ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)

ORGANIZATION OF ISLAMIC COOPERATION (OIC)

Gazipur-1704, Dhaka, Bangladesh

Project Title: **Travel and Tour System**

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Certification

This thesis is to certify that “Travel and Tour” is fruit of hard work of Aboubakar Alamine and Kamalluddin as their final year project of Bachelor in Technical and Vocational Education with specialization in computer science and engineering at The Islamic University of Technology (IUT) Dhaka, Bangladesh.

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At last, we would like to thank our parents who have given us tremendous inspiration and support. Without their constant moral and financial support we would not have been able to accomplish this work.

Dedication

Dedicated to our beloved parents who have been supported us to complete our degree successfully, and they have always motivated us to achieve our educational goals.

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Chapter 1
1. INTRODUCTION

As technology has growth in 21th century and the commerce system change dramatically from brick-and-mortar world to click and conquer world and provide facilities to website system. The internet today made enormous savings in time and money achieved to change its name to E-commerce in web based world.
This project is about Tours and travels system is a web based application useful for managing different types of bookings (It offer travel services including ticket bookings and hotel reservations) by using a single application.

1.1 Problem Definition:

Today's extremely exhausting work environment dictates that individuals requires some joyful holiday. People are planning their trip separately flights, hotels and tour packages apart.

From the business perspective, managing the customer information is also important to achieve high profit.

1.2 Project Definition:

Tours and travels system is a web based application useful for managing different types of bookings (It offer travel services including ticket bookings, hotel reservations) by using a single application.

1.3 Issues:

	ISSUES	WEIGHT
1	Customer doesn't usually have time to place their booking by going to the traveling agencies by himself.	10
2	There is no information about customer's preferences.	8
3	there is lack of interaction between customers and business system	2

1.4 Objectives:

1. Provide an online web base system that provides a kind of all in one for the bookings.
2. Enforce each customer to subscribe, and keep track of the customer historical order, and preferences in the data base.
3. Provide a system where the customer can interact very easily.

1.5 Requirements:

- The system need to be secured from customer side as well as from administrator side.
- Provide an easy and interactive graphical user interface event for non-technical people.
- The user must have a full control over his account.

1.6 Constraints:

- The current system should be ready by the end of the academic year 2015/2016.
- The current system is completely free for use.

1.7 Motivation and Purpose

Reasons for traveling include recreation tourism or vacationing research travel for the gathering of information, for holiday to visit people, volunteer travel for charity, migration to begin life somewhere else, religious pilgrimages and mission trips, business travel trade commuting, and other reasons, such as to obtain health care or waging or fleeing war or for the enjoyment of traveling. Travel may occur by human-powered transport such as walking or bicycling, or with vehicles, such as public transport, automobiles, trains and airplanes.

Motives to travel include:

- pleasure
- relaxation
- discovery and exploration
- getting to know other cultures
- taking personal time for building interpersonal relationships

.

Chapter 2

2.1 Platform, Tools and Technologies:

For the development of this system we are using:

1. PHP5
2. HTML5
3. CSS3
4. JAVASCRIPT
5. BOOTSTRAP FRAME WORK
6. PYTHON
7. XAMPP(APACHE2 SERVER FOR PHP AND MYSQL DATABASE) And WINDOWS Platform

In this project, MySQL is used as the backend database. MySQL is an open source database management system. The features of MySQL are given below MySQL is a relational database management system. A relational database stores information in different tables, rather than in one giant table. These tables can be referenced to each other, to access and maintain data easily. MySQL is open source database system. The database software can be used and modify by anyone according to their needs. It is fast, reliable and easy to use. To improve the performance, MySQL is multithreaded database engine. A multithreaded application performs many tasks at the same time as if multiple instances of that application were running simultaneously. In being multithreaded MySQL has many advantages. A separate thread handles each incoming connection with an extra thread that is always running to manage the connections. Multiple clients can perform read operations simultaneously, but while writing, only hold up another client that needs access to the data being updated. Even though the threads share the same process space, they execute individually and because of this separation, multiprocessor machines can spread the thread across many CPUs as long as the host operating system supports multiple CPUs. Multithreading is the key feature to support MySQL's performance design goals. It is the core feature around which MySQL is built. MySQL database is connected to JSP using an ODBC driver. Open Database Connectivity (ODBC) is a widely accepted application-programming interface (API) for database access. The ODBC driver is a library that implements the functions supported by ODBC API. It processes ODBC function calls, submits SQL requests to MySQL server, and returns results back to the application. If necessary, the driver modifies an application's request so that the request conforms to syntax supported by MySQL.

2.2 FEATURES

- ADMIN
  - BOOKING MANAGEMENT
  - HOTEL MANAGEMENT
  - FLIGHTS MANAGEMENT

- USER
  - LOGIN
  - CAN REGISTER
  - MAKE RESERVATION (Hotels, Flights)
  - CANCEL BOOKING (Hotels, Flights)
  - SEARCH HOTELS, FLIGHTS,

2.3 ADMIN CONTROL PANEL

2.4 ADMIN HOME PAGE

After successful login in the system then the admin will get a summary of the current condition about registered users, Flight booking and Hotel booking.

2.5 HOTEL MANAGEMENT

Hotel management consist of adding a new hotel in the system then adding, removing or updating a particular room in a specific hotel.

2.6 FLIGHT MANAGEMENT

The flight management option is done completely by the API provider, it consist of adding, editing or removing information about flights. So API provider provides data about flights details.

2.7 RESERVATIONS

The admin of system is managing the bookings: he can confirm or cancel a reservation about hotels and flights. By default the request is pending when the booking is made, therefore the admin has to confirm or cancel in order for the customer to get the notification.

2.8 USER INTERFACE

2.9 Registration

Anyone can register for an account from travel and tour website it is free, the account will be validated by the administrator of the system.to register a user must give some basic information: user name, password, email, and address.

2.10 Make reservation:

This is the part where the user has the capability to make a reservation for hotel and flights.

The process of reservation as follow

1. For Hotels: the user has to first search for the hotel base on location and other parameters like check-in and check-out date, size of the room etc. Then select a particular hotel and available rooms will be display with their details finally he can place the booking of the desired room.
2. For Flights: The customer or passenger will first search the flight and destinations from where to where then he will be selecting the desired date rather the flight is available or not. Based on these information he/she can book a flight. In order for the customer or passenger to book a flight, first of all he will select departure location or “from where” and the arrival location or “to where” then select the desired date for travelling.

2.11 API PROVIDER

1. API Provider for Flight: Sabre developer (link https://developer.sabre.com)

- Registration

  Users are requested to give some basic information in order to get the API key

- Authentication

Step 1: Construct your Client ID

The format looks like this: V1:{userid}:{group}:{domain}
This step assumes you have obtained the security credentials to build your client ID.

Step 2: Base64 encode your credentials

Use a base64 encoding tool to encode your Client ID from step 1. Then encode your password. Append your new encoded Client ID with your encoded password and separate with a colon to make a concatenated string. The format looks like this: yourclientid: yourclientsecret

Step 3: Get an access token

Access token request.
Make an HTTPS POST to the authentication URL at
{Environment}/V2/auth/token
Access token response
If the request is valid, the API will send a response that contains the access token.
Field Value Description
access_token: (your token) this must be sent to access the REST API
token_type: bearer, the type of token returned
expires_in: 604800, the lifetime of the access token in seconds.

Step 4: Call the Rest API

Send the access token to the environment, method and endpoint in an Authorization header when you call a given REST API. We recommend you reuse the same access token for multiple requests, until it expires.

Step 5: Handle token Expiration

This step consist of resetting the access token after it expires.

2. API Provider for Hotel: Sabre Sky Scanner (link https://business.skyscanner.net/)

- Registration

  Users are requested to give some basic information in order to get the API key
- Authentication

Step 1: Creating the session

The Hotels Price List Session must be created before any pricing data can be obtained. The request contains details of the check-in and check-out dates, the number of guests and rooms required, and the destination. These parameters define the session, and cannot be changed within the session.

Step 2: Polling the session

Polling the session will return the details of all possible hotels that satisfy the request query parameters. Prices will be obtained for the hotels during the session. The calling application should poll the session several times until value of 'status' element is COMPLETE.

