

**DESIGN AND DEVELOPMENT OF WEB APPLICATION ON
ONLINE HOTEL RESERVATION & TRANSPORTATION SYSTEM**

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of
Bachelor of Science in Computer Science and Engineering

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DHAKA, BANGLADESH

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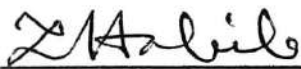
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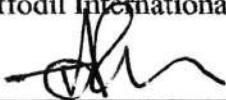
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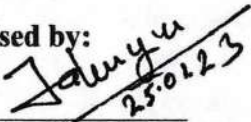
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DECLARATION

I hereby declare that this project has been done by me under the supervision of **Mohammad Jahangir Alam, Department of CSE, Daffodil International University**. I also declare that neither this project nor any portion of this project has been submitted to any other institution for the award of a degree or diploma.

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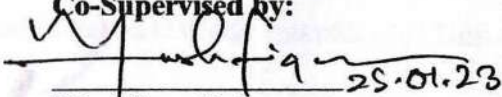
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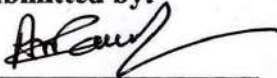
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ABSTRACT

The project Online Hotel Reservation & Transportation System is a system predicated on accessing the internet to book for rooms in a hotel and search for flight details. The reason for this study is to develop and implement an online hotel reservation system for hotels and get details about the flights on their expected route, which will supersede the manual method of booking hotel rooms and withal for flight booking.

The earlier system for booking rooms was faced with so many errors like delays in processing the customer booking or paying for rooms that are below or far away from his/her standard, causing arduousness for emergency booking. The whole project analysis and design methodology were consequently used to analyze the system in order to discover the sundry objects involved and how they interact with one another so that an incipient and ameliorated system can be defined. The utilization of online view of room rates and uploading of available rooms and facilities was utilized for the incipient system so that the customer can view and make his cull afore advent, and additionally in the case of emergency travel.

Here utilizer can withal book their flights as their cull and within budgets. This incipient system availed the hotel owners in managing their hotels because they can withal regulate the receptionist's moves and eschew fraudulent activities. It withal incremented the efficiency of the hotel managers and withal their profit margin, once they have better and good facilities. After all, this project avails all the users to get everything in their pockets.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

It is the Web application named “Online Hotel Reservation & Transportation System” which will help the user to find a guide to what to do before planning a tour for anyone, anywhere. It will also help you to catch the nearest hotel where you can have one or more days anytime, anywhere. In populated countries like Bangladesh where the bottleneck is a general scene. So, it is difficult for people to go to Airport physically, since it's more time-consuming and cause physical and mental harassment. In this situation, you can use this site to book an airplane ticket. This system provides flexible online applications for customers and provides information through the internet.

1.2 Motivation

The idea behind the work was first sparked by a brief graphic that was shared with us during a class time. Why not make the assignment symbolize course simplification to prevent student dissatisfaction? In order to assess the user's knowledge, attitude, and impressions of the surroundings as well as to evaluate the Emergency Guidance, a team effort was created. Cellular phone applications that enable advice to complete the duties can be one such helpful feature. Anyone could use it as a useful tool. In addition, we created the program online so that anyone could utilize it without difficulty.

1.3 Objective

With the intention of attaining this aim I will,

- By this application user can know about which airplane are run on your expected root.
- Users also know about their regular timetable
- Ticket prices will be routinely apprised by synchronization
- User can know the particular position of any Hotel.

1.4 Expected Outcomes

The purpose of our project is to develop a website that will provide people with a variety of plans and pertinent information, improving the effectiveness of their tour planning and making it much easier to visit a variety of destinations around the country. This website has a user-friendly design that makes it easy for visitors to interact with it. On our website, a user must first register. Registration is cost-free. Once they have done that, they will simply log in and start using our website for their own travel requirements. so that they won't need to ask for help from others again. We're working to make our website more self-sufficient so that visitors won't need to download extra applications or websites or search for more web pages to supplement the main one.

1.5 Project Management and Finance

Making plans and organizing a company's resources to move a specific task, event, or responsibility closer to completion are both aspects of project control. Assets under control include people, money, technology, and expensive property, and it may consist of a one-time task or an ongoing activity. Project management is frequently associated with industries like engineering, production, and more recently, healthcare and information technology (IT), which frequently require a complex mix of components to be finished and put together in a specific way in order to produce a usable product. Regardless of the business, the assignment supervisor tends to have kind of an equal job: to aid in outlining the hopes and objectives of the assignment and choosing when and by whom the various assignment components are to be completed. To ensure that finished additives meet a high standard, they also develop nice manipulate assessments.

1.6 Report Layout

The report's structure outlines a synopsis of each chapter. All chapters are summarized as follows:

Chapter 1: Part of the chapter I've discussed the motivation for our project, our goals, as well as the typical outcomes of my work.

Chapter 2: In this section, I've discussed the theoretical underpinnings of my research, looked at related publications, related studies, and the scope of problems and obstacles.

Chapter 3: I have looked through this area of my prerequisites, including the use cases, class diagrams, agile models, and business process modeling.

Chapter 4: I've covered my project's specific overall strategy in this area, including the front end and back-end plans as well as the cooperation plan for the execution requirements.

Chapter 5: We'll go through the project's design in this chapter. Here are all the specifications for front-end, back-end, interaction design, user experience, and implementation.

Chapter 6: In this chapter, I've discussed the impact of this applications on society, environment. And here I also talked about the ethical aspects of this project and the sustainability plan.

Chapter 7: We shall examine the project's findings and suggestions for ongoing expansion in this chapter.

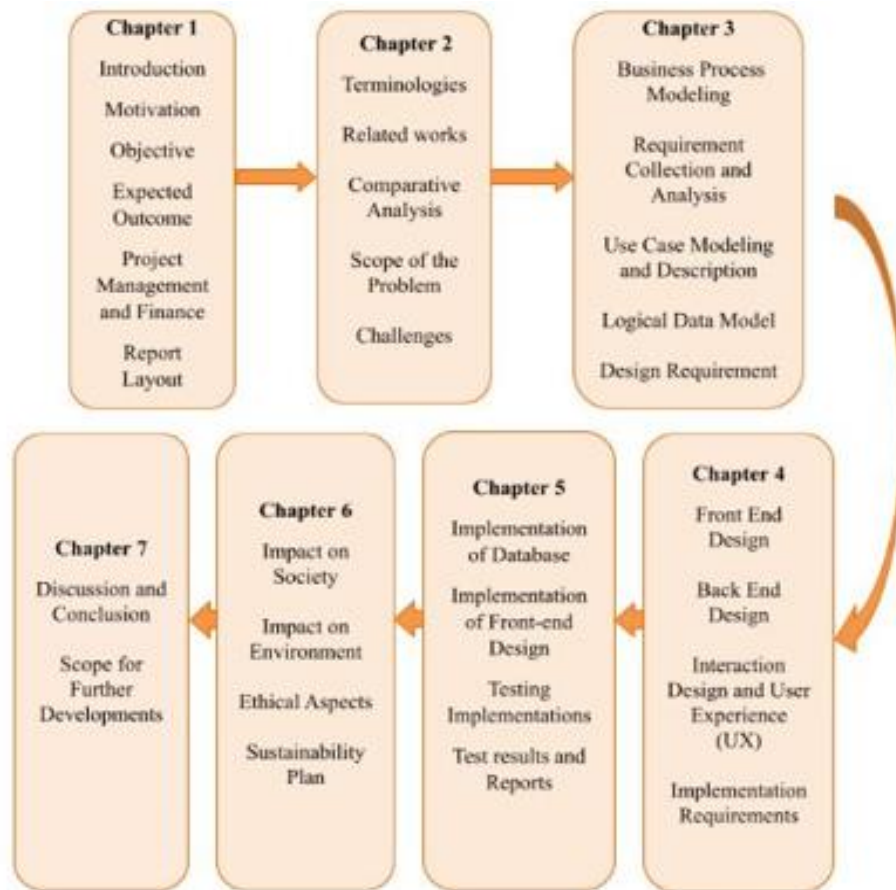


Figure 1.6.1: Report Layout

CHAPTER 2

BACKGROUND STUDY

2.1 Terminologies

The inclusion of technologies from the present. It keeps getting better. Today, automated systems are replacing manual systems for the majority of labor. The advancement of communication systems is a direct result of technological growth. A new dimension in communication has been added by the purchase of airline tickets through various online apps and the knowledge of numerous plane-related facts. Users may simply do this at any time and from any location [2]. Nearly every year, tourists from other countries visit our nation. Outside of our borders, several nations already possess more advanced technologies [1]. Nowadays, they search for nearly anything online. Where people may quickly and accurately obtain information regarding transportation, housing, etc.

With this in mind, we are considering developing a web application that will assist our citizens, particularly international visitors, in obtaining accurate information about travel, housing, numerous tourist spots, etc. The conversion of currencies is crucial for foreigners. They may also access it using this app.

2.2 Associated Works

We followed the directions given for the associated task. In essence, it is clear from the majority of websites that they are mostly used for making hotel room reservations, automobile rentals, and reservations for tables in restaurants. Therefore, a tourist can often reserve a hotel room before they plan to go, but when they get at their destination, they may discover that the cost of the hotel room's rental is exorbitant. Therefore, we are working to identify all of the issues with such websites before developing a plan to create something fresh and user-friendly to lessen harassment.

There are several internet projects that are related to mine because I'm developing an online hotel and ticket reservation system. But I'm developing some ad-hoc capabilities and a fusion that would be a huge help to all sorts of peregrinators. Biman Bangladesh, an online platform for booking tickets located in Bangladesh, is present on a few of the related websites. It is presently our nation's largest internet platform in terms of sheer size [3].

