece completed her reservations and she wants to logout.
              2. She goes to the main page and clicks on the logout button.
              3. System logs Ece out from the website.

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Scenario Name:Let's see what's waiting?

Participating Actor Instance(s):Mehmet:Registrant

Flow Events

1)Mehmet opened the main page and logged in in order to check the registrations
2)Mehmet clicked on Check Registrations button and registrations webpage opened.
3)Mehmet saw the Ayşe's Hotel's name and clicked on Open Form button.
4)Ayşe's registration form opened and Mehmet checked the information.
5)He saw that everything is correct including the code he gave to her so he clicked on Approve Form button.
6)Form has closed.

Scenario Name:aliWantsToRegister

Participating Actor Instance(s):Ali:User

Flow of Events:
1)Ali decided to register on to Hotel Reservation System so he visited the main webpage.
2)Ali saw the register button on the upper right corner and clicked on it.
3)The register page opened and Ali selected user registration.
4)User registration form has show up ,Ali filed the form and clicked on complete.
5)A message appeared on the screen"You have successfully registered as a user."

Scenario Name   : Searching

Participating Actors: Tanaka: User

Flow of Events   : 1. Tanaka wants to search for hotels in Taipei.
                        2. Tanaka opens the main page.
                        3. Tanaka types 'Taipei' in the search bar.
                        4. Tanaka clicks the 'Search' button.
                        5. System lists hotels whose locations are Taipei.
                        6. After deciding on a hotel, Tanaka clicks it's 'Information Page' button.

Scenario Name   : Updating a Hotel's Information

Participating Actors: Jane: Hotel User, communicates with John: Registrar

Flow of Events   : 1. Jane wants to update her hotel's information on the system.
                        2. Jane opens the main page and logs in.
                        3. Jane goes to her hotel's Information Page and clicks the 'Update Iformation' button.
                        4. System redirects her to the 'Registration Page' where she can edit her already-filled registration form.
                        6. Jane makes the changes she wants on the form and and clicks the 'Approve Changes' button.
                        7. The updated form reaches John through the 'Registrations Page' which he reaches through the 'Check Registrations' button on the MainPage.
                        8. After checking the form, John approves the changes by clicking the 'Approve Button'.
                        9. System makes the wanted changes within the Hotel Records and displays a 'Form Approved' message.
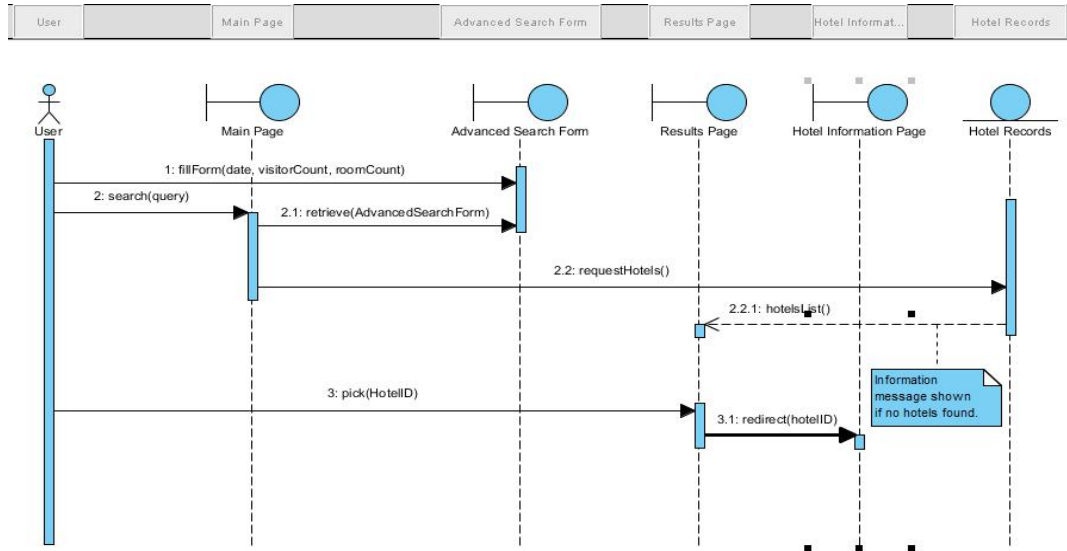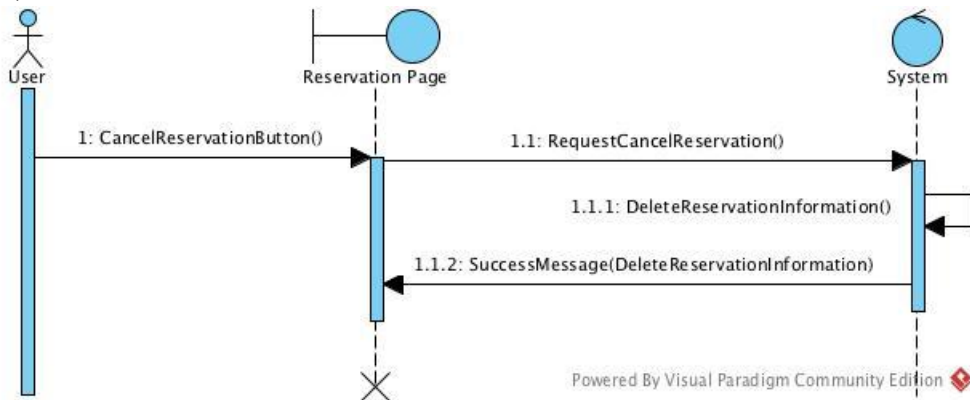
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Use case model