Step 3: Creation the details

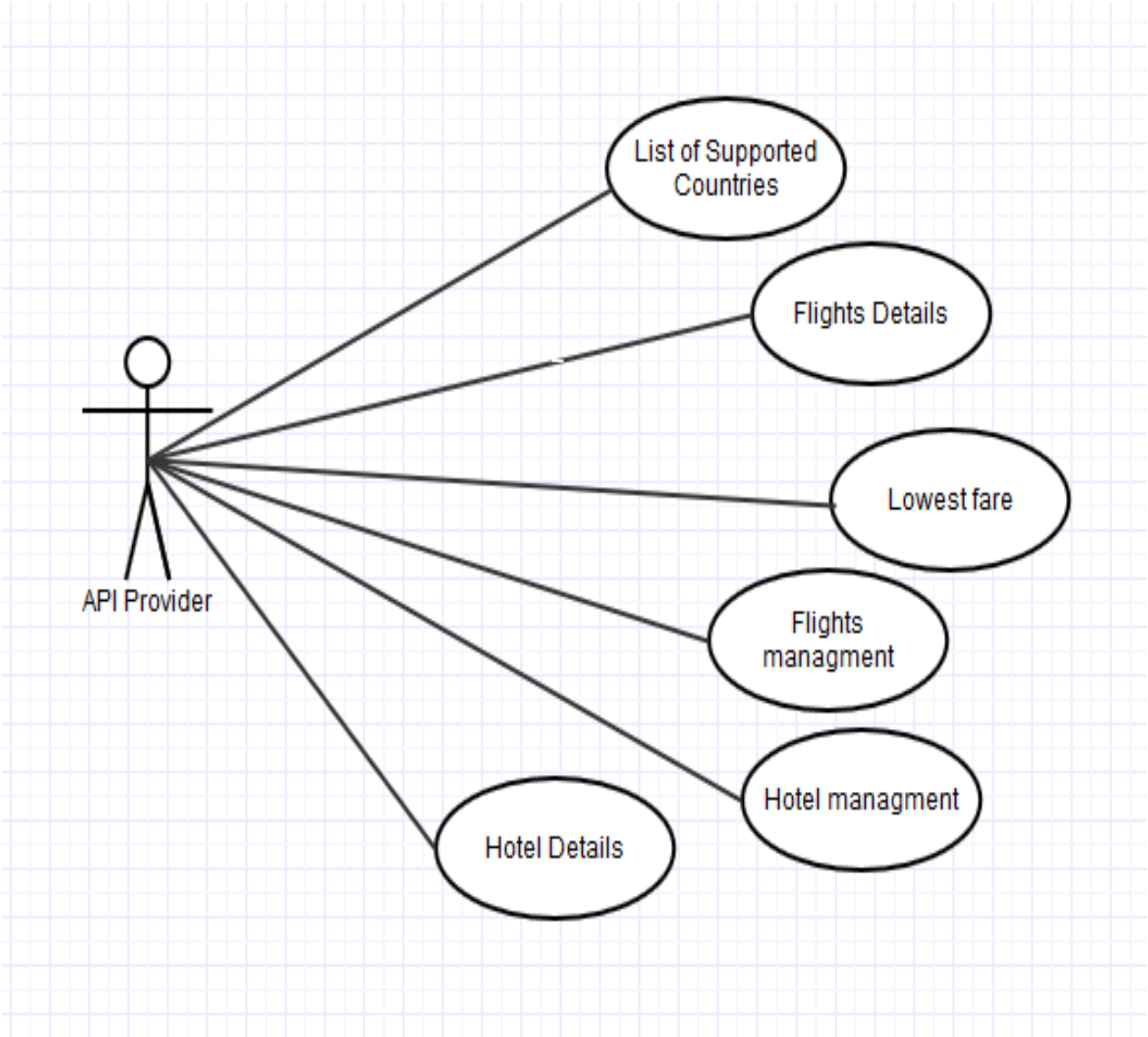
In order to drill down into specific hotels and get full details about them, including the necessary deep links to actually make the booking, it is necessary to make a Hotels Details request, then poll for results.

Step 4: Polling the details

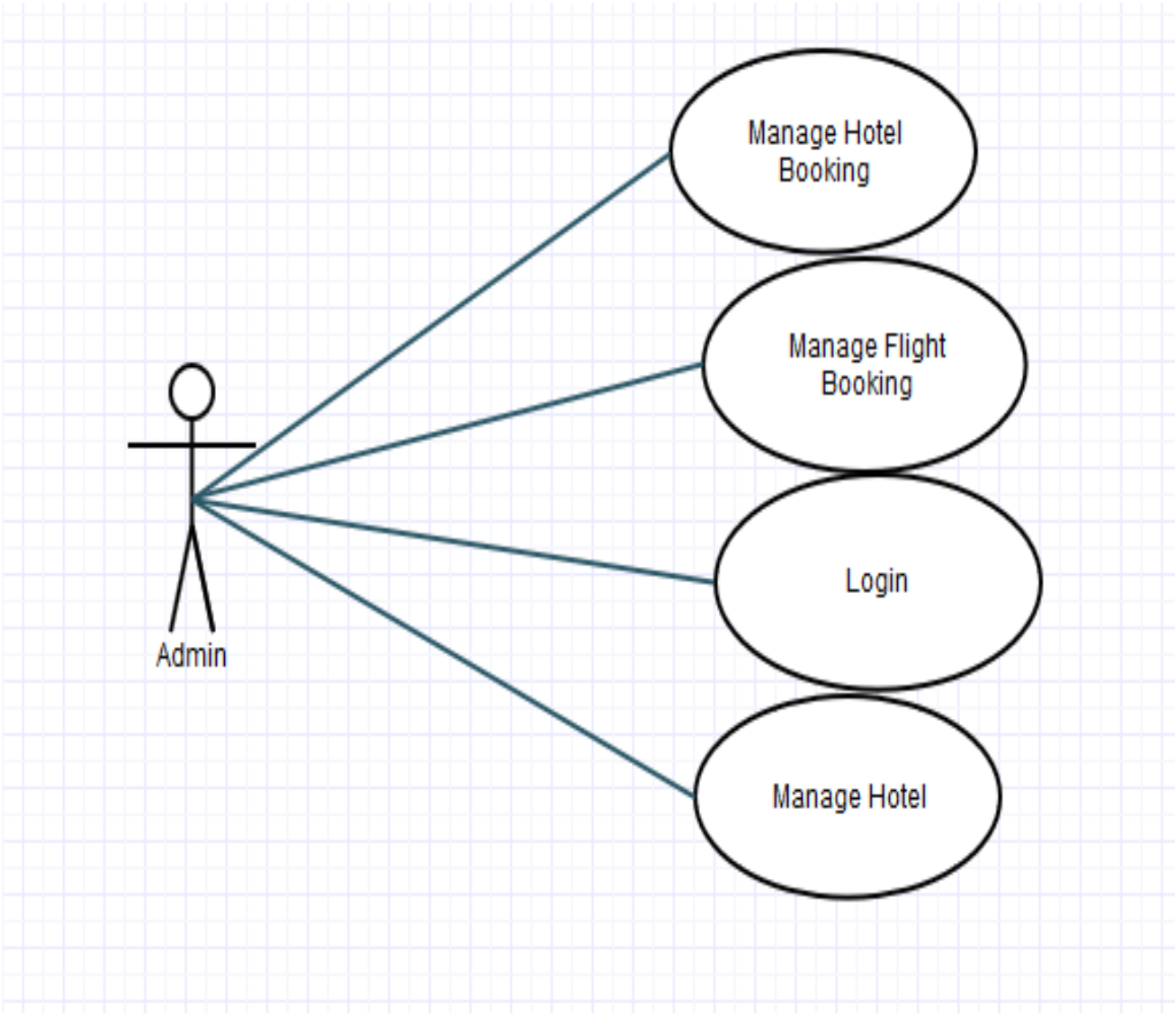
Once the request for Details has been done, the polling can start immediately. The calling application should poll several times until all updates are complete (this is based on the value of the 'status' element which must be equals to 'COMPLETE')

Chapter 3

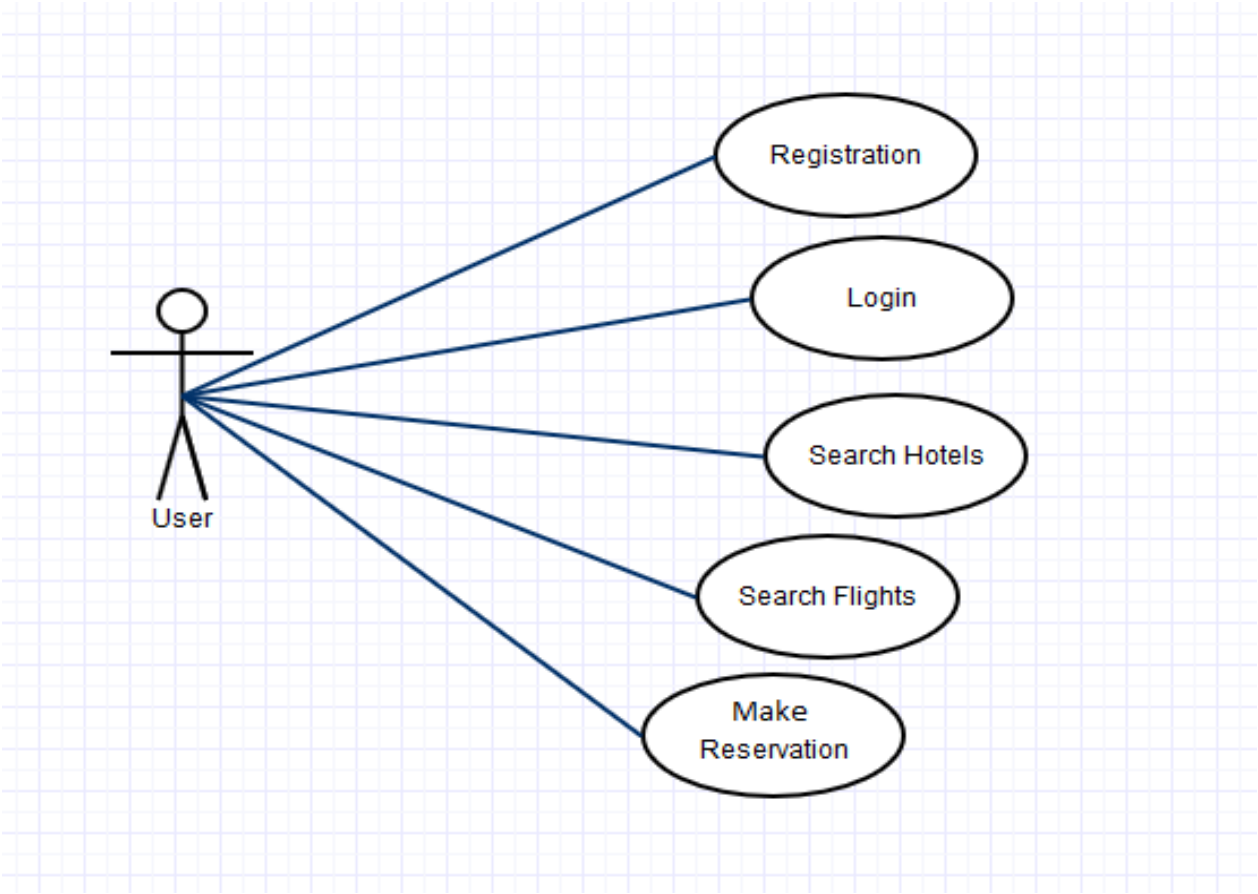
3.1 Use case Diagram of API Provider.