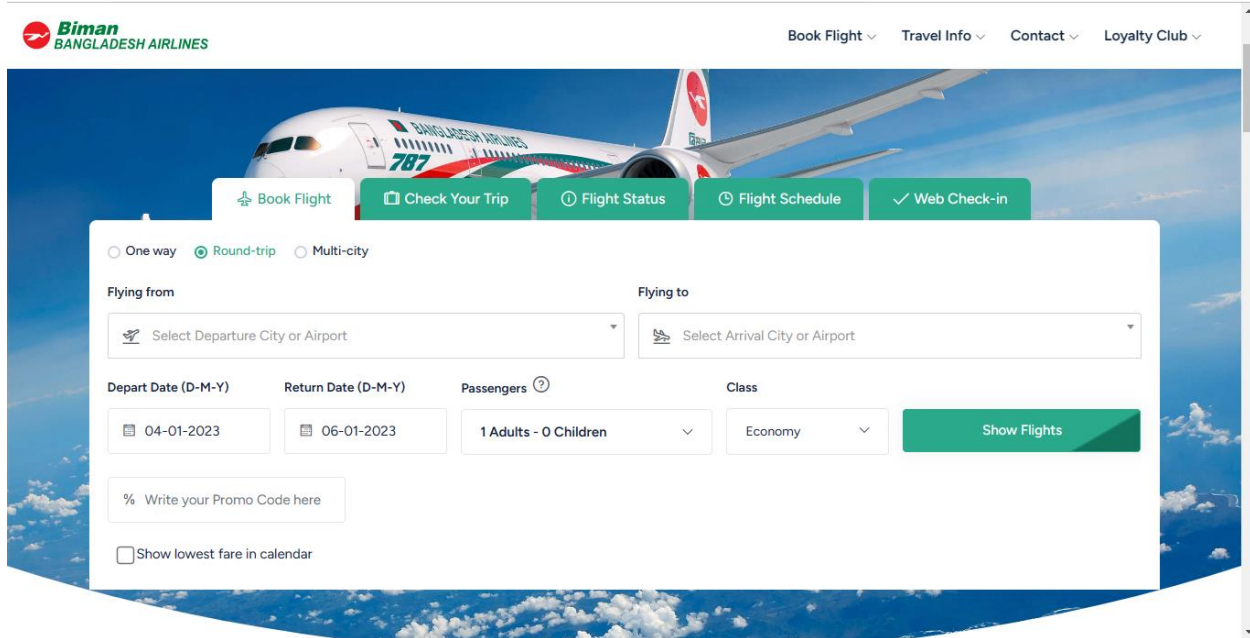


Figure 2.1.1: Biman Bangladesh Website

A five-star hotel internet-based website is sayeman resort.com [4]. In this website they fully focused on room reservation.

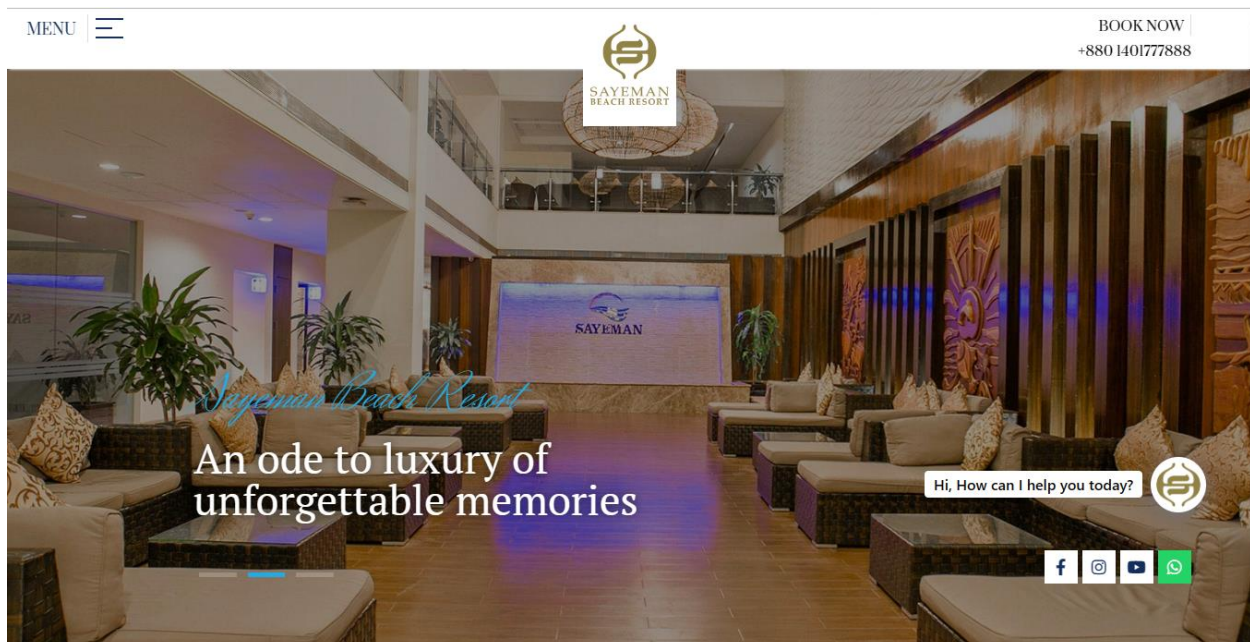


Figure 2.1.2: Hotel Sayeman Website

2.3 Comparative Evaluation

I have antecedently covered two different websites in our country. An air ticket booking website Bangladesh Biman. A platform for hotel room booking sayeman resort. But I have cumulated their feature in my website.

Table 2.3.1: Comparative Analysis

Feature	Biman Bangladesh	Hotel Sayeman	Online Hotel and Ticket
Ticket	Yes	No	Yes
Room	No	Yes	Yes

2.4 Size of the Problem

My preliminary target is to build it as easy as possible for job tourist to find the information they need on my platform, including ticket hotel room. Every cyberspace utilizer will be capable to access and utilize this website for reservations because it would be online. As my platform is an online based reservation platform, nobody can use it without an internet connection.

2.5 Difficulties

I would face the following difficulties toward provide the best utilizer experience possible:

- I need to create a user-friendly platform that everyone can find everything in my website.
- It needs to be updated because tickets and room prices and vacancies will be changed daily.
- Cyber security is also a crucial part as its handle customers details.
- If I opted to reach our targeted customers then I must need to do marketing and advertising. It is withal a paramount part.

CHAPTER 3 REQUIREMENTS SPECIFICATIONS

3.1 Business Process Modeling

BPM, commonly referred to as business process modeling, is the graphical depiction of any company's or website's business model or process, as well as the associated workflows. After completing a successful payment through the payment gateway, we have demonstrated in our BPM how a user may access both our air ticket and hotel room content. The materials available here search ticket, search room and more.

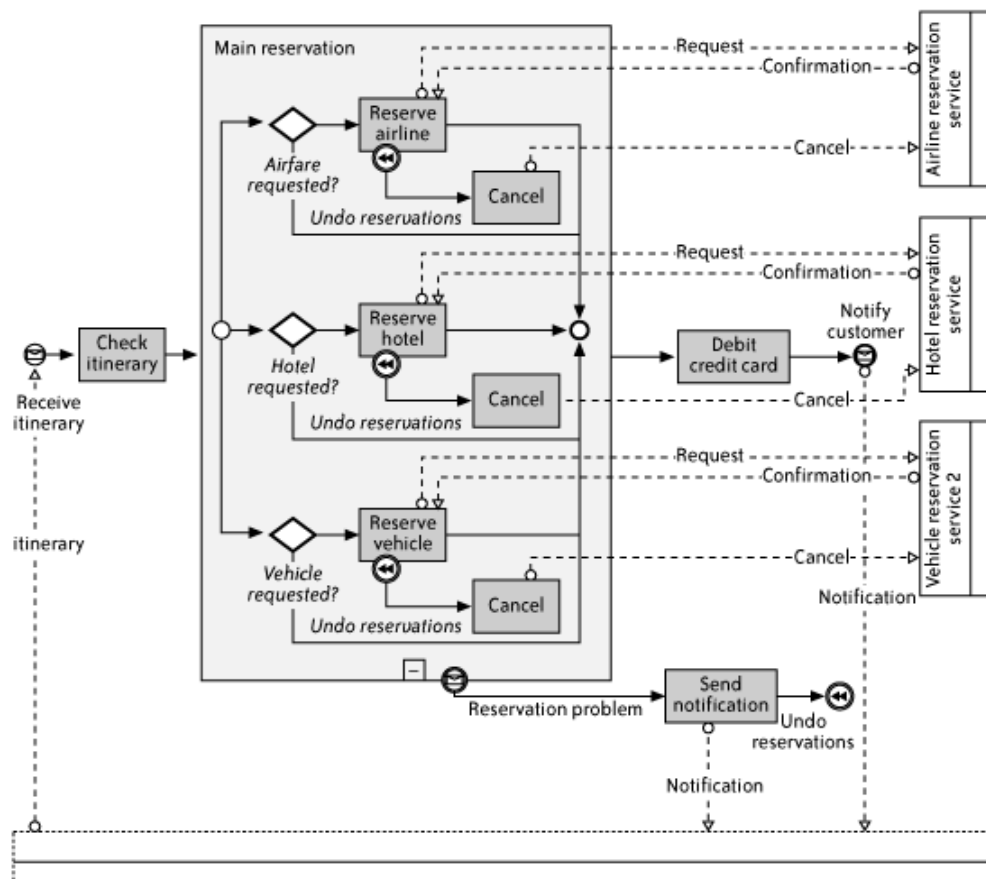


Figure 3.1.1: Business Process Modeling

3.2 Requirement Collection and Analysis

First, the requirement specification was defined. The Specification is a document that outlines each of the essential specifications for the Application and the external interfaces. The "Online Hotel Reservation & Transportation System" that we have in mind is a web-based program. With this tool, users may easily view airline and hotel information via our web application before finding other accommodations at a nearby hotel. Anyone may use this program, which is especially useful for the younger crowd. We believe that if the younger generations readily accept the facts concerning the flight travel, communication will be safe. This application will be of great assistance to those who were unaware of the hotels in the area where they may stay. Time can be saved by using this program. While at home doing nothing, kids will have access to the knowledge they need about airplanes thanks to this app.