1)Use Case Diagram

Object model

1)Class Diagram

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Dynamic model

1)Sequence Diagrams
  1.1)Advanced Search

1.2)Cancel Reservation

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1.3) Edit Reservation
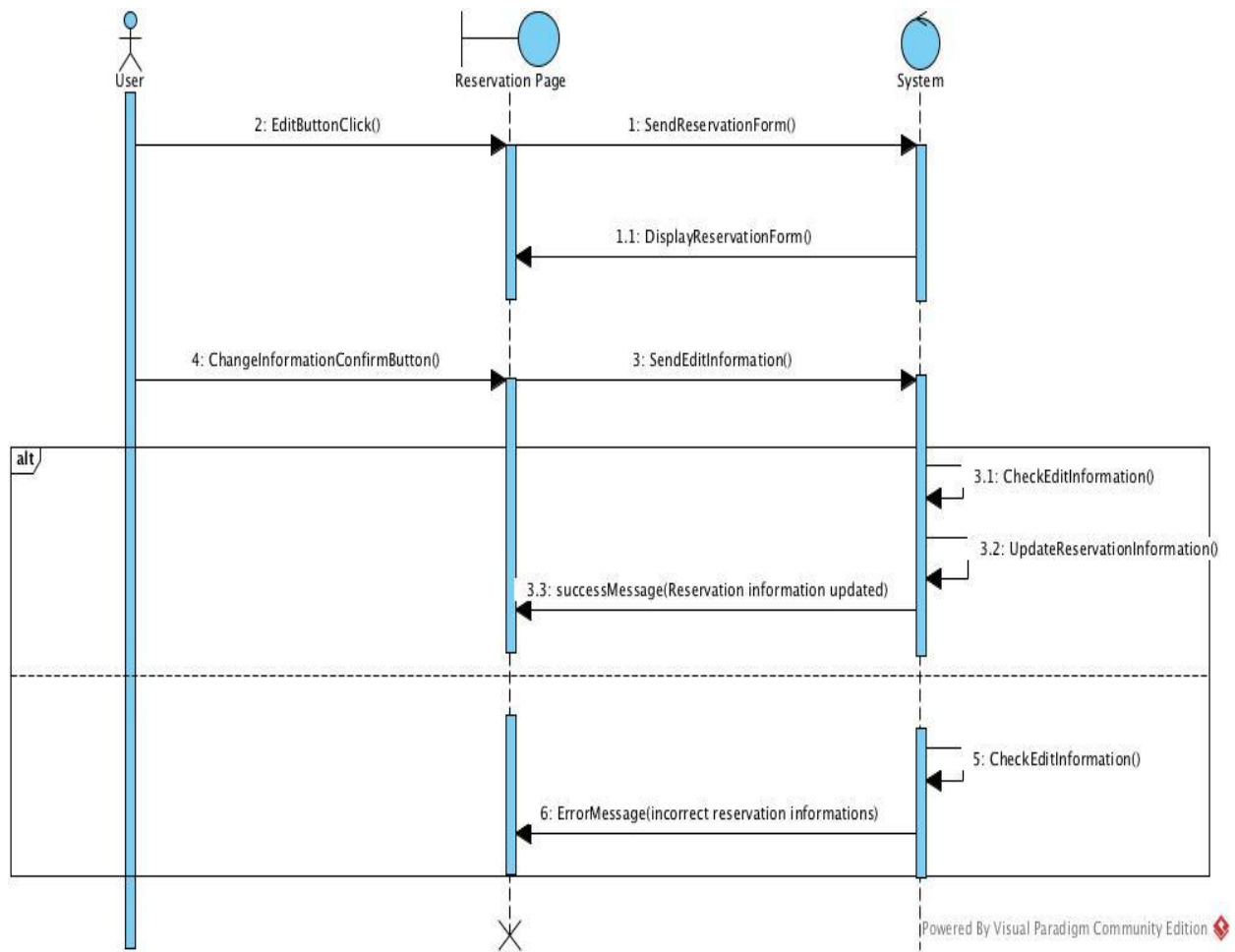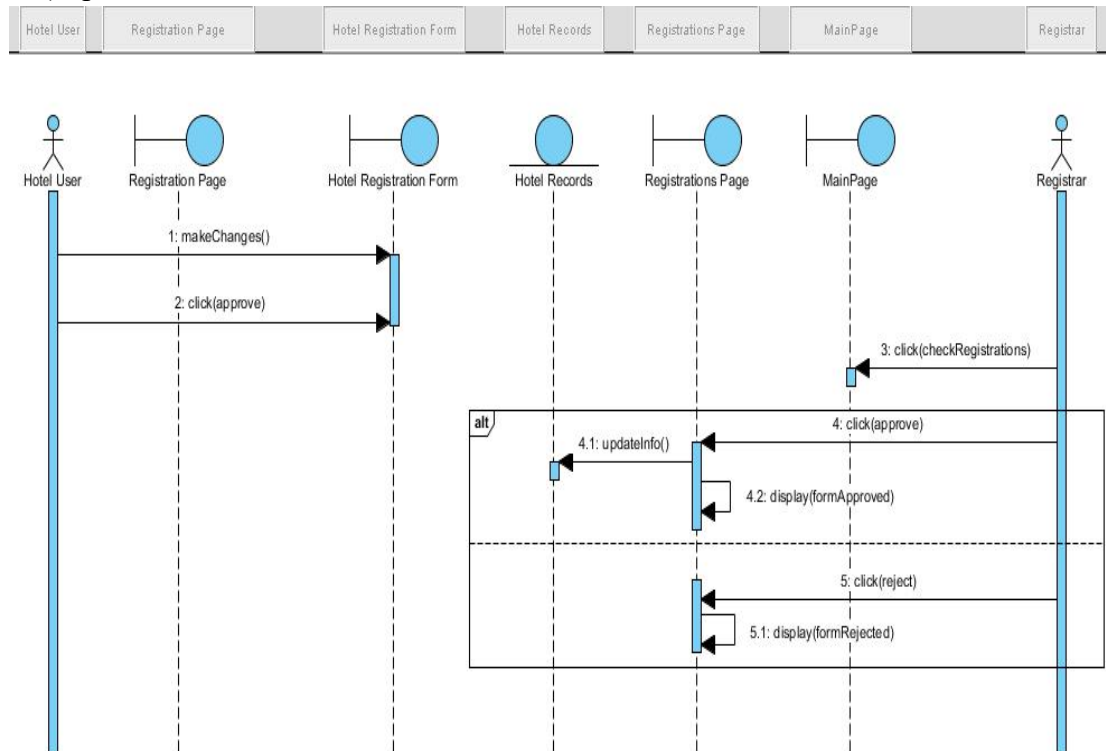