3.2 Use case Diagram of Admin.

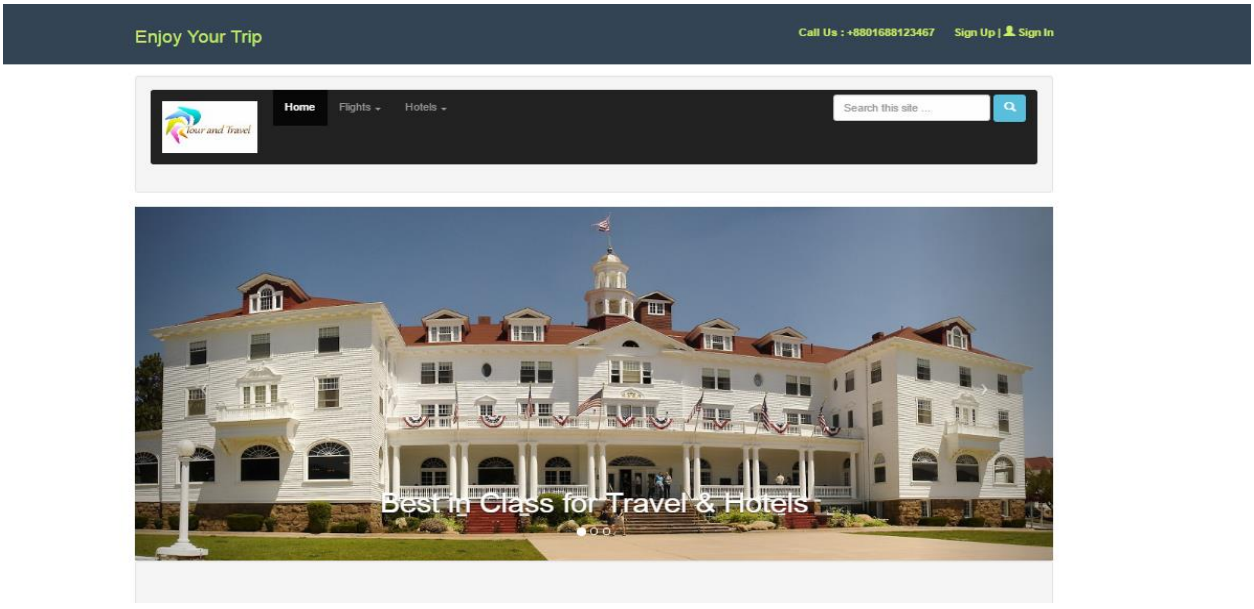


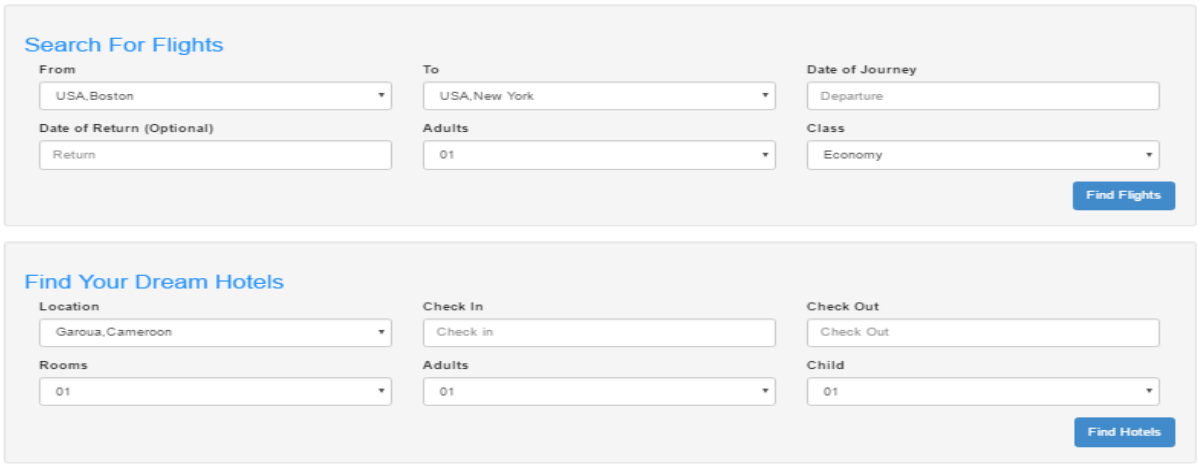
3.3 Use case Diagram of User.

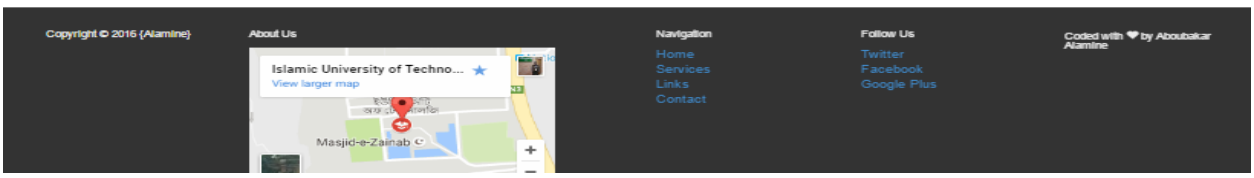


3.4 Home Page

HOME PAGE

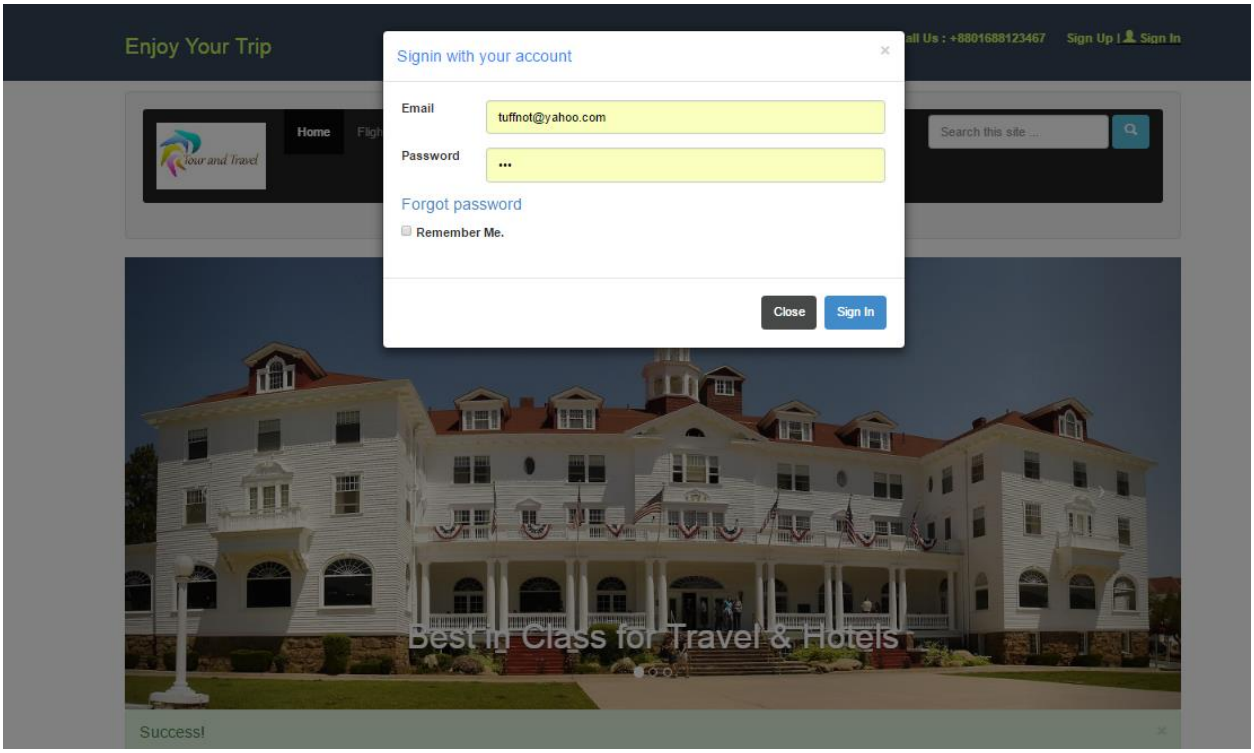






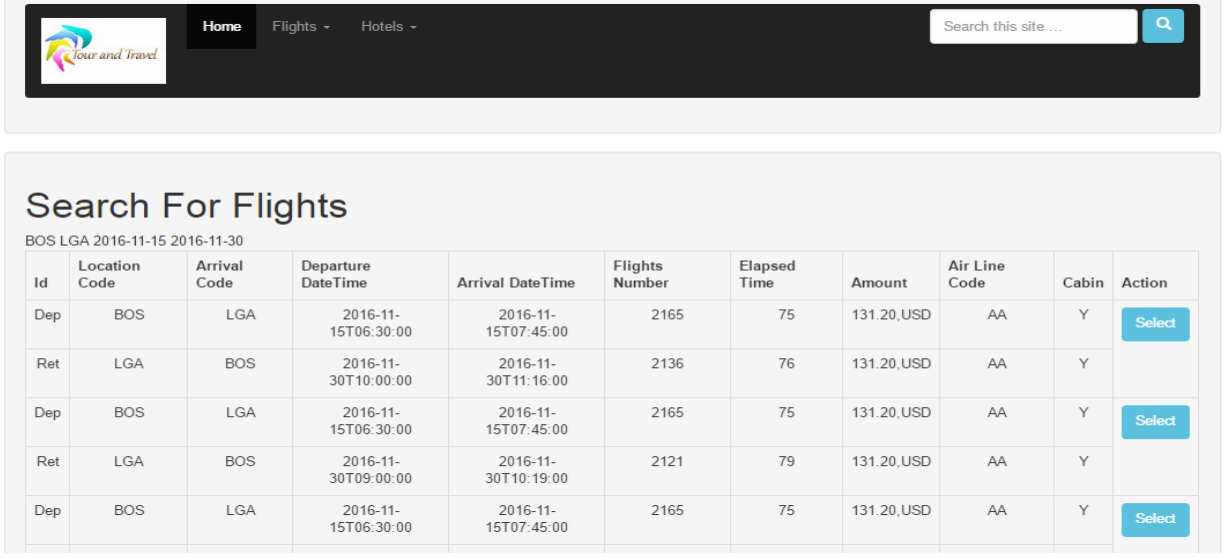
Description: this is the home page of our system.