3.3 Agile Model

According to the agile model, each plan must be evaluated uniquely, and the current approaches must be customized to best meet the project's objectives. The jobs are divided into time packages (short time limits) in Agile to carry clear frameworks for a respite. After all iterations, an iterative procedure is used and a functional software body is transferred [14]. Every construction has more structures, and the latest one can accommodate all the different kinds that the customer wants. I follow the agile model by following steps –

- This method takes the product's excellent design.
- Every month I make a meeting with my supervisor to set a goal.
- I tried my best for achieving the target.
- I try to get connected with your supervisor so you can show him project updates weekly or twice in a month so I can adapt changes as per need.
- In accordance with the instructions from my supervisor, the requirements I have amended are acknowledged in the application's later phases.

A visual representation of the Agile Model is shown here -

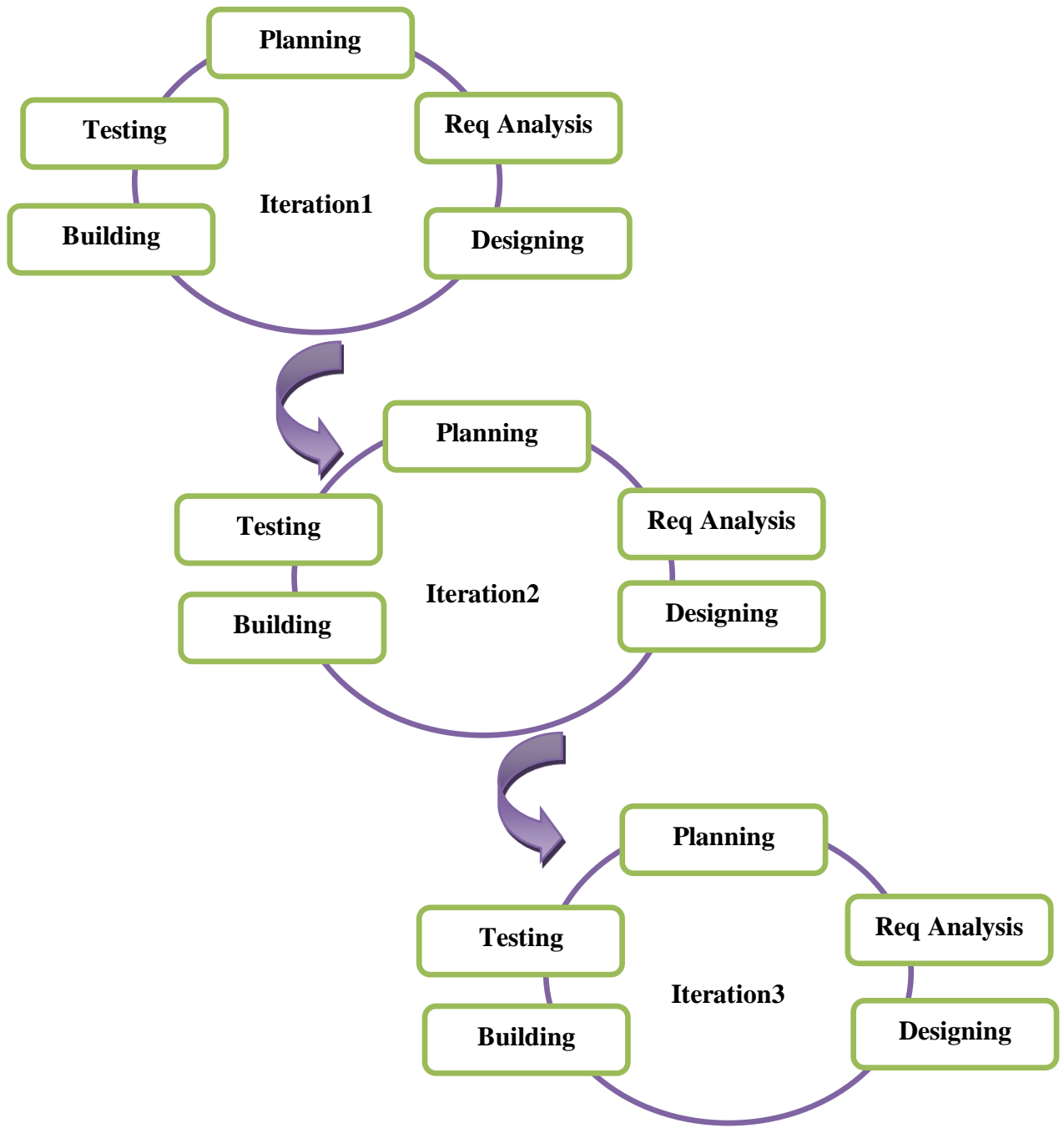


Figure 3.3.1: Agile Model

3.4 Use Case Modeling and Description

In the Unified Modeling Language (UML), a use case diagram is a specific kind of behavioral diagram that results from and is defined by a use-case study. Its objective is to offer a graphical picture of a system's functionality in terms of actors, their objectives (expressed as use cases), and any relationships among those use cases. A use case diagram's main goal is to demonstrate which actor performs which system functions. A use case is a standalone, substantial piece of work that identifies, clarifies, and groups system needs. Use cases, associations, actors, and their interactions are the most important components. A human or an outside system might be the actor. Use case diagrams serve as a system's building blocks. [11].

The user, moderator and admin are the actors in this scene.

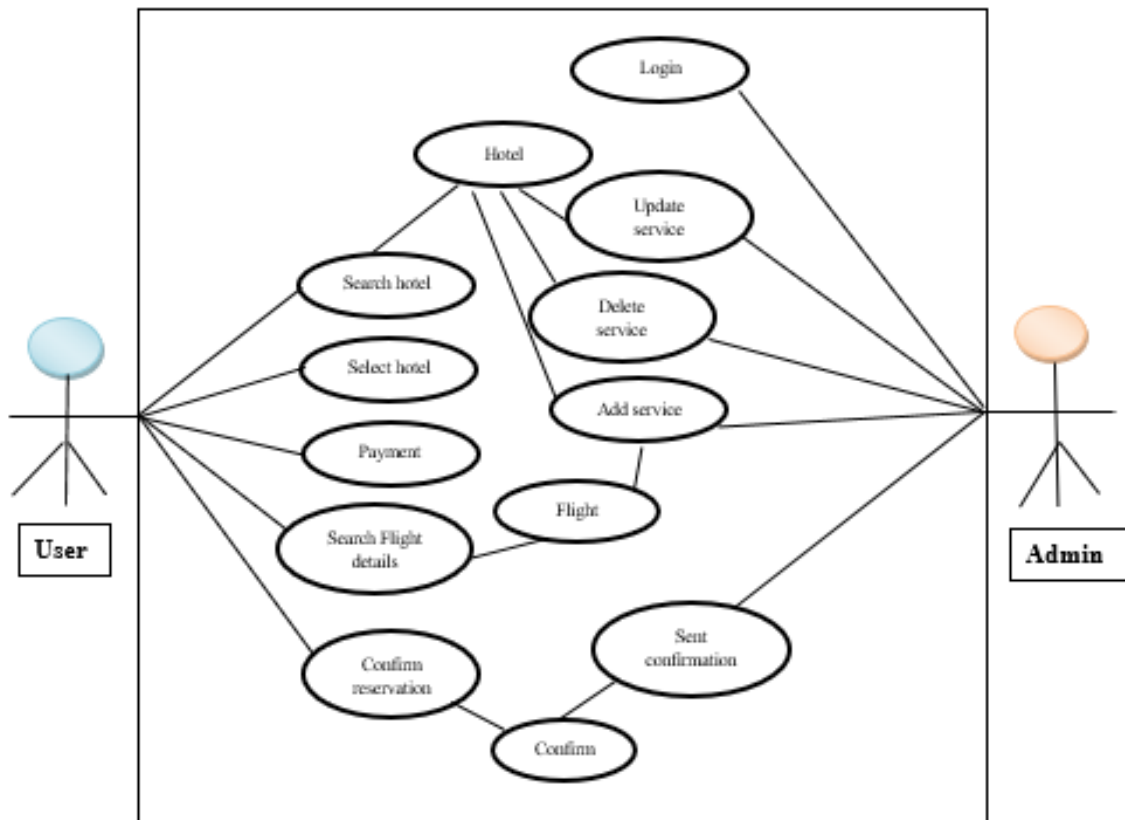


Figure 3.4.1.2: Use Case Model

3.4.1 Use Case Description

Here are some use case descriptions for our model:

Table 3.4.1.1: Use Case Description for Admin Sign up

Use Case	Sign In
Primary Actor	Admin.
Secondary Actor	Null
Pre - Condition	Null
Scenario	<ul style="list-style-type: none">• Enter Name• Enter User Name• Enter Valid Email• Enter Valid Phone Number• Enter Password• Confirm Password
Post Condition	<ul style="list-style-type: none">• Signed Up Successfully or fail• Log In

Table 3.4.1.2: Use Case Description for Admin Login

Use Case	Log In
Primary Actor	Admin.
Secondary Actor	Null
Pre - Condition	Null
Scenario	<ul style="list-style-type: none">• Enter Valid Email• Enter Password
Post Condition	<ul style="list-style-type: none">• Logged In Successfully or fail• Dashboard

Table 3.4.1.3: Use Case Search Ticket

Use Case	Search Ticket
Primary Actor	User.
Secondary Actor	Null
Pre - Condition	Null
Scenario	<ul style="list-style-type: none"> • Enter Departure • Enter Arrival • Enter Date
Post Condition	<ul style="list-style-type: none"> • Found Ticket Successfully or failed • Booked Ticket

Table 3.4.1.4: Use Case Search Hotel Room

Use Case	Search Hotel Room
Primary Actor	User.
Secondary Actor	Null
Pre - Condition	Null
Scenario	<ul style="list-style-type: none"> • Enter Check In • Enter Check Out • Enter Room Style
Post Condition	<ul style="list-style-type: none"> • Found Room Successfully or failed • Booked Room

Table 3.4.1.5: Use Case Add Flight

Use Case	Add Flight
Primary Actor	Admin.
Secondary Actor	Null
Pre - Condition	Log In
Scenario	<ul style="list-style-type: none"> • Enter Flight Number • Enter Flight Description • Enter Price
Post Condition	<ul style="list-style-type: none"> • Flight Added Successfully or failed • Booked Ticket

3.5 Logical Data Model

A popular language for modeling motives is called Unified Modeling Language (UML). The ultimate target of UML is representing how a project has been engendered [12]. Here is the sketch of the UML class diagram [13].