1.4) Search

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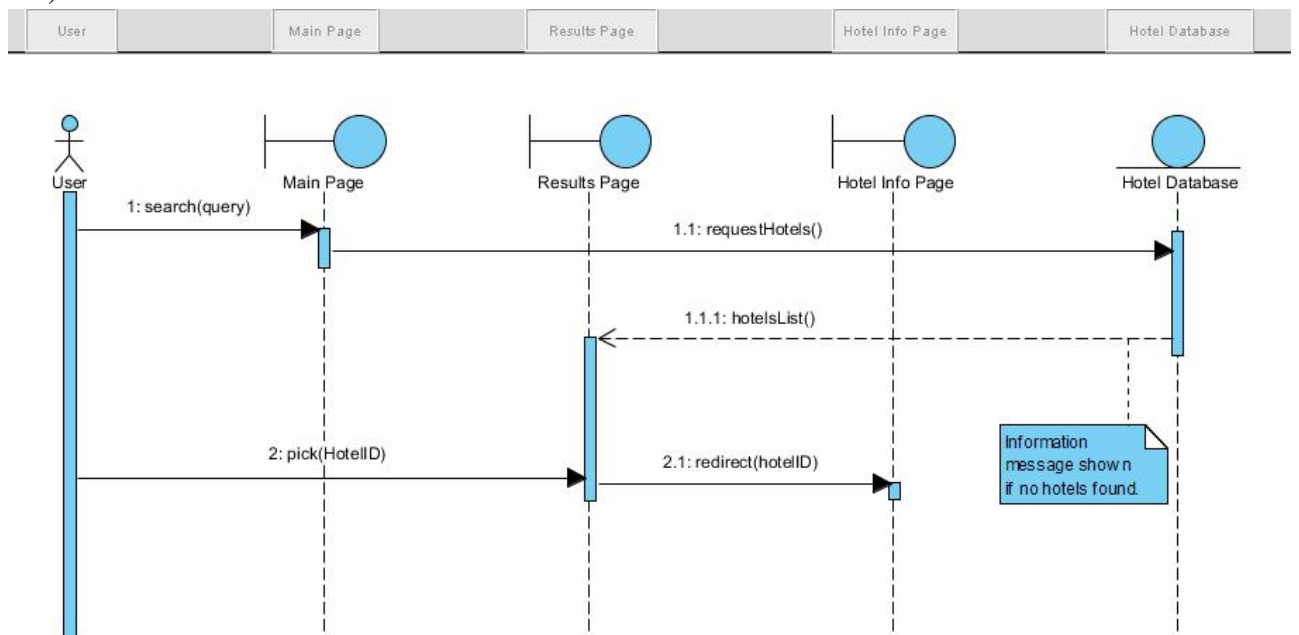