3.5 LOGIN INTERFACE

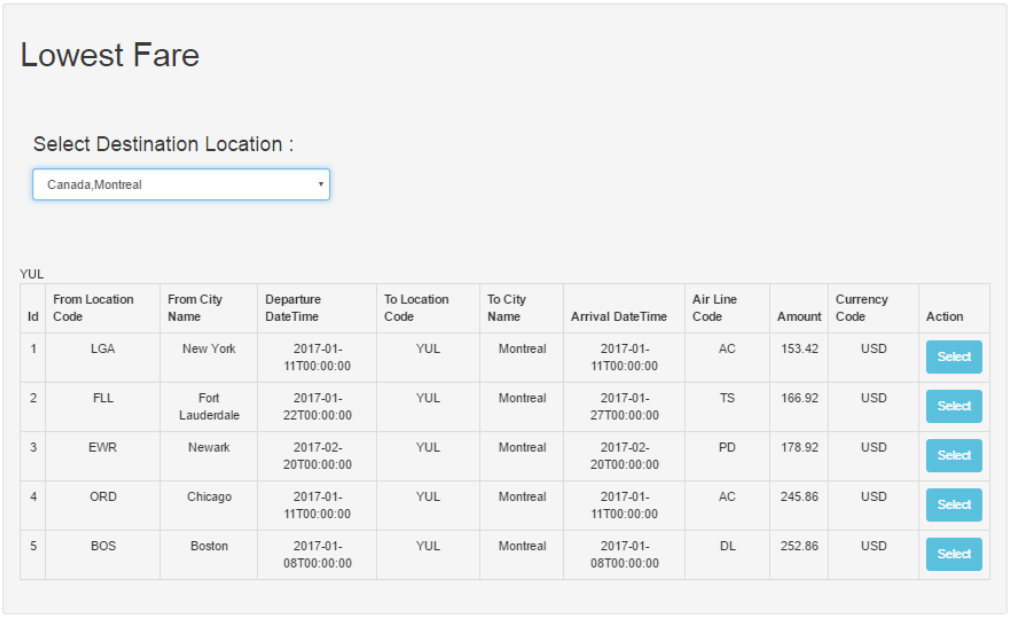


Description: from this login interface the user has to provide his email and password in order to get access to our system

3.6 SEARCH FOR FLIGHTS

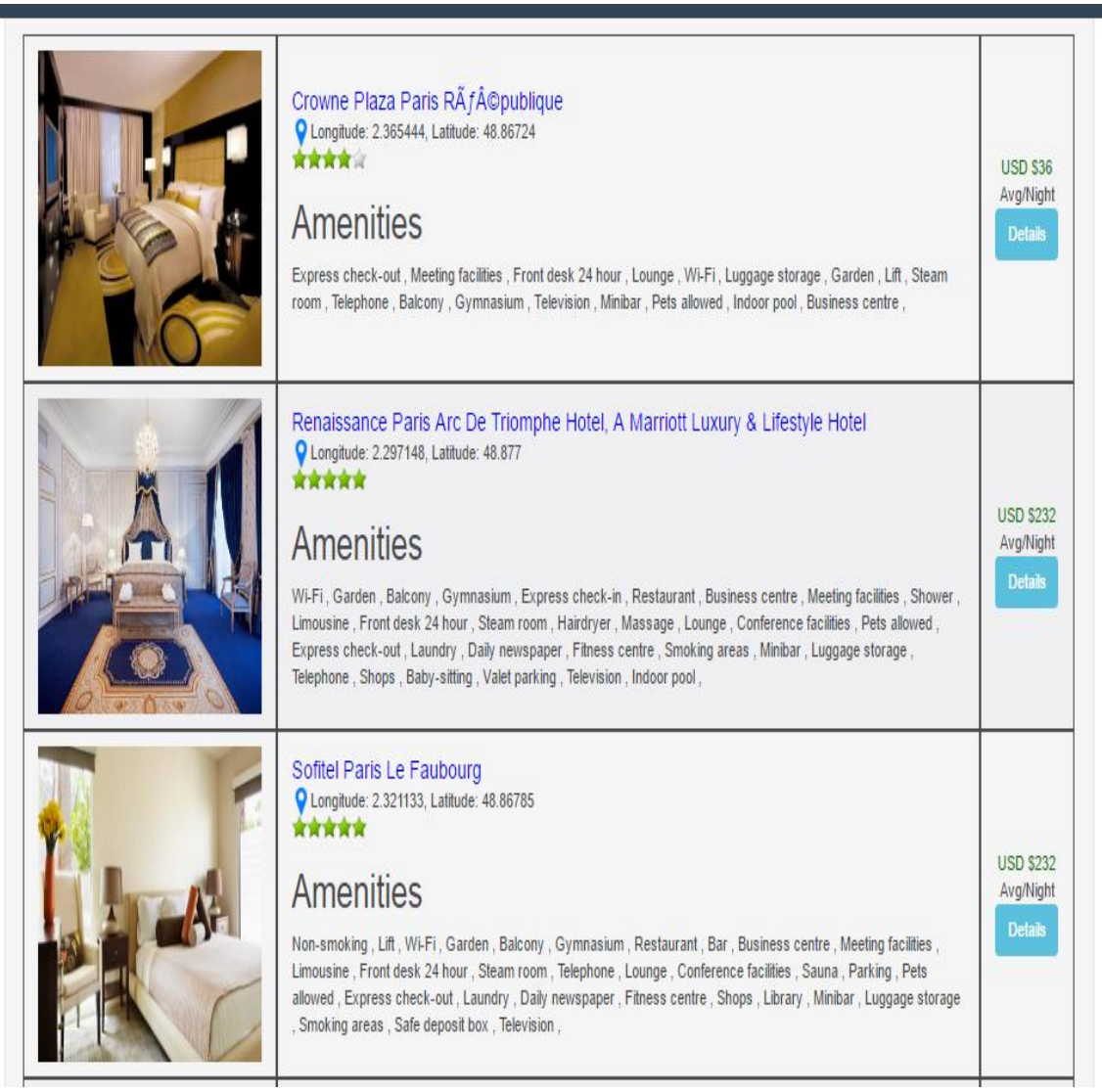


Description: After selecting the origin location and destination location along with Departure date and/or Arrival date then the customer can search for available flight to proceed with the booking process.



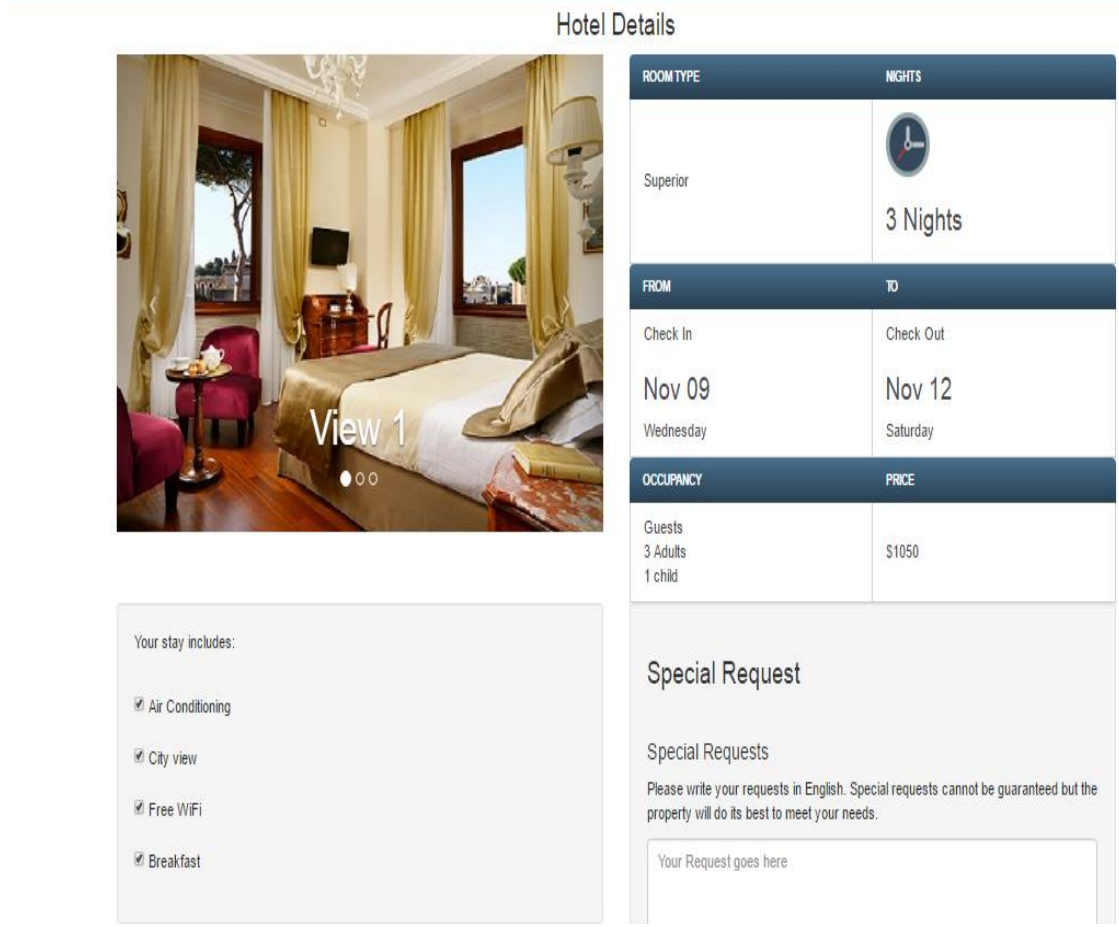
Description: Here the customer will select a destination location in order to find the lowest fare to this particular city.