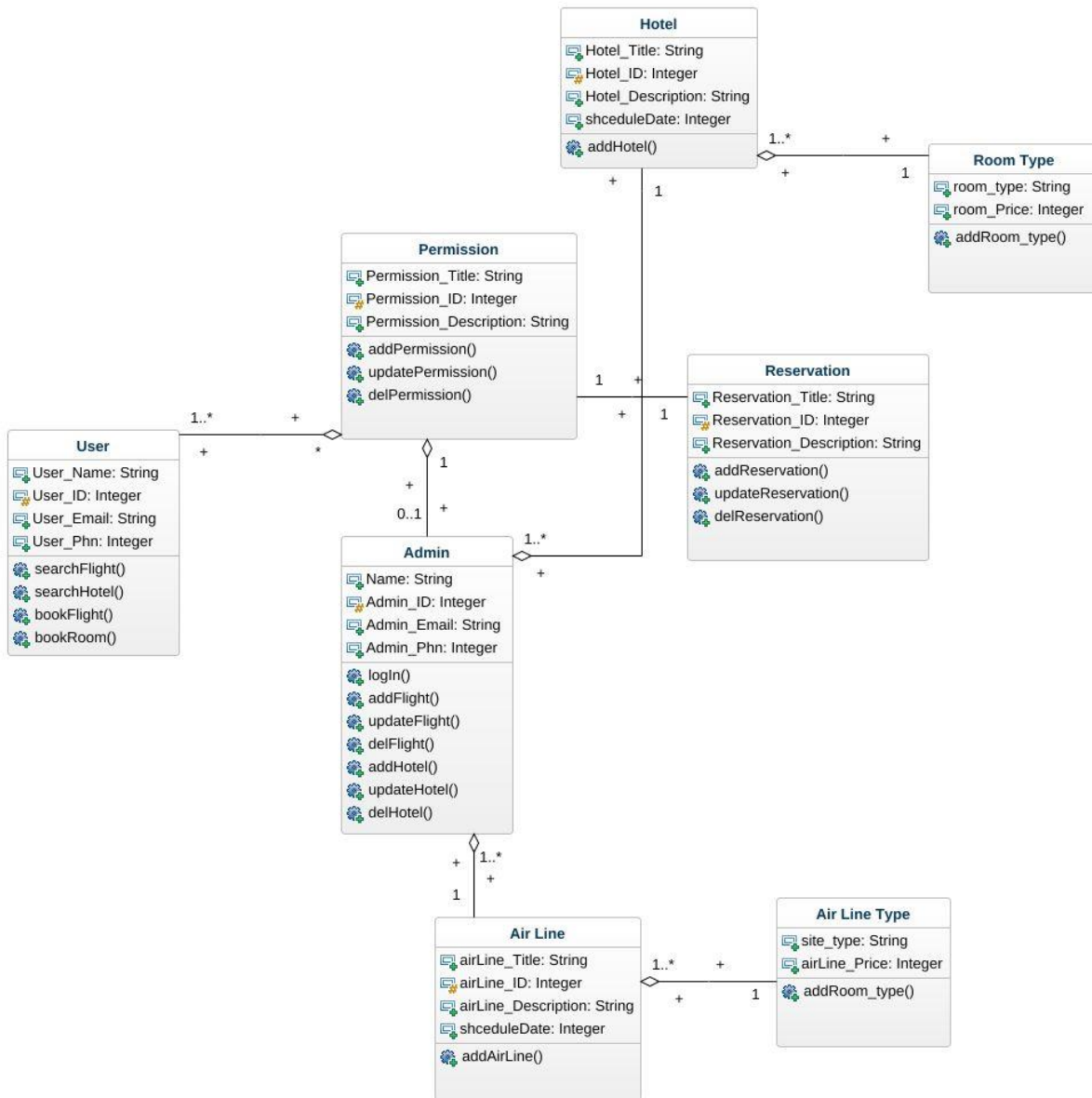


Figure 3.5.1: UML Class Diagram

3.6 Design Requirement

The functional qualities that allow the team to convert ideas into design features are referred to as "design requirements."

- Set of features or functionality
- Capability
- Design of user interfaces
- Customizability
- Response time and quickness

Table 3.6.1: Design Requirement Analysis Table

Module	Objective	Requirements Analysis
Admin	Admin Activities	<ul style="list-style-type: none">• Admin add user rule• Admin can Add blog• Admin can see available flight• Admin can see available room
User	User Activities	<ul style="list-style-type: none">• User can Sign up / Log in• User can book flight• User can book room

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

A cyber site's front-end design is its outlook Layout. It ameliorates the understanding and comprehension of an online website for persons. The whole website's front-end design is what users optically discern. For the front end of a website's design, languages like HTML and CSS are applied [9]. It gives a method for the client and the server to interrelate. I use HTML, CSS, and bootstrap for my front-end layout [5]. Here I also use jQuery for animation, it is specially for eye catchy layout [6].

Admin login: Here is admin login page. On this page, an admin needs to provide his/her registered email and password. If he /she forgot the password, he/she can recover the password.

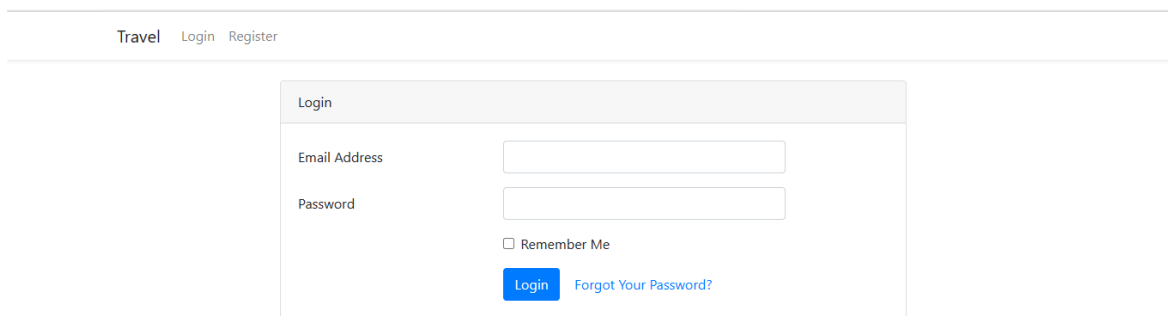
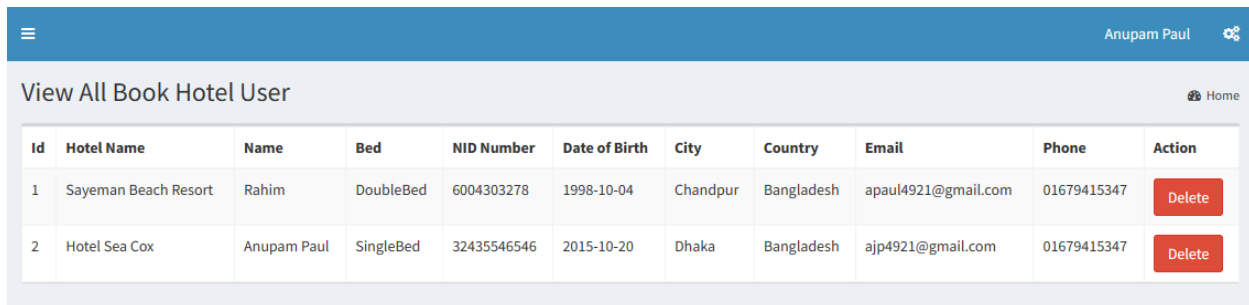


Figure 4.1.1: Admin login

Hotel Reservation Details:

Here an admin can see, which customer booked the hotel room. From here an admin can cancel the reservation.



Id	Hotel Name	Name	Bed	NID Number	Date of Birth	City	Country	Email	Phone	Action
1	Sayeman Beach Resort	Rahim	DoubleBed	6004303278	1998-10-04	Chandpur	Bangladesh	apaul4921@gmail.com	01679415347	Delete
2	Hotel Sea Cox	Anupam Paul	SingleBed	32435546546	2015-10-20	Dhaka	Bangladesh	ajp4921@gmail.com	01679415347	Delete

Figure 4.1.2: Hotel Reservation Details

Admin dashboard for add hotel:

This page is also for admin panel. Here admin can add hotel, upgrade and delete from database.