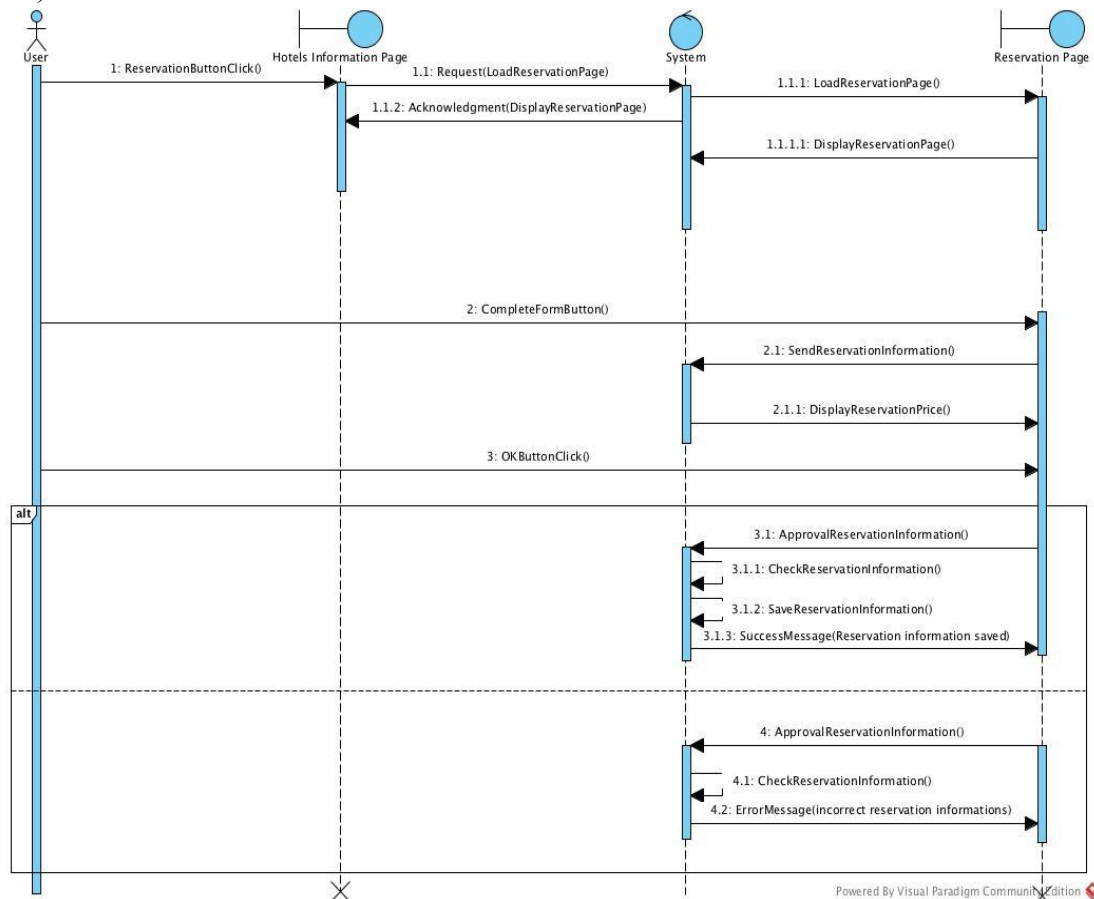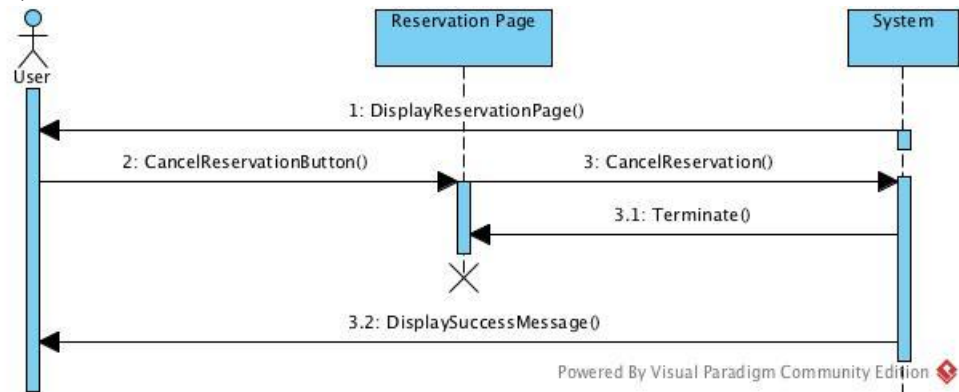
1.5)Update Information