3.7 SEARCH FOR HOTELS



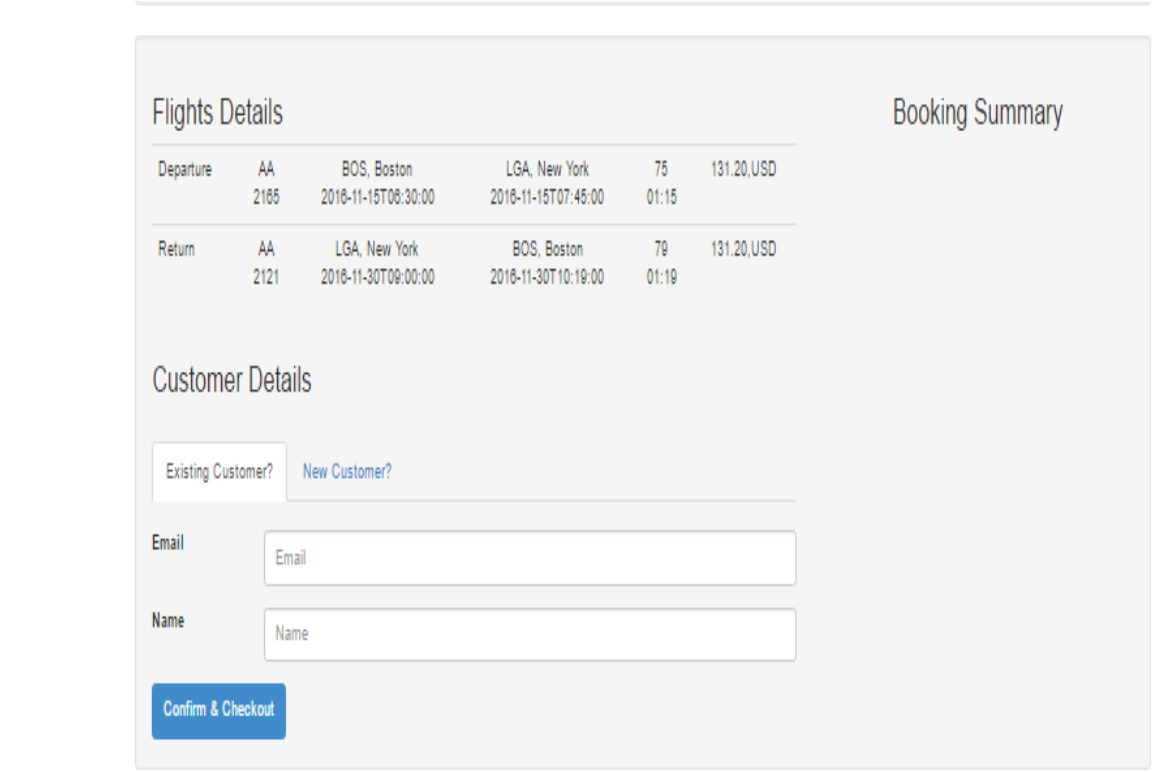
Description: Check-in date, check-out date and the city name are basic information required in order to get details about hotels in a particular city.

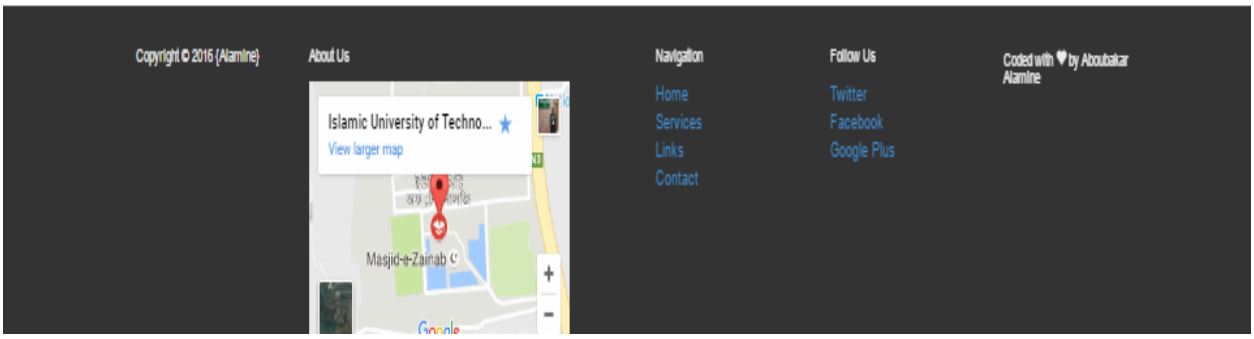
3.8 BOOKING A ROOM



Description: Customer having an account can directly book a room by just providing his/her email address and name.