Create Hotel

Home
[Back](#)

Hotel Image:
 No file chosen

Hotel Title:

Hotel Location:

Hotel Rating:

Hotel Description:

Hotel Single Bed:

Hotel Double Bed:

Hotel Single Bed price:

Hotel Double Bed price:

Hotel Payment System:

[Create](#)

Figure 4.1.3: Add hotel

Home

View All Hotel Data

[Create](#)



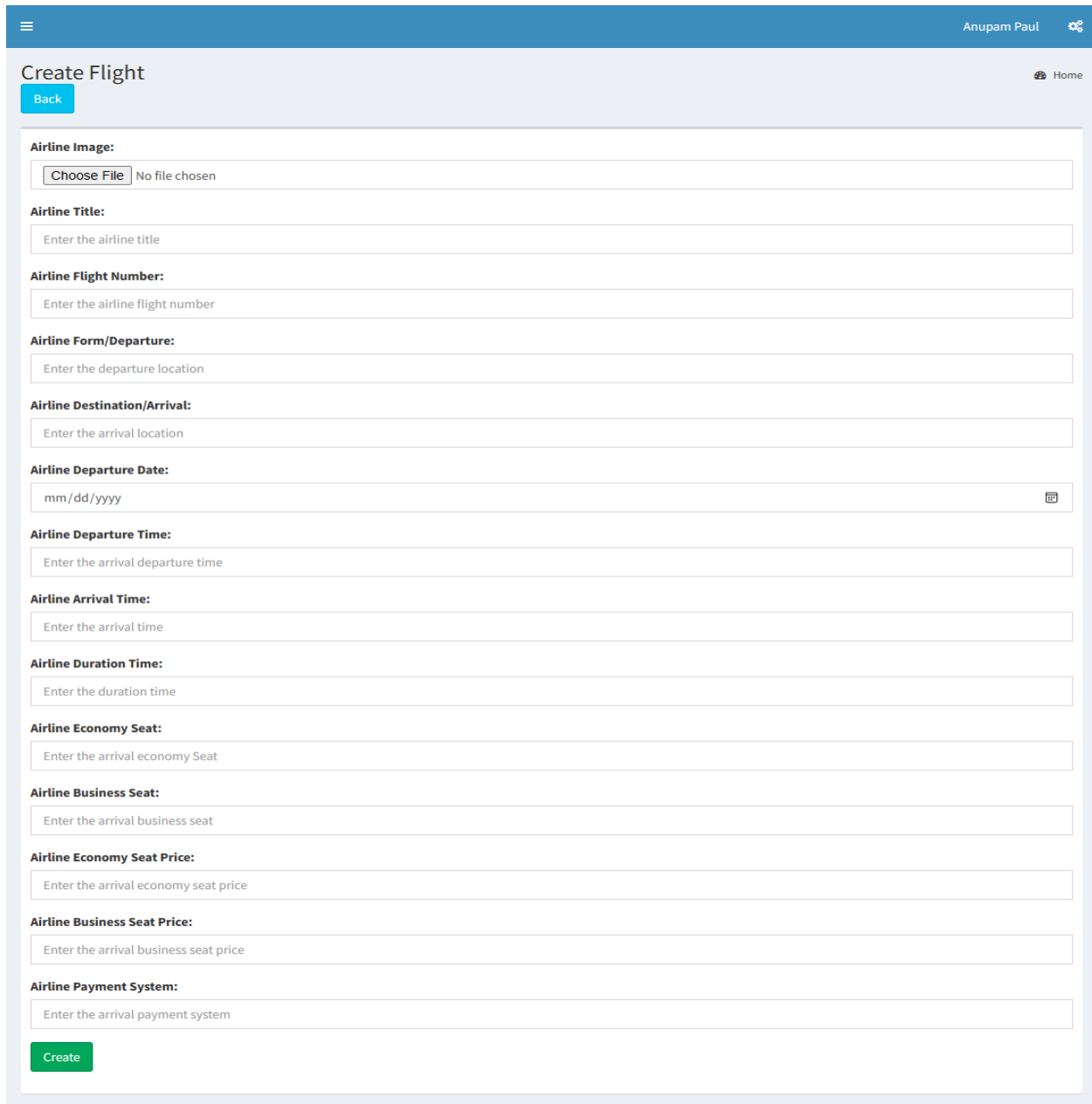
Id	Hotel Image	Hotel Title	Hotel Location	Hotel Descrip	Hotel Rating	Hotel SinBed	Hotel DoubBed	Hotel SinBed Price	Hotel DoubBed Price	Hotel Payment	Action
1		Hotel Sea Cox	Cox's Bazar	Hotel Sea Cox Welcome you to a beautiful Eco-friendly hotel and comfortable for you and your family.	3	80	40	2000	4500	bKash	Edit Delete
2		Sayeman Beach Resort	Cox's Bazar	Sayeman Beach Resort – Best hotel in Cox's Bazar's present you the best Sea view living modern and tropical accents.	5	100	60	3500	6000	bKash	Edit Delete

Figure 4.1.4: Available Hotel

Admin dashboard for add flights:

This page is also for admin panel. Here admin can add flight, upgrade and delete from database.



The screenshot shows a web application interface for creating a flight. At the top, there is a blue header with a hamburger menu icon on the left, the user name 'Anupam Paul', and a settings gear icon on the right. Below the header, the page title is 'Create Flight' with a 'Home' link and a 'Back' button. The main content area contains a form with the following fields:

- Airline Image:** A file upload field with a 'Choose File' button and the text 'No file chosen'.
- Airline Title:** A text input field with the placeholder 'Enter the airline title'.
- Airline Flight Number:** A text input field with the placeholder 'Enter the airline flight number'.
- Airline Form/Departure:** A text input field with the placeholder 'Enter the departure location'.
- Airline Destination/Arrival:** A text input field with the placeholder 'Enter the arrival location'.
- Airline Departure Date:** A date input field with the placeholder 'mm/dd/yyyy' and a calendar icon.
- Airline Departure Time:** A text input field with the placeholder 'Enter the arrival departure time'.
- Airline Arrival Time:** A text input field with the placeholder 'Enter the arrival time'.
- Airline Duration Time:** A text input field with the placeholder 'Enter the duration time'.
- Airline Economy Seat:** A text input field with the placeholder 'Enter the arrival economy Seat'.
- Airline Business Seat:** A text input field with the placeholder 'Enter the arrival business seat'.
- Airline Economy Seat Price:** A text input field with the placeholder 'Enter the arrival economy seat price'.
- Airline Business Seat Price:** A text input field with the placeholder 'Enter the arrival business seat price'.
- Airline Payment System:** A text input field with the placeholder 'Enter the arrival payment system'.

At the bottom of the form is a green 'Create' button.

Figure 4.1.5: Add Flight

Home Page:

The homepage of our web application Travel will be displayed to our user like this 4.1.4 figure. This homepage displays all of our website's features, including blogs, Flights, hotels. Anyone may access the other pages or detailed information on any particular feature.



Figure 4.1.6: Homepage screenshot

Search Hotel:

User can find cheap hotels and they also save their period and cash on your housing search with millions of reviews and snaps on. User can find a perfect hotel and match prices from altered websites. From budget hotels to luxury suites, our website makes it easier to search and book online. They also can select hotels by selecting the category of hotels and also can be selected by rating.

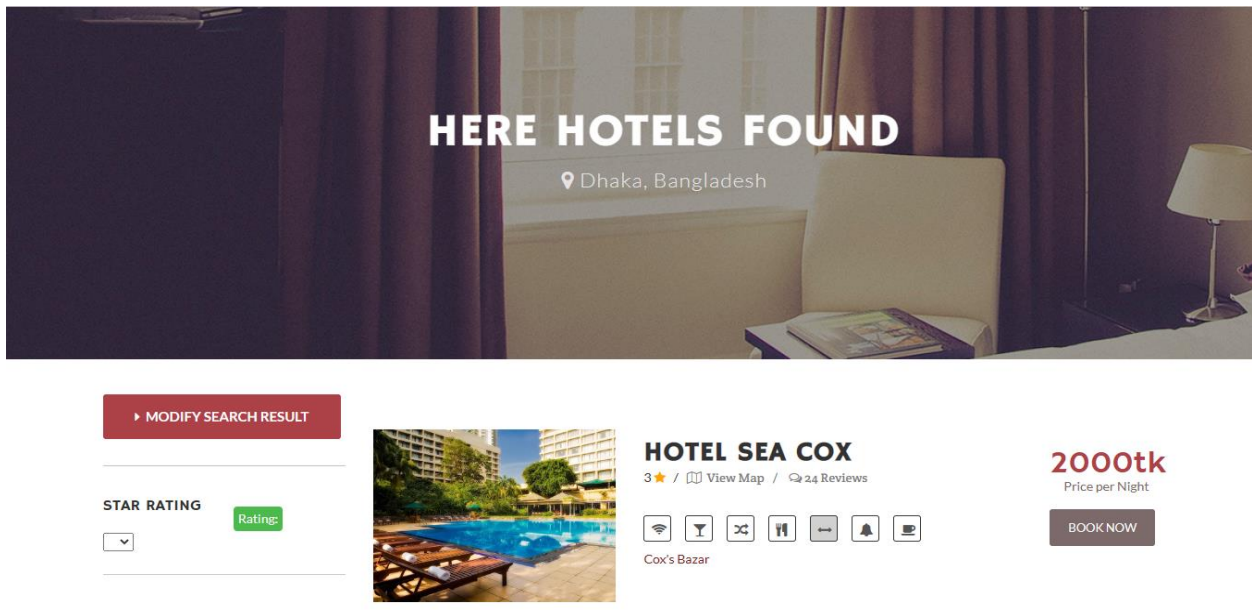


Figure 4.1.7: Search hotel

Hotel details:

Here user can finally get into the hotel with the location. This is the step of booking

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HOTELS DETAILS

Dhaka, Bangladesh

Name: Hotel Sea Cox
Short Des: Hotel Sea Cox Welcome you to a beautiful Eco-friendly hotel and comfortable for you and your family.
Rating: 3 Star
Location: Cox's Bazar

Single Bed: 80	SingleBed Price: 2000
Double Bed: 40	DoubleBed Price: 4500

Payment System: bKash

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Figure 4.1.8: Hotel details

Booking Details:

User need to fill up this form for booking the hotel room.