1.6)Make Reservation

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1.7)Cancel Reservation

1.8)Display Reservations

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1.9)Hotel Register
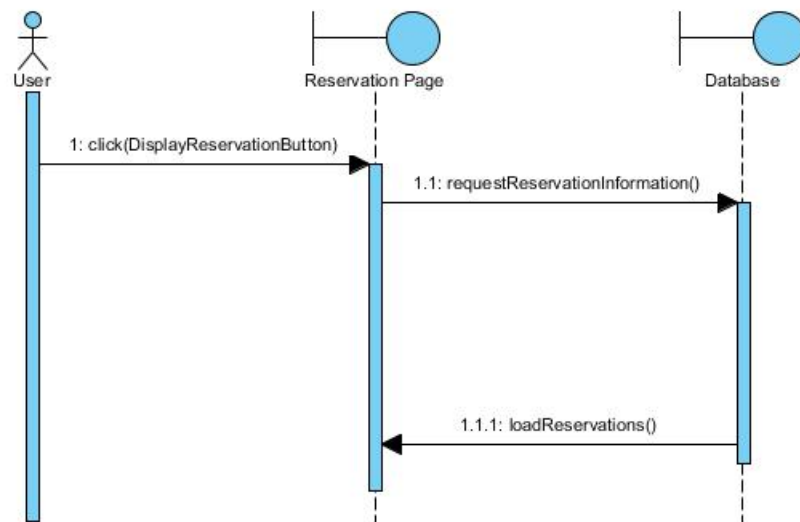
sd HotelRegistration
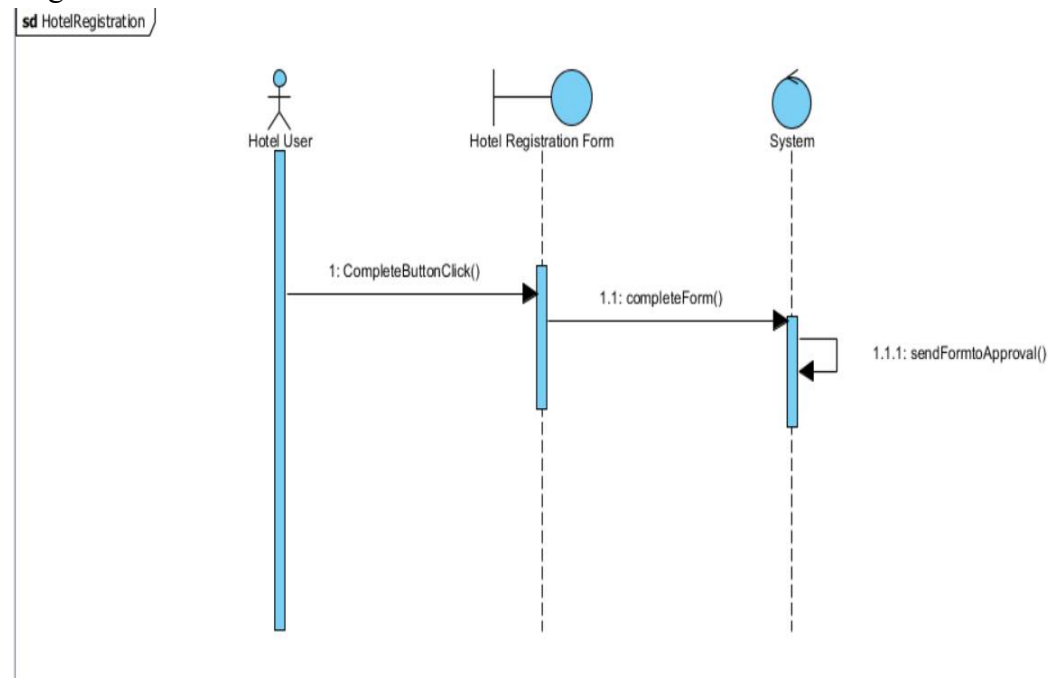
1.10)Login