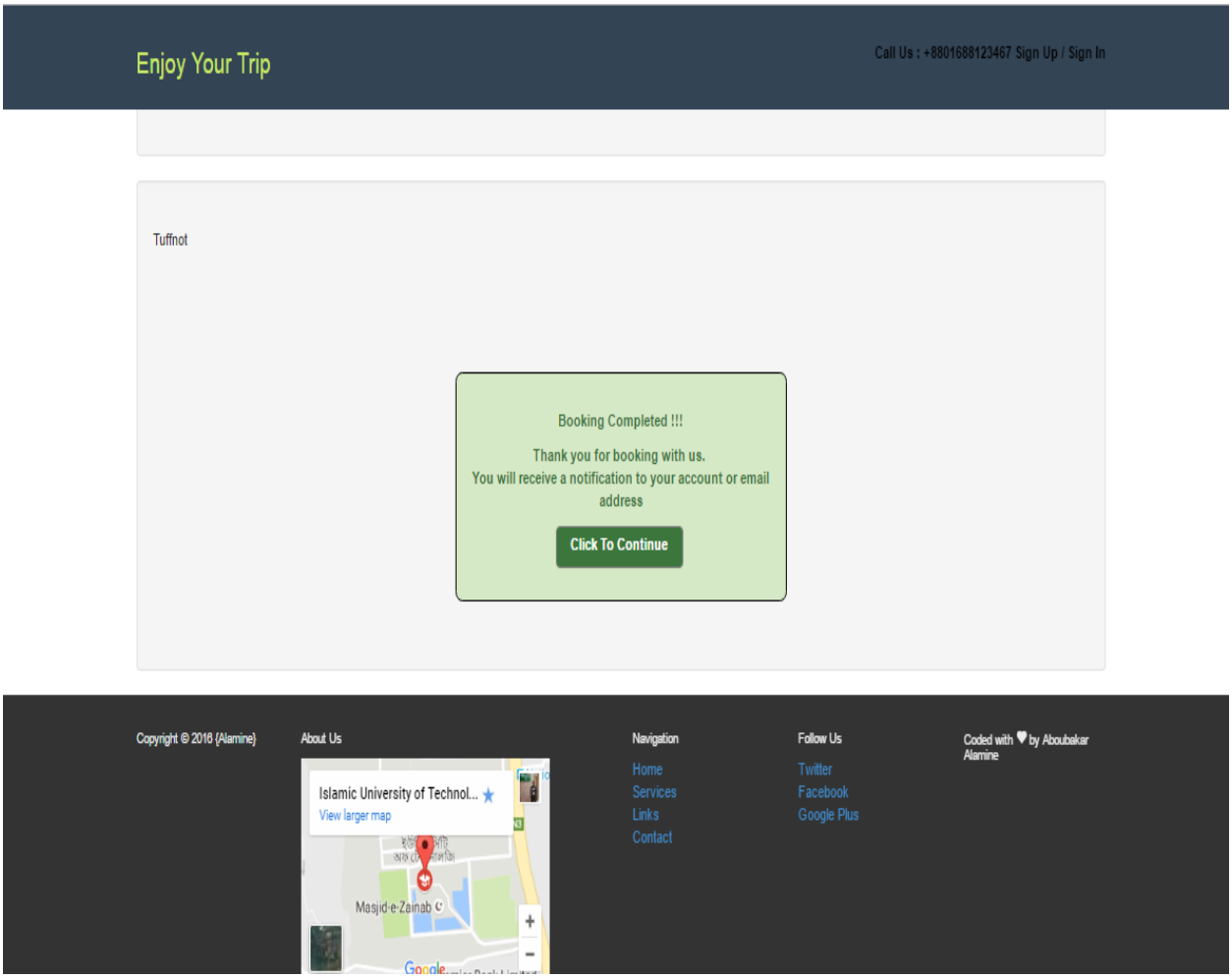
BOOKING A ROOM





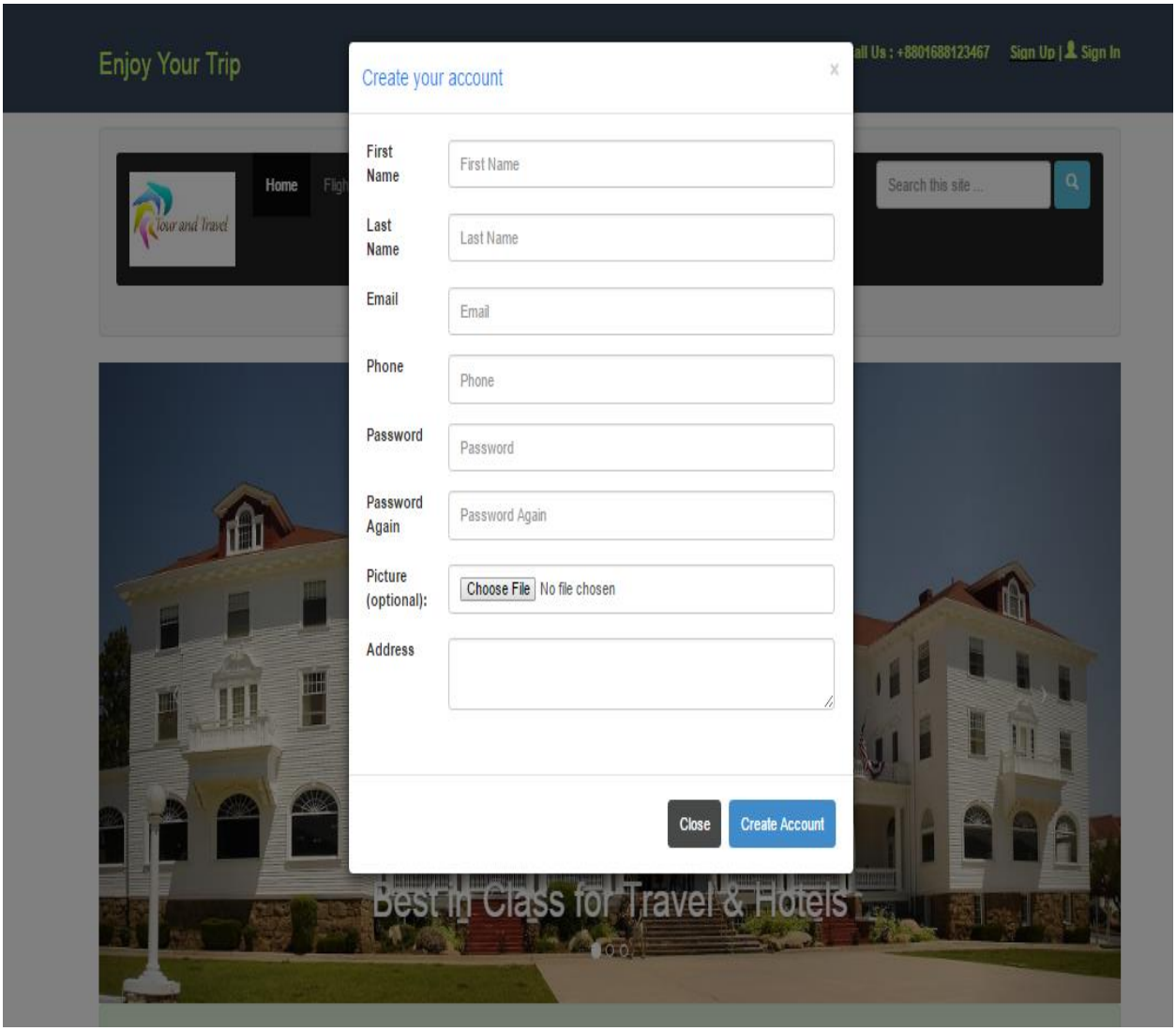
Description: Customer having an account can directly book a room by just providing his/her email address and name.

3.9 SUCCESSFUL BOOKING



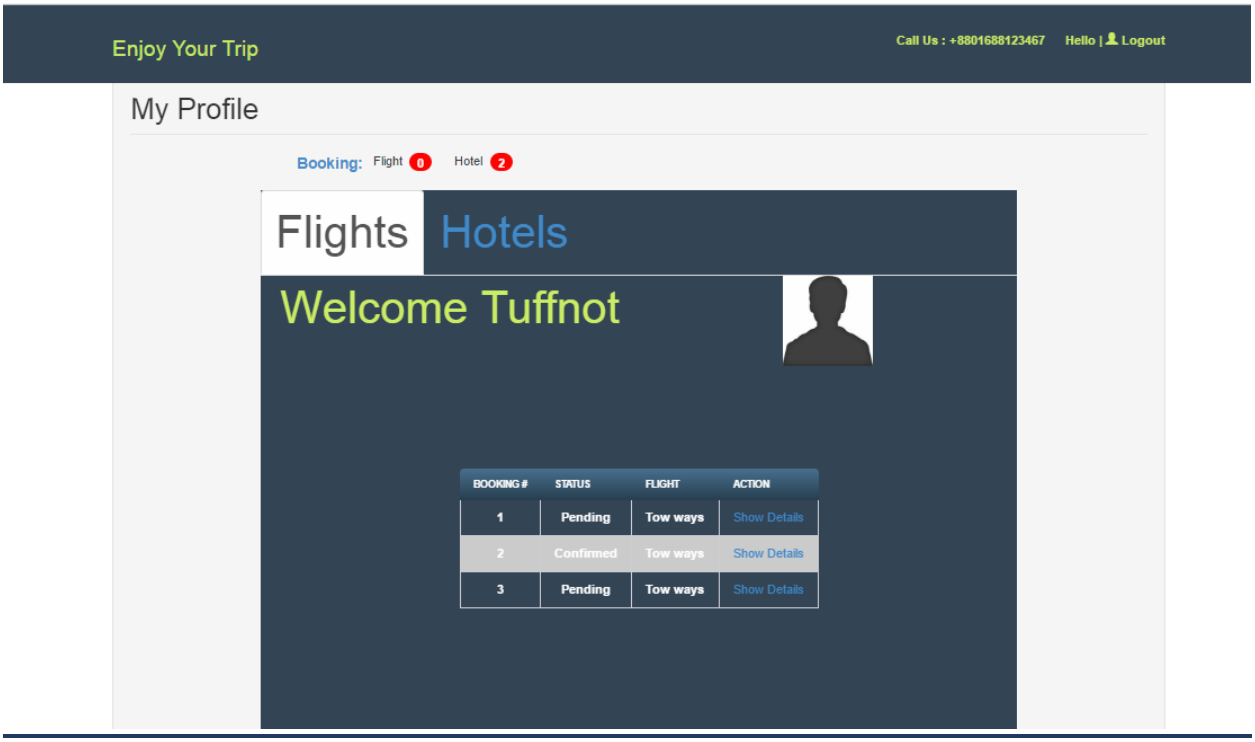
Description: When the booking process is done successfully.

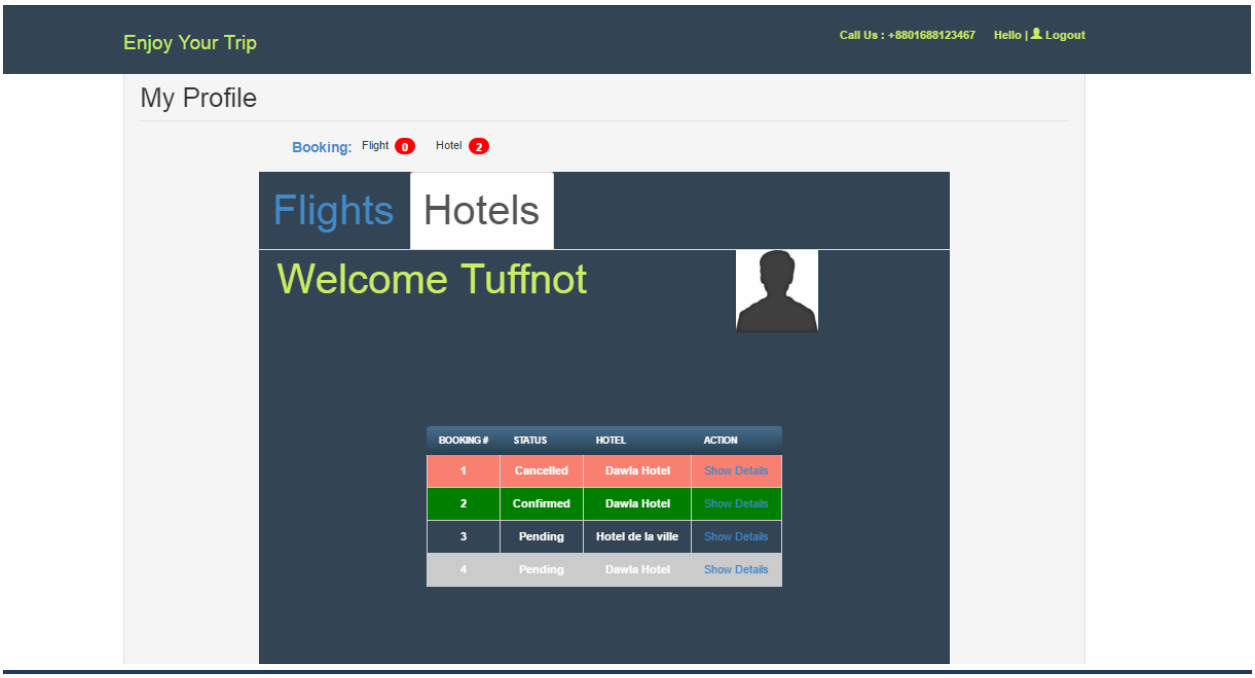
3.10 REGISTRATION



Description: This window allow a new user to create an account to get full access.