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HOTELS DETAILS

Dhaka, Bangladesh

Client Details

Name
Enter Your Full Name

Room Type
Single Bed

NID Number:
Enter your NID Number

Date of Birth
mm/dd/yyyy

City
Enter your City

Country
Enter your Country Name

Contact Details

Email
Enter your Email

Phone Number
Enter your Phone Number

Submit

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Figure 4.1.9: Booking with confirm email

Confirmation via Email:

User will be notified in this process via their given email.

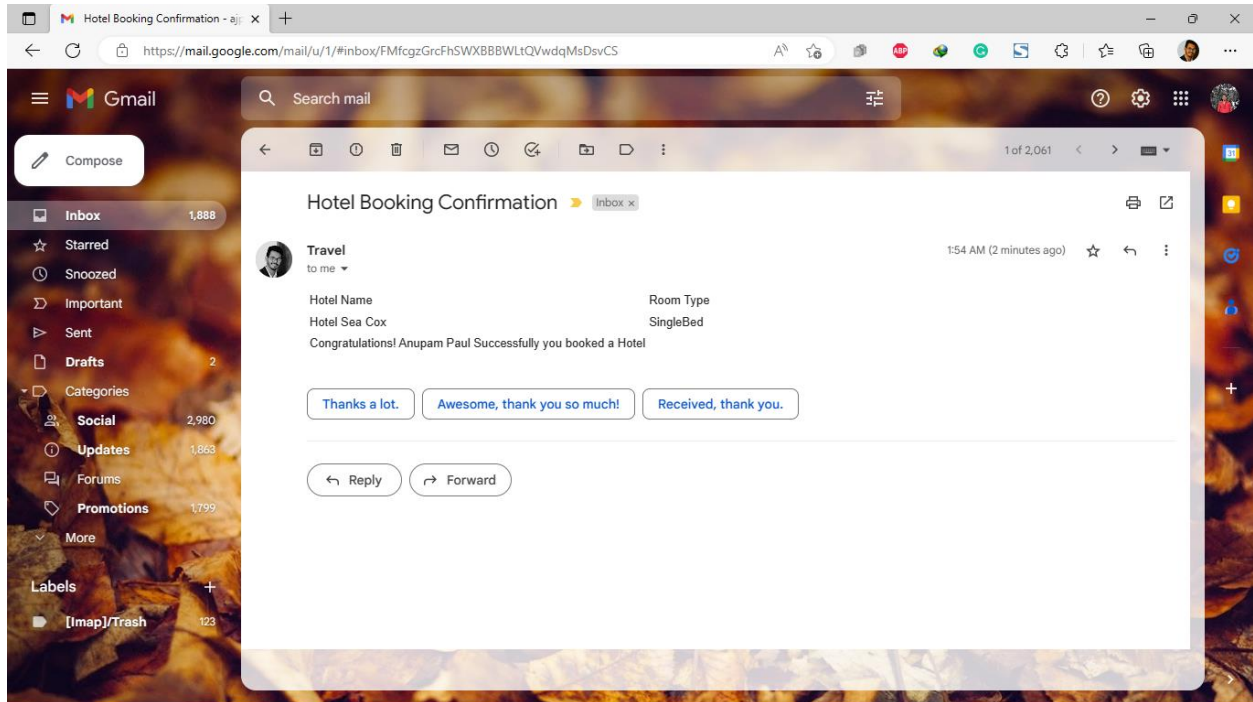


Figure 4.1.10: Hotel Reservation Confirmation Email

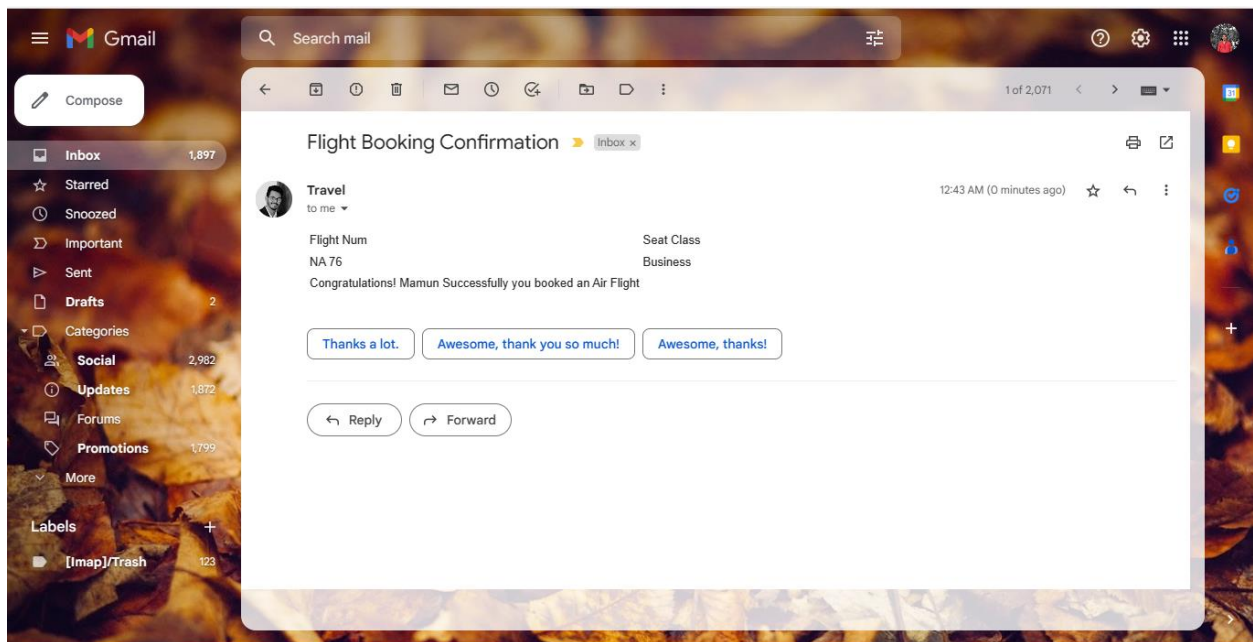
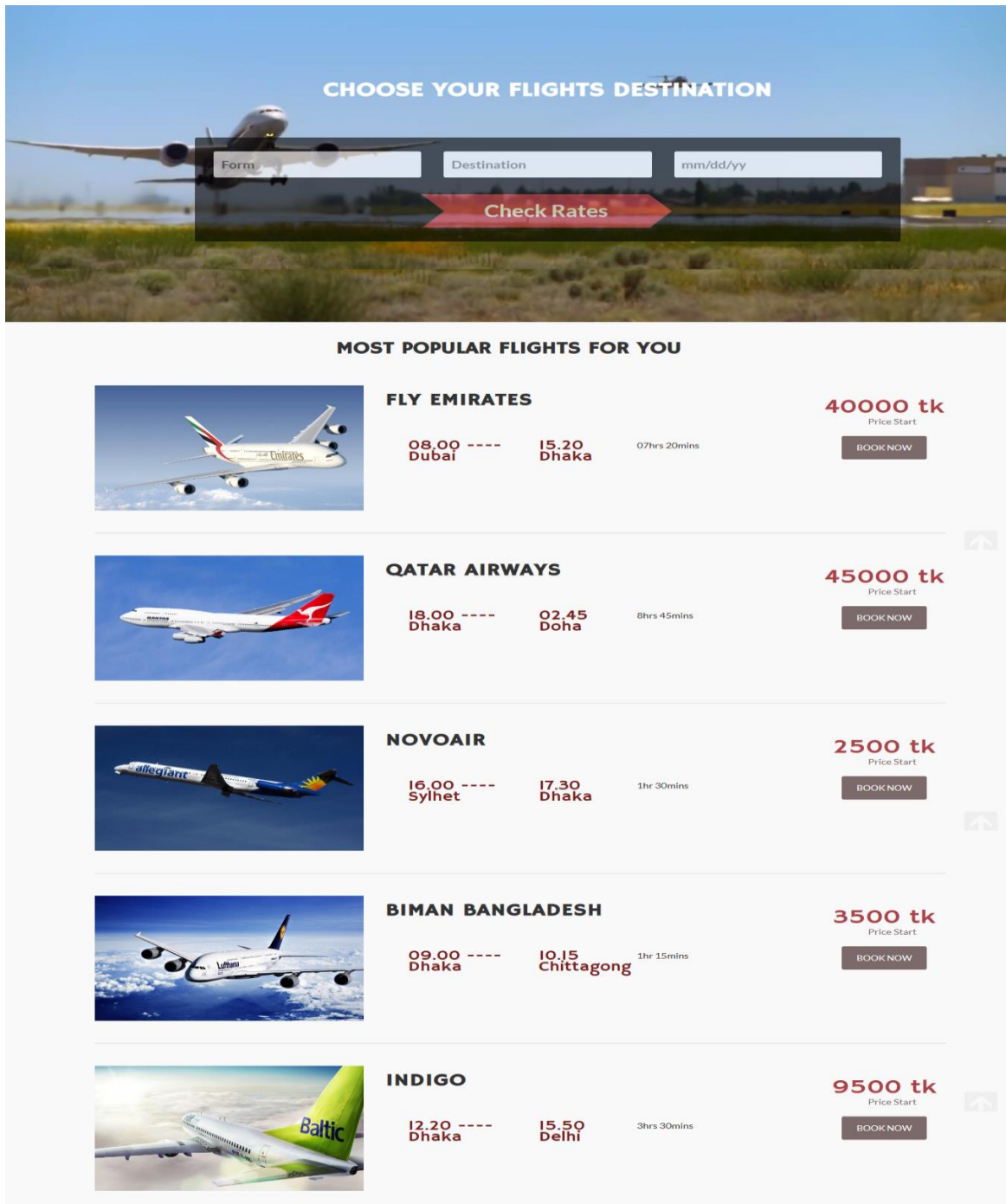


Figure 4.1.11: Flight Reservation Confirmation Email

Flight Search

User can easily find flights and save interval and currency on tickets to every journey's end in the world at using this website. Whether user by now get to know where and when they want to go and then confirm the flights.