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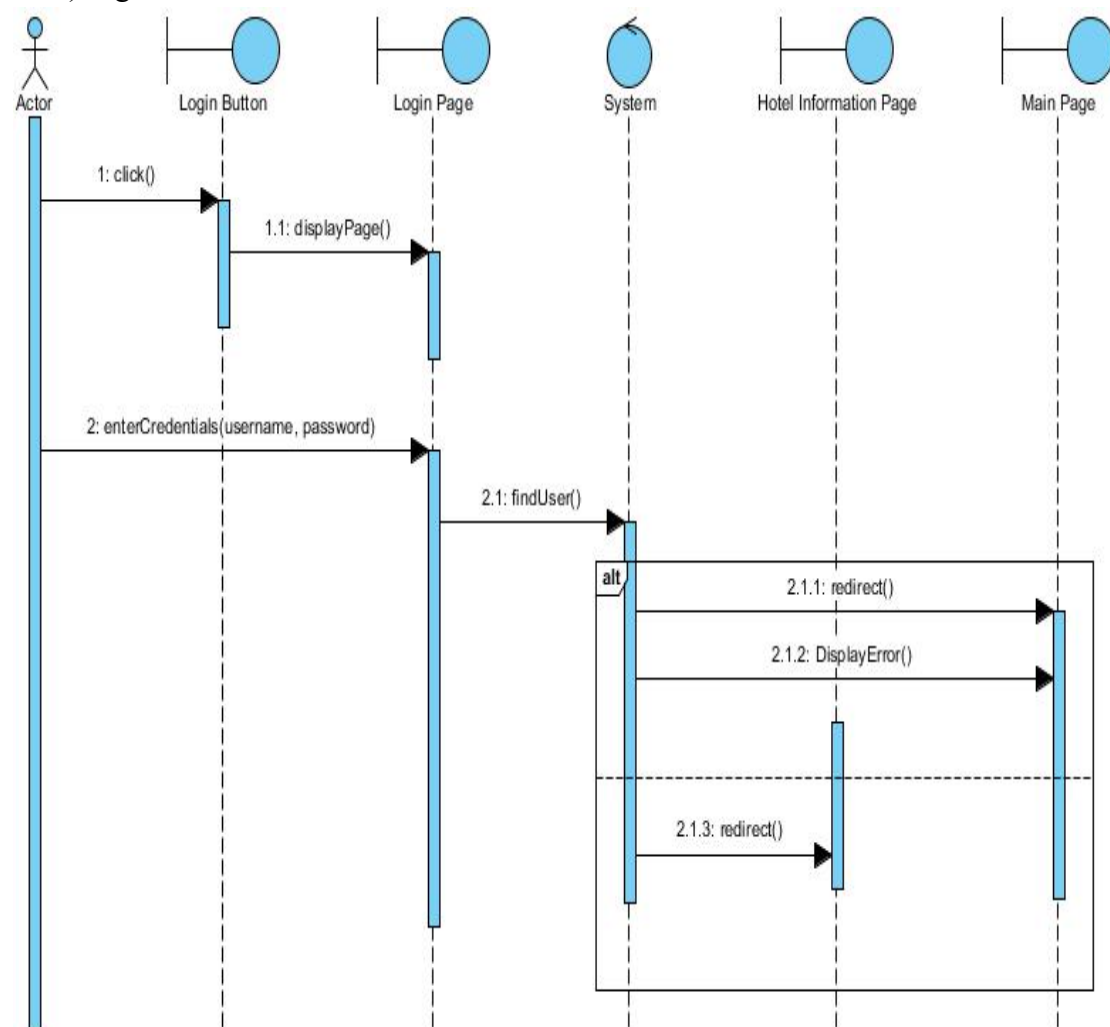
1.11)Logout
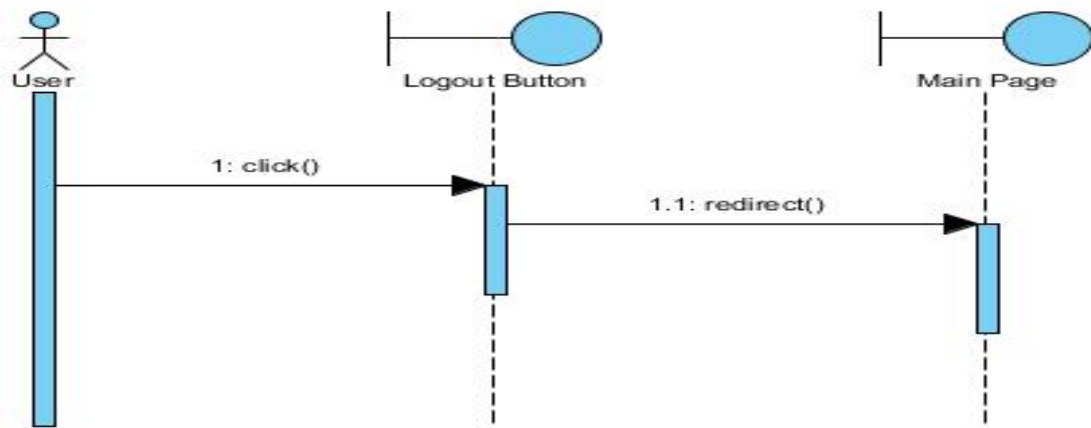
1.12)Manage Registration