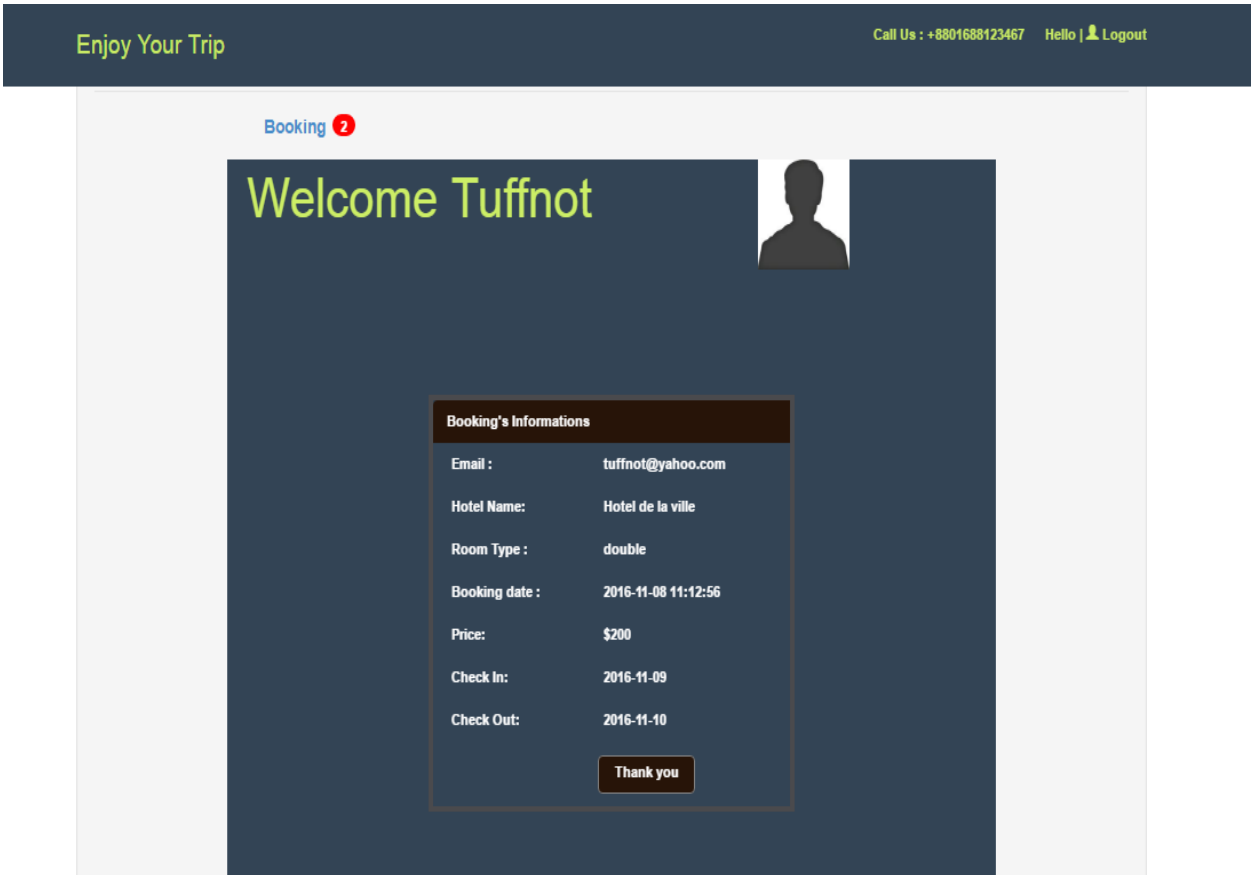
3.11 USER INTERFACE





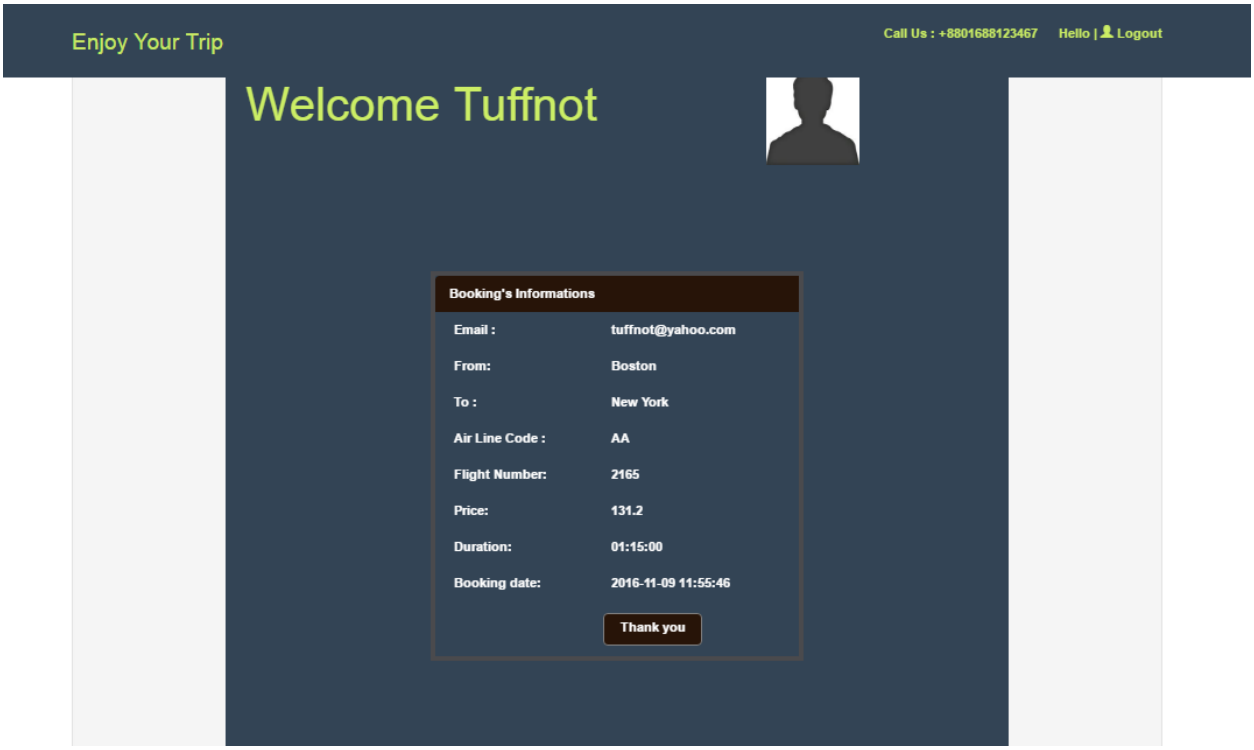
Description: this interface is the user home interface, it is access after a successful login.

3.12 HOTEL BOOKING DETAILS



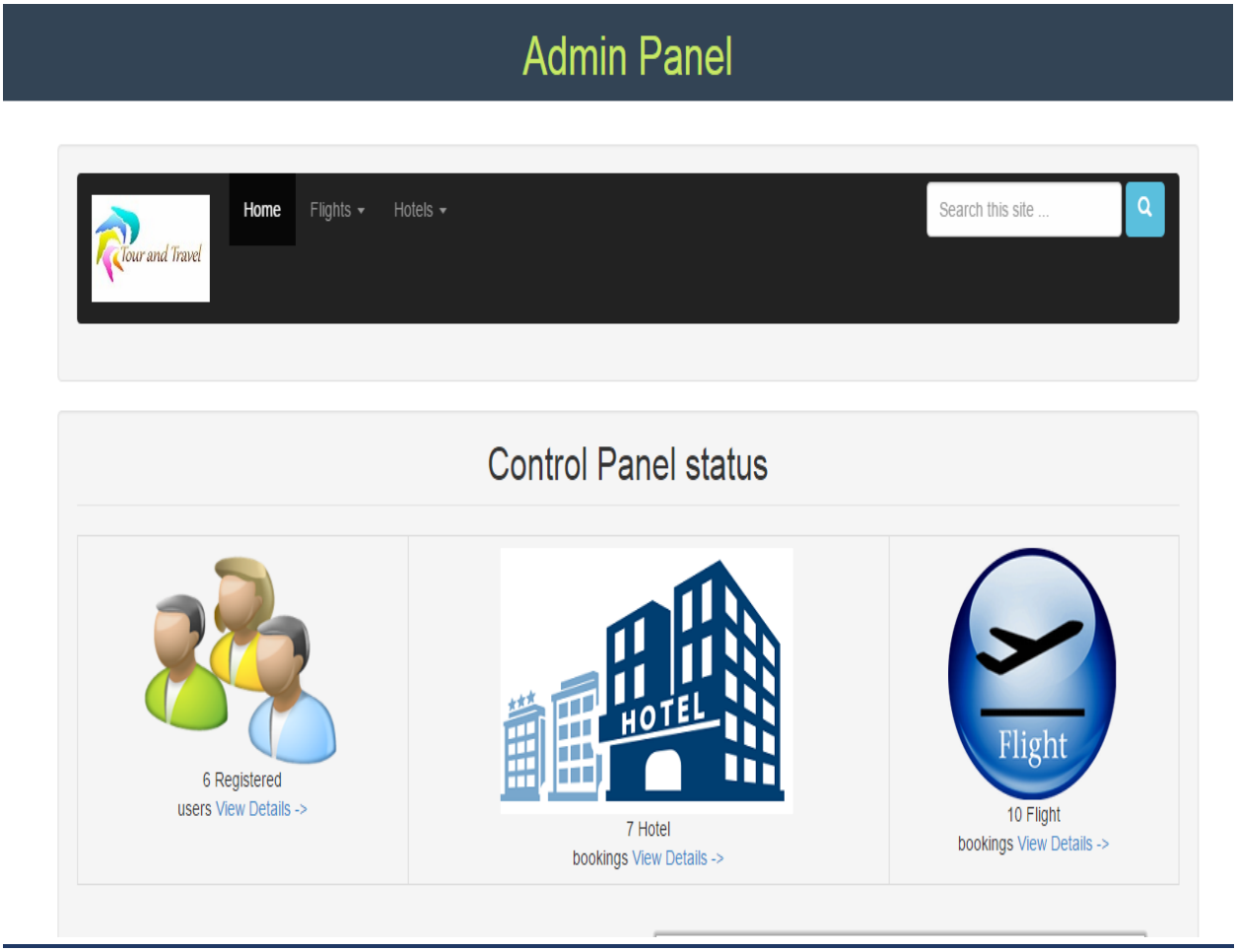
Description: When the user login into his account then he will get notification for any reservation made whether it is for flight or hotel, from this window he can see the details about a particular hotel booking.