CHOOSE YOUR FLIGHTS DESTINATION

Form Destination mm/dd/yy

Check Rates

MOST POPULAR FLIGHTS FOR YOU






	FLY EMIRATES 08.00 Dubai ---- 15.20 Dhaka 07hrs 20mins	40000 tk Price Start BOOK NOW
	QATAR AIRWAYS 18.00 Dhaka ---- 02.45 Doha 8hrs 45mins	45000 tk Price Start BOOK NOW
	NOVOAIR 16.00 Sylhet ---- 17.30 Dhaka 1hr 30mins	2500 tk Price Start BOOK NOW
	BIMAN BANGLADESH 09.00 Dhaka ---- 10.15 Chittagong 1hr 15mins	3500 tk Price Start BOOK NOW
	INDIGO 12.20 Dhaka ---- 15.50 Delhi 3hrs 30mins	9500 tk Price Start BOOK NOW

Figure 4.1.12: Search airline

Airlines Details:

User will get to know the airline details.

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Flight Details

Fly Emirates

Fare Summary	
Economy Seat	Economy Price
70	40000 tk
Business Seat	Business Price
30	70000 tk

Airline Name	FL 15	Fly Emirates
Depart	Duration	Arrival
08.00	07hrs 20mins	15.20
2022-12-16		2022-12-16
Dubai		Dhaka

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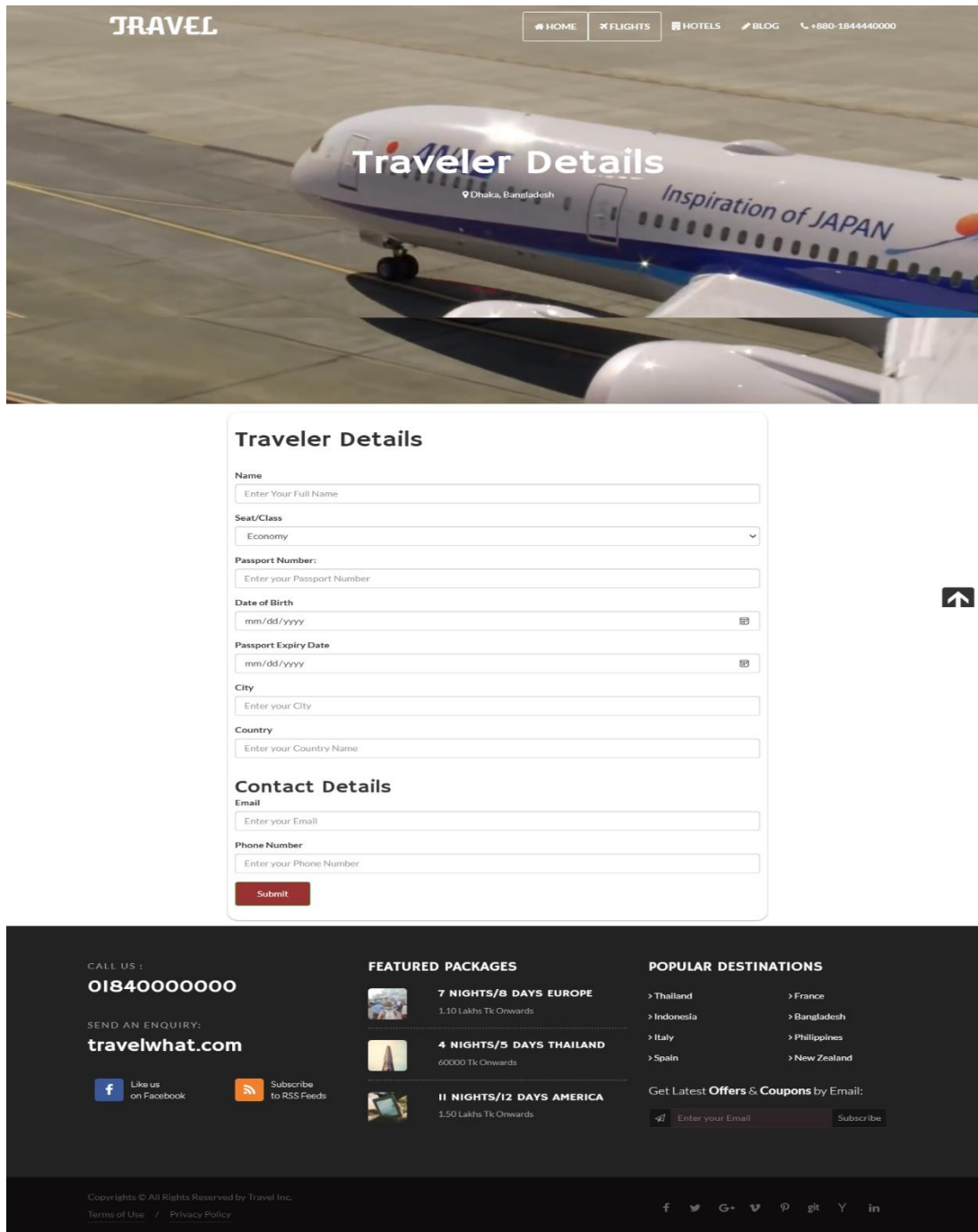
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Figure 4.1.13: Airline Booking

Booking Details:

Here a user can book a flight by giving his/her details.



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Traveler Details

Dhaka, Bangladesh
Inspiration of JAPAN

Traveler Details

Name
Enter Your Full Name

Seat/Class
Economy

Passport Number:
Enter your Passport Number

Date of Birth
mm/dd/yyyy

Passport Expiry Date
mm/dd/yyyy

City
Enter your City

Country
Enter your Country Name

Contact Details

Email
Enter your Email

Phone Number
Enter your Phone Number

Submit

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Figure 4.1.14: Confirm Air ticket Book

Merchant Dashboard:

This snapshot is for the hotel owners. They can also add their own hotel after getting registered. The owner can also see if any consumer reserved a seat of the hotel added by them.

Create Hotel

[Home](#)
[Back](#)

Hotel Image:
 No file chosen

Hotel Title:

Hotel Location:

Hotel Rating:

Hotel Description:

Hotel Single Bed:

Hotel Double Bed:

Hotel Single Bed price:

Hotel Double Bed price:

Hotel Payment System:

View All Book Hotel User

[Home](#)

Id	Hotel Name	Name	Bed	NID Number	Date of Birth	City	Country	Email	Phone	Action
1	Sayeman Beach Resort	Rahim	DoubleBed	6004303278	1998-10-04	Chandpur	Bangladesh	apaul4921@gmail.com	01679415347	<input type="button" value="Delete"/>
2	Hotel Sea Cox	Anupam Paul	SingleBed	32435546546	2015-10-20	Dhaka	Bangladesh	ajp4921@gmail.com	01679415347	<input type="button" value="Delete"/>

Figure 4.1.15: Merchant Dashboard for add hotel

Blog Page:

User can know more details latest travel and trends.



Figure 4.1.16: Blog page

4.2 Back-end Design

The internal logical layout of a website is called the back-end layout. Additionally called server aspect design. It is simpler to construct a dynamic website thanks to the back-end design. It outlines the required functionality of the online website. Back-end designers are computer programmers who handle the website's online form, security, and content. The most challenging and crucial component of web development is the back-end. The back-end or server component is the main foundation upon which the whole internet is built. Intricate phases including authentication, session management, record validation, database administration, record passing, security, and others must be handled by a back-end developer. Laravel, a well-liked back-end server, is used to construct the back-end of our project [9].

We collaborated on our project utilizing postman, an open-source platform MySQL database, to test our requests and responses. The back end of each area's API, which we designed, is shown in the photos below.

Sign-up API: The request and answers for the user sign-up are shown in figure 4.2.1.

```
11 class User extends Authenticatable
12 {
13     use HasApiTokens, HasFactory, Notifiable;
14
15     /**
16      * The attributes that are mass assignable.
17      *
18      * @var array<int, string>
19      */
20     protected $fillable = [
21         'name',
22         'email',
23         'password',
24     ];
25
26     /**
27      * The attributes that should be hidden for serialization.
28      *
29      * @var array<int, string>
30      */
31     protected $hidden = [
32         'password',
33         'remember_token',
34     ];
35
36     /**
37      * The attributes that should be cast.
38      *
39      * @var array<string, string>
40      */
41     protected $casts = [
42         'email_verified_at' => 'datetime',
43     ];
44 }
```