<Hotel Reservation System>
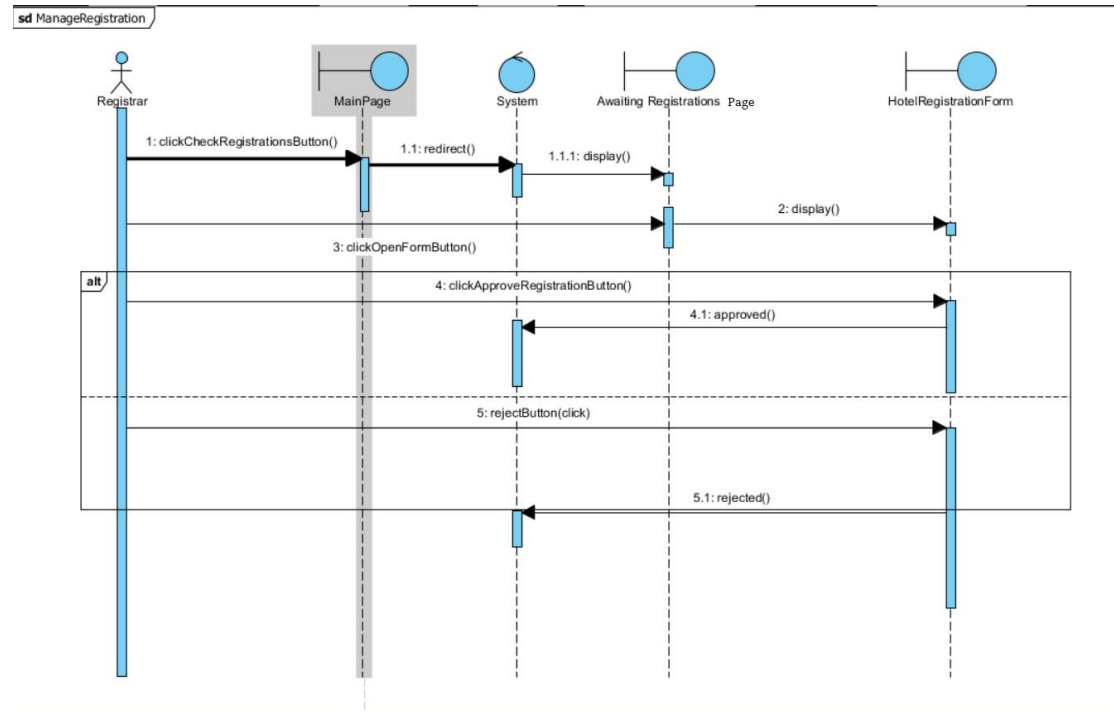
1.13)Register

<Hotel Reservation System>
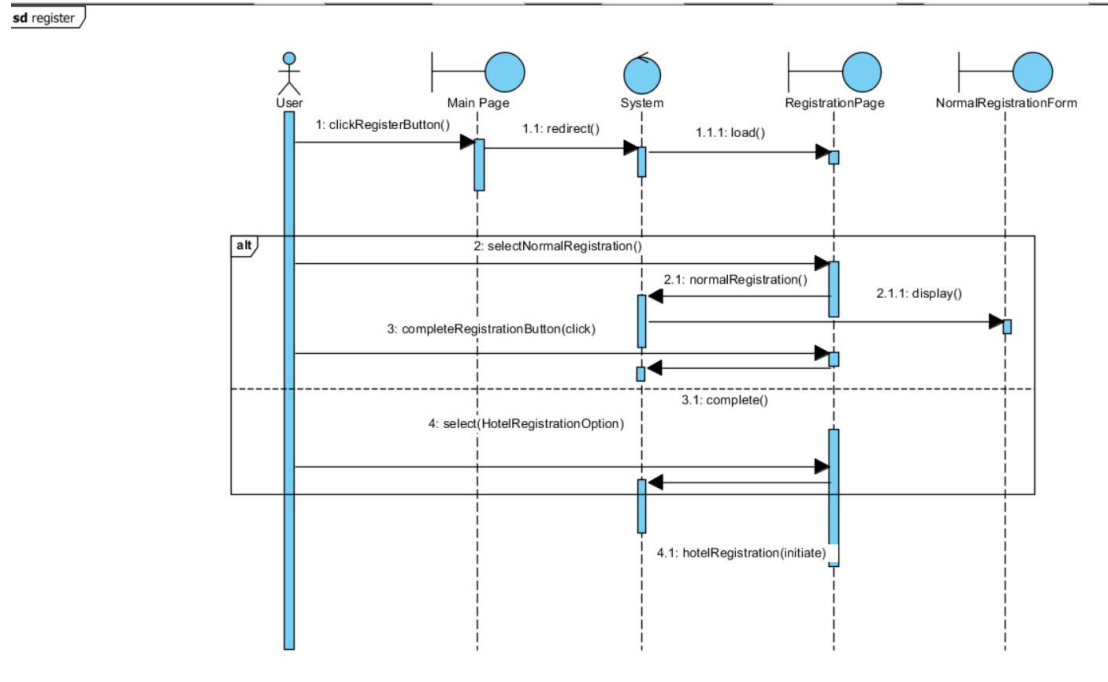
User interface—navigational paths and screen mock-ups