3.13 FLIGHT BOOKING DETAILS



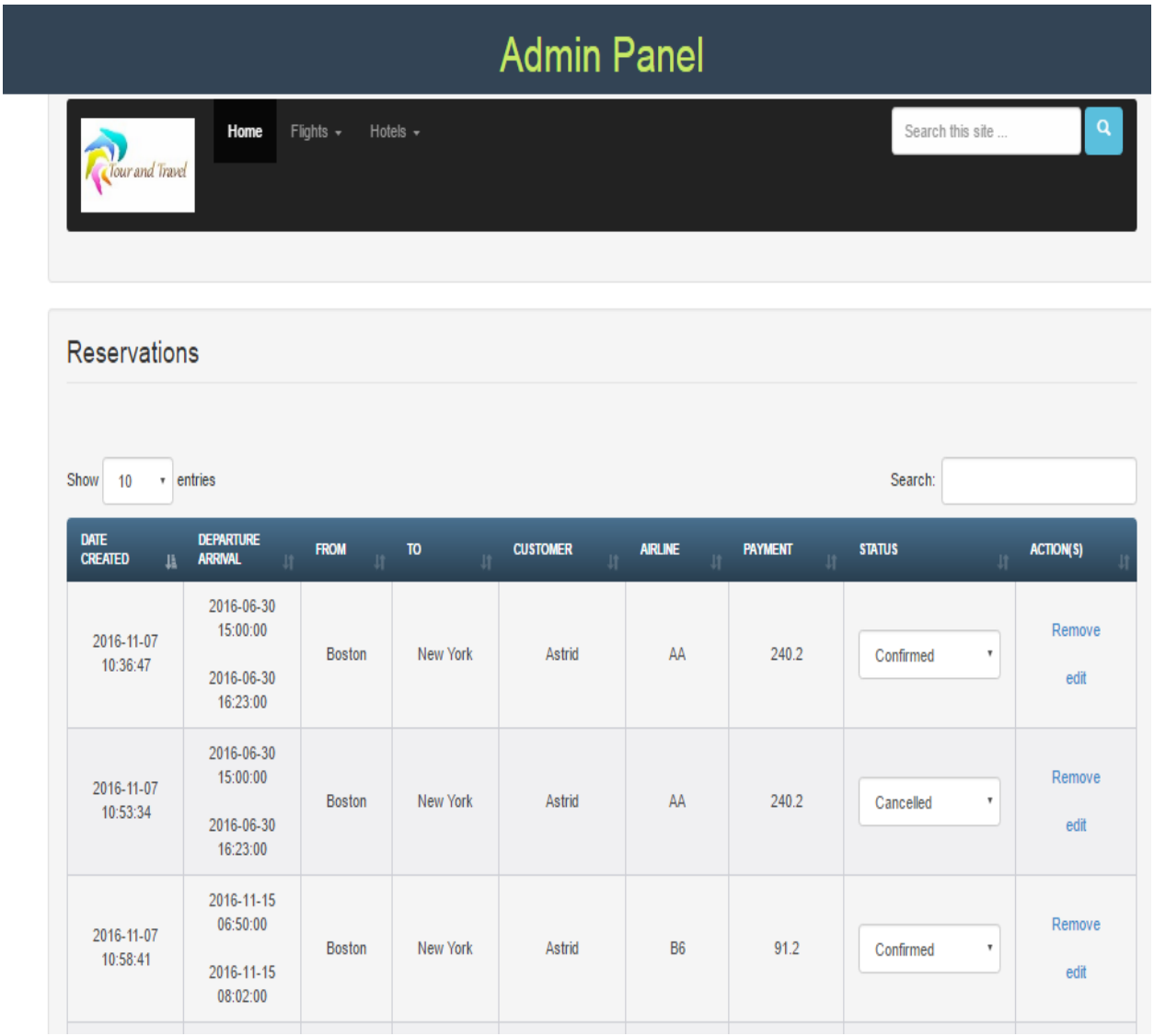
Description: When the user login into his account then he will get notification for any reservation made whether it is for flight or hotel, from this window he can see the details about a particular flight booking.

3.14 ADMIN HOME INTERFACE



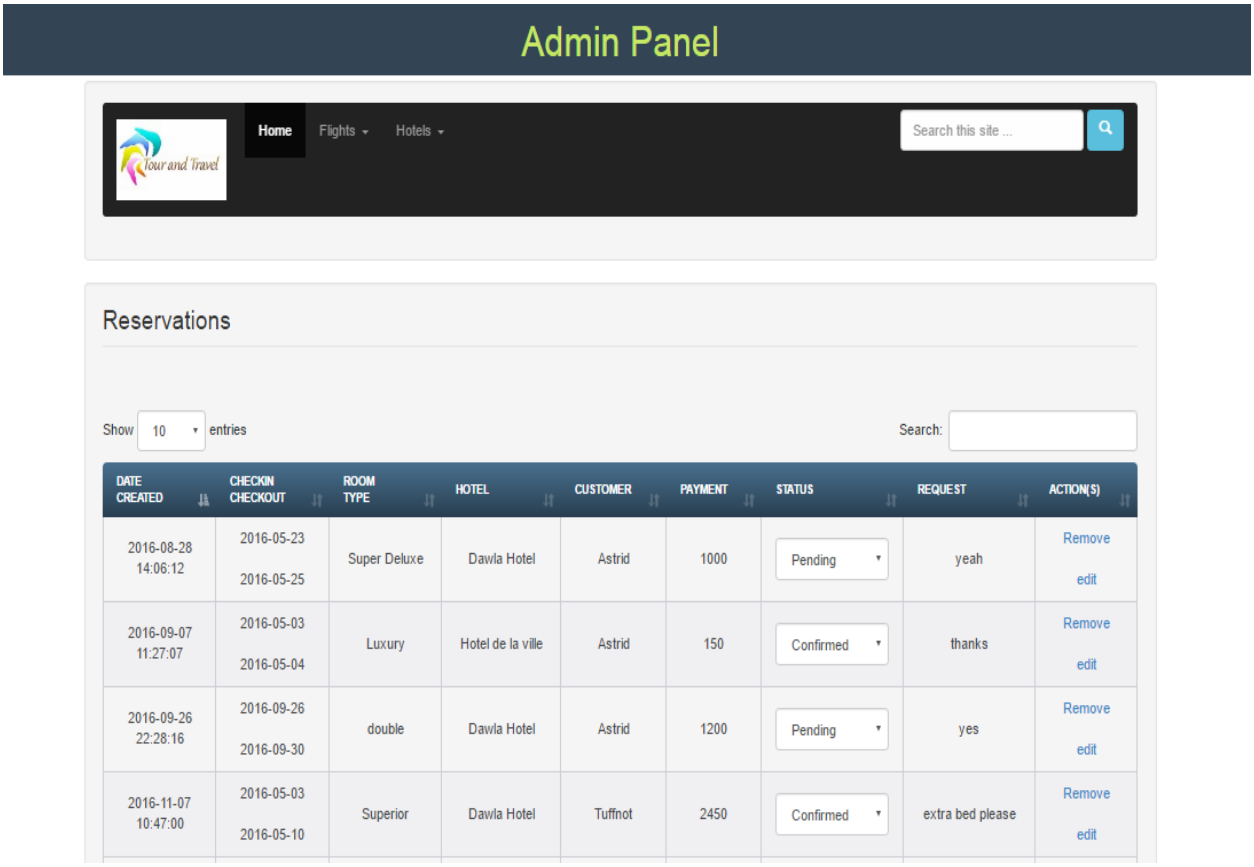
Description: this page gives an overview of what is going on in the system to the admin such as: the number of registered customer, the number of flight booked and the number of hotel booked.

3.15 FLIGHTS RESERVATONS



Description: From this interface the admin can confirm, cancel, edit or delete any reservation.

3.16 HOTEL RESERVATONS



Description: From this interface the admin can confirm, cancel, edit or delete any reservation.

Chapter 4

4. Limitations and Future Possibilities:

- The current system is not dealing with any payment method directly, we assume dealing with kind of cash on delivery.
- Notification by the customer email is not possible now but later is going to be implemented because some user may need to see their notification through email.
- Right now the system does not allow any chatting with the admin, it will be implemented in future.

4.1 Conclusion:

Travel and Tour is online base system where anyone can register and then place bookings base on his preference about hotel and flight in order to enjoy a vacation or a trip.