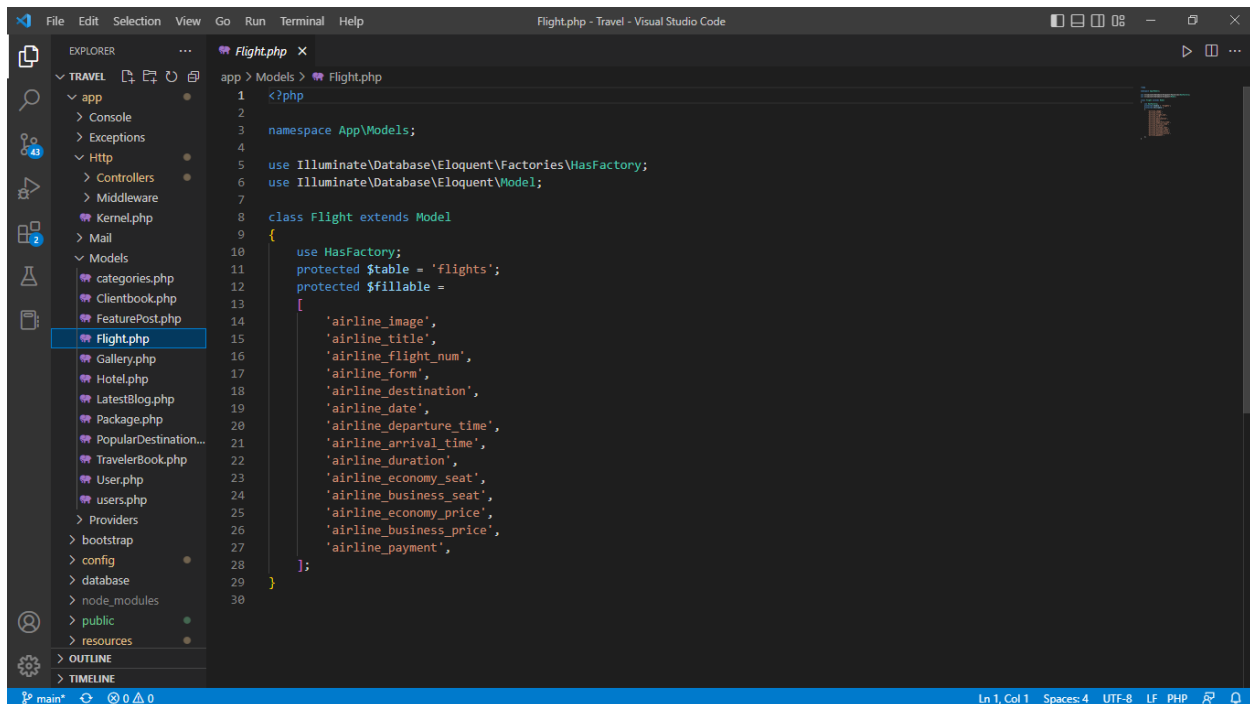
Figure 4.2.1: Sign up API

Add Hotel API: Here is add hotel code.

```
1 <?php
2
3 namespace App\Models;
4
5 use Illuminate\Database\Eloquent\Factories\HasFactory;
6 use Illuminate\Database\Eloquent\Model;
7
8 class Hotel extends Model
9 {
10     use HasFactory;
11     protected $table = 'hotels';
12     protected $fillable = [
13         'hotel_image',
14         'hotel_title',
15         'hotel_location',
16         'hotel_rating',
17         'hotel_description',
18         'hotel_singlebed',
19         'hotel_doublebed',
20         'hotel_singlebed_price',
21         'hotel_doublebed_price',
22         'hotel_payment',
23     ];
24 }
25
26
```

Figure 4.2.2: Add hotel

Add Flight API: Here is add flight code.



```
1 <?php
2
3 namespace App\Models;
4
5 use Illuminate\Database\Eloquent\Factories\HasFactory;
6 use Illuminate\Database\Eloquent\Model;
7
8 class Flight extends Model
9 {
10     use HasFactory;
11     protected $table = 'flights';
12     protected $fillable =
13     [
14         'airline_image',
15         'airline_title',
16         'airline_flight_num',
17         'airline_form',
18         'airline_destination',
19         'airline_date',
20         'airline_departure_time',
21         'airline_arrival_time',
22         'airline_duration',
23         'airline_economy_seat',
24         'airline_business_seat',
25         'airline_economy_price',
26         'airline_business_price',
27         'airline_payment',
28     ];
29 }
30
```

Figure 4.2.3: Add Flight

4.3 Interaction Design and User Experience (UX)

In order for every utilizer to expeditious browse through every feature of my website, as I developed an online Ticket and Hotel Reservation platform, we want to make the design especially utilizer-amicable. Simply entering a certain term into one of our sites will allow anyone to quickly locate all the features or whatever it is they are looking for. I develop my application utilizing a tab view to change the exhibit or feature in a very simple method. Overall, I endeavor my best to build up an astounding utilizer experience (UX) for my customers that would make it facile for them to probe and learn.

4.4 Implementation Requirements

- HTML, CSS, Bootstrap are used to create the front-end of this web application.
- PHP, the Laravel framework, and the SQL database, are used to the back-end create server [7].
- A variety of error messages should be displayed if any erroneous data is entered into the form.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

I have used my SQL as our database on my Hotel Reservation & Transportation System website. My SQL is a popular document-oriented database that makes it possible to store any form of data [8]. It accepts that it can manage my data without bothering on the quantity of fields that require to sustain values. My entities are:

- User
- Flight
- Hotel
- Blog
- Package

5.2 Implementation of Front-end Design

- Authenticated user profiles: Users will be capable to authenticate as registered users with their own, changeable profiles after consummating the registration formula.
- Dashboard: There will be a dashboard page that exhibits the many abilities I am offering to customers.
- Filtering: A compulsory implementation for culling an effective search procedure (manual, keywords, and categories).
- Admin panel: An implement for controlling a website, entailing interconnection with hotels, flights, etc.

5.3 Testing Implementations

The purport of this test is to appraise how efficacious my application satiates the designated criterion. We exerted ourselves strenuously to keep this application secure. The test must succeed by all of the data a utilizer inputs in my application

5.3.1 Login Test Case

Table 5.3.1: Login Test Case

Conditions	Email	F	F	F	T
	Password	F	T	F	T
Actions	Result	Error Please Enter a valid email and password	Error Please Enter a valid email and password	Error Please Enter a valid email and password	Successfully Logged in.
	Expected Result	Error Please Enter a valid email and password	Error Please Enter a valid email and password	Error Please Enter a valid email and password	Successfully Logged in.

5.3.2 Change Password Test Case

Table 5.3.2: Change Password Test Case

Conditions	Old Password	F	F	F	T
	New Password	F	T	F	T
Actions	Result	Error Please Enter a valid password	Error Please Enter a valid password	Error Please Enter a valid password	Password Changed.
	Expected Result	Error Please Enter a valid password	Error Please Enter a valid password	Error Please Enter a valid password	Password Changed.

5.3.3 Test Case Evaluation

Table 5.3.3: Test Case Evaluation

S.L No	Test result	Expected Result	Result
1	Registration	When the anonymous user (buyer and seller) registers, the information will be recorded in the MySQL database.	Successful
2	Log-In	Sellers and buyers can access the website by entering their email and password.	Successful
3	Forget-Password	After enrolling, if a user (seller or buyer) forgets his password, he can reset it by choosing "forget password" and entering his email address.	Successful
4	Book Ticket	After logging in with his password, the user can Book Ticket.	Successful
5	Book Room	Can Book a Hotel Room by User.	Successful
6	Add Blog	adding blog your blog page.	Successful

5.4 Test Results and Reports

A system's test findings and reports are a necessary element in deciding if the system is prepared for inauguration or not. This may be discovered by analyzing each characteristic. This may be found by inspecting every element. Testing of the important side is compulsory to ascertain that the functionality works as planned.

After prosperously consummating these tests, I accept the inauguration of my System. I endeavored these on many mobiles, tabs, and laptops. Conclusively, we utilized the detection and superiorities of the serviceability testing:

- Best UI for interconnection
- Customer can use it simply
- Using the application and search the ticket is simple.
- Customer will like the accept system.
- Better system quality.

Chapter 6

Impact on Society, Environment and Sustainability

6.1 Impact on Society

Today's people search and book their transportation and hotel room in online platform. M reservation system's will affect positive in our society. If we utilize this reservation system, there are many positive things that will change our society, and those will follow:

- By developing holiday package, people are enjoying their holiday.
- Now-a-days people are doing every necessary works in online.
- No one needs to outside for booking their tickets.
- By posting their travelling experience and picture, they can help other about the place.

6.2 Impact on Environment

Online hotel and ticket reservations have an effect on the environment as well. Customers will utilize fuels for automobiles when they go outside for reservations. We are all kened that utilizing fuels pollutes our environment. Ergo, there is no perspective on environmental pollution while reservation online.

There is withal no misuse of space because the items appear via the cyber world. Supplementally, it will benefit the environment.

6.3 Ethical Aspects

Apprehension of what is good and erroneous is only one aspect of ethics. It has to do with the concept we confirm and obey. Online reservation requires affluence of ethical thought. And you can be sure to give a positive customer experience while you stake your ethics and traditions. You can get your customer's faith and loyalty by giving great customer accommodation. Ethical Concerns in online reservation you must ken about.

The first one we'll be addressing for this is:

1. Online theft
2. Exposure-prone Data Lakes
3. Web monitoring
4. Online trespassing
5. Web-Copycatting

6. Spamming emails

7. Dependable Customer Support

6.4 Sustainability Plan

Establishment of a conventional, self-contained reservation platform. Our technical personnel is utilized to avail lead it. The system runs better for this proposal's goals and breadth. It is congruous with the unusual technique of contrivances (mobile, tablet, laptop, and desktop). It can handle over 1000 visitors at a time. It is workable all over the clock 24/7. Supplementally, it has been built and made so that travelers can buy tickets, book hotels, and buy packages. Customers can participate in blogs. It enables the development of saving time for working people.

CHAPTER 7

Conclusion & Future Scope

7.1 Discussion and Conclusion

Albeit my target was to reach a consummate system that will have high precision and at the same time can be able to perform user instructions effectively, I have controlled to build of a system and a direction on how an application can be developed for hotel booking and airplane ticket reservation system based on the web. I have faced many errors and fine-tuned them and endeavored my best to move forward with it and I hope to perpetuate working with the project to ameliorate its precision.

7.2 Scope for Further Developments

The application has been built with future evolution possibilities in deliberation. We operate we could amend the system and truncate its constraint on the project in a short time. The developers of the application want to perpetuate their involution and contribution to this project for further development operations. This project withal has the area of improvement such as:

- The more alluring utilizer interface makes it more utilizer convivial.
- Can integrate more functionality
- The dependability of the project can be an incrementation.
- Add the payment System via bKash or visa card.

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