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4. Glossary

Buttons	
Approve Button	This button is displayed on awaiting registrations page and used for approving an hotel registration form
Approve Changes Button	This button is displayed on hotel information page and display reservations page.If user edits his/her reservation this button simply saves the changes.If registrant changes the hotel information this button simply saves the changes
Cancel Reservation Button	The button that user clicks to cancel his/her reservation
Check Registrations Button	This button is displayed on main page and redirects the registrant to awaiting registrations page.Only registrant can use this button
Complete Button	This button is displayed on forms and used for notifying the system that user has filled the form.
Confirm Button	This button is displayed on a form when the form is being edited and similar purpose with complete button
Display Reservations Button	This button is displayed on mainpage and redirects user to display reservations page.User should be logged in in order to use this button
Edit Button	This button is displayed on Display Reservations Webpage in order to edit an existing reservation .
Login Button	This button is displayed on any page if user is not logged in and redirects user to login page when clicked.
Logout Button	this button is dislplayed on anypage if the user is logged in and redirects the user to mainpage with loggig him/her out when clicked.
Make Reservation Button	This button is displayed on Hotel information page and redirects user to reservation page
OK Button	This button is displayed on reservation form when user clicks complete button and system displays the price.When user clicks system makes the reservation.
Open Form Button	This button is displayed on awaiting registrations page and used for displaying an hotel registration form
Register Button	This button is displayed on any page if user is not logged in and redirects user to register page when clicked.
Reject Button	This button is displayed on registrations page when clicked rejects an Hotel Registration form.
Search Button	The button that user clicks after enteirng his/her search term to the searchbox in order to start search operation
Update Information Button	This button is displayed on hotel information page and used for editing the information of the hotel.Only registrant can use this button

Error Messages	
Login Error Message	The message displayed by system when user clicks login button but could not login.It contains "Login was not successfull check your username/password" text.
Can't Be Found Message	The message displayed by system when a user clicks on search button but results page has no results to display.It contains "There is no such results relleated with your search" text.
Form Rejected	The message displayed by system when registrant cliks Rehect form button.It contains "You have rejected this registration" text.
Edit Reservation Error Message	The message displayed by system when user clikcks on Confirm button while editing his/her reservation but this update is not possible.It contains "You cannot update the reservation like this" text.
Make Reservation Error Message	The message displayed by system when user clicks OK button while making a reservation but this reservation is not possible.It contains "You cannot make such a reservation" text.

Forms	
Advanced Search Form	The form that user fills the criterias on it in order to make a more detailed search both with a search term and criterias.This criterias are entry date,leave date,people count and room count
Hotel Registration Form	This form is displayed on registration page to user if s/he chosen hotel registration option.
Reservation Form	The form that user fills the criterias on it in order to make a reservation to a hotel.The criterias consist of price,hotels information and advanced search form's criterias
User Registration Form	This form is displayed on register page to user if s/he choses user registration option

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Operations	These operation names are used in this glossary while describing some terms.Since the operations indicate use cases their descriptions can be found in use case descriptions part.
Search	
Login	
Logout	
Make Reservation	
Edit Reservation	
Cancel Reservation	
Display Reservations	
Register	
Hotel Registration	
Advanced Search	
Manage Registration	

Others	
Search Box	The box that user enters his/her search term in order to find a hotel releated to this term
List of Hotels	The results that displayed in the results page which consists of hotels names and pictures
Registrations List	This list consists of Hotel Registration Forms and displayed in Registrations page.The purpose of the list is to let the registrant approve registrations.Only registrant can access to this list.
Registration Code	This field exists on hotel registration form and the purpose is entering the registration code given to the hotel user from registrant.

Success Messages	
Form Approved Message	The message displayed by system when a form is approved after clicking complete button.It contains "Your form has approved" text.
Edit Reservation Success Message	The message displayed by system when confirm button is clicked and edit operation is approved.It contains "Your reservation has updated" text.
Cancel Reservation Success Message	The message displayed by system when cancel reservation button is clicked.It contains "Your reservation has been cancelled" text.
Make Reservation Success Message	The message displayed by system when OK button clicked and reservation approved by system.It contains "Your reservation has taken" text.
Hotel Register Success Message	The message displayed by system when clicked Complete button in Hotel Registration form.It contains "Your registration has taken" text.
Registration Successfull Message	The message displayed by system when Complete button clicked in User Registration Form.It contain "You have successfully registered as a user" text.
Confirmation Message	The message displayed by system when a hotel user clicks Approve button after editing his/her hotel information.

Webpages	
Display Reservations Page	The webpage that displays the reservations of user that s/he made.User can click edit or cancel reservation button on this page if s/he has at least one
Hotel InformationPage	The webpage that displays the information about Hotel
Login Page	The webpage that where user can login
Main Page	Main page is a webpage that display searchbox ,check awaiting registrations button,search button,display reservations button,login button,logout button and register button
Registrations Page	Registrations page is a webpage and displays the awaiting registrations list,approve buttın and reject button.Only registrant button can access to this page.
Reservation Page	The page that user reaches when s/he clicks on make reservation button in Hotel Information page.This page also displays the hotel reservation form
Results Page	The page that results of search operation is displayed by system after the search operation finished by system
Register Page	The page that reached with register button and displays register forms .This is the page where user selects if s/he want to register as an hotel or user