

DECLARATION

This is to certify that this project is entirely our own development. No component of this work has been submitted elsewhere, in part or in whole, with the purpose of receiving a different degree or diploma. All the materials used in this project have been appropriately acknowledged.

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APPROVAL

The senior project entitled “**Web-Based App on Tourism E-commerce**” by **Team Neptune** is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer Science and Engineering in January and has been accepted as satisfactory.

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ACKNOWLEDGMENT

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The senior design (CSE499) project is very helpful to bridge the gap between theoretical knowledge and real-life experience as part of the Bachelor of Science (BSc) program. This report has been designed to have practical experience through theoretical understanding.

We also acknowledge our profound sense of gratitude to all the teachers who have been instrumental in providing us with the technical knowledge and moral support to complete the project with full understanding.

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We thank our friends and family for their moral support to carve out this project and always offer their support.



CSE499 A B

Fall'21

Project Report On

Web-Based App on Tourism E-commerce

Supervised By

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ABSTRACT

We have decided to implement an online e-commerce web application for Bangladeshi travelers and retailers to manage packages on this system. The customers can quickly search the available packages and come to the store to pick them up and they can contact the service provider to learn more about the packages they are looking for. The best aspect of our website will be the global availability as well as the accurate information on the places to visit which are usually backed up by trustworthy customer reviews.

Objectives:

This website is developed to provide the best traveling services to the customers. The main objective of this project was to create a travel booking website where the tourists can choose their preferable services to go to their desired destinations in Bangladesh. It will allow the user of the system to access all the details such as popular destinations, packages, and deals, bookings of flights/tickets, hotels, transportation, etc.

Methods:

The implementation of the proposed web application has been accomplished using the MERN stack. The acronym stands for MongoDB, Express, React.js, and Node.js. It is one of the powerful stacks that help us to develop our e-commerce web application. A point to note is that

all components of the MERN stack are built upon JavaScript, Therefore, the MERN stack is a crucial technology for this project.

We have used Visual Studio Code to write our programs as it is free, open-source, and cross-platform. Unlike many other code editors, Visual Studio Code has an in-built debugger. This makes the process of bug tracking, and code run-throughs a lot easier and faster. We have used GitHub to collaboratively work on code.

Keywords:

HTML, CSS, Javascript, MERN Stack, Travel Buddy, Virtual Studio Code.

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CHAPTER 1: Introduction

1.1 Introduction

Various researches have shown the significance of web services on tourism services. In the last 5-10 years techno-friendly visitors prefer to buy their travel services online like the online shopping of physical goods. Our website named ‘Travel Buddy’ would play a vital role in planning the perfect trip to Bangladesh. It will allow the user of the system to access all the details such as popular destinations, packages, bookings of flights/tickets, transportation, etc.

A recent survey found that 59 percent of respondents had travel issues caused by technology, from fluctuating prices to incorrect bookings to limited options for the travel they wanted to book. However, our website, Travel Buddy, presents a clear and clutter-free experience that can be used to book a tour from anywhere in the world by a single dynamic website that will help the user to know all about the places and tour details on a single website.

1.2 Project Details

By this project, we can help travelers in a certain area. Here we have included an interactive-Map which gives users a dynamic method of searching for places. This is the main feature of our website. This shows the fastest route between any two locations that are set on the map. Moreover, it can also track our locations. There are other important features such as Blogs, Reviews, and Tour packages. Review and blog sections serve as Social proof which is an

important driver for the clients to use our website. All these things make our website unique from other travel websites and we believe these facilities will serve as a source of attraction for travelers.

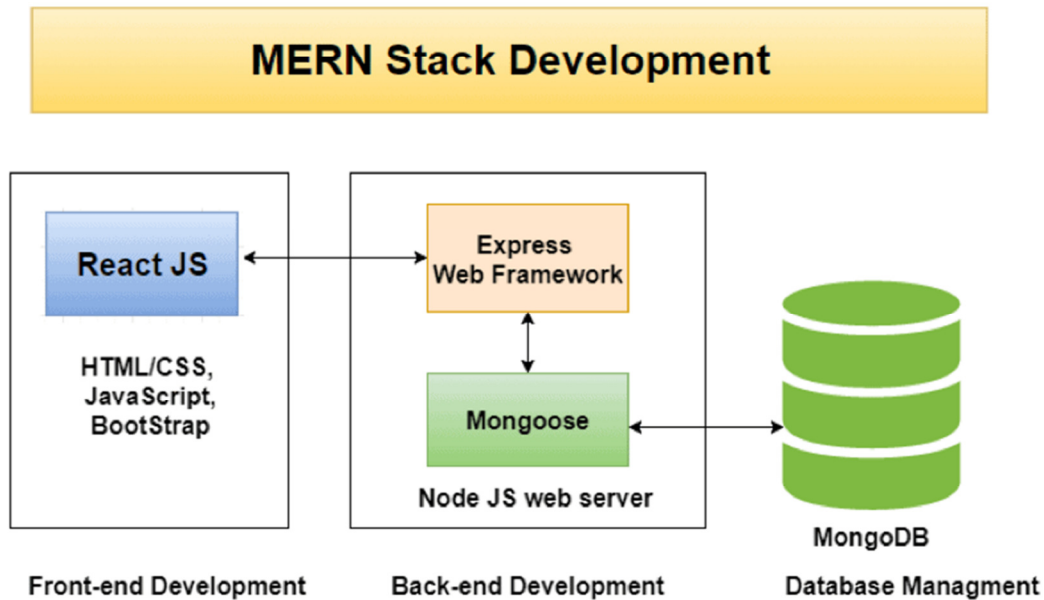
In the future by adding more useful features, we believe that our project will add a significant amount of value to the project field. We have plans to develop the project into Android, IOS as well as a web app.

1.3 Project Goals

The purpose of this project is to design a website using which one can get and perform nearly all the operations related to traveling. "Travel Buddy" can be used to book tours from anywhere by a single dynamic website which will help the tourists to know all about the places and tour details.

It will also help to develop tourism with different cultures so that they enrich the tourism experience and build pride. So, we believe our website will provide cost savings and convenience that makes a convoluted experience worth it.

CHAPTER 2: Method and Methodology



2.1 MERN-FRONTEND

- **React JS**

React.js is a JavaScript-enabled library designed to build user web resources. React Virtual DOM is completely memory and is a web browser DOM browser. As a result, when we write the React section, we do not write directly to the DOM; instead, we write the tool so that the response will turn into a DOM. React is built around objects, not templates like other frames. The section can be created with the function of the Class React object, the first place when you access the library.

- **React.js performance**

When looking at the performance of a React or other framework it is important to remember that in the end, is all JavaScript scripts - the main purpose of these frameworks is to provide a better framework for UI development than to achieve high levels of efficiency in any given environment. Any pre-trip request can be reduced to its base level for high-performance fraud, but the result may be poorly formatted. Because all JavaScript location points eventually use the same base of the JavaScript API, the difference in performance boils down to how much additional code the framework surrounds those tools.

- **The reasoning behind the use of React.js**

Because part of the front-end app is straightforward and does not have a functionality that is different enough for a single frame to be allowed to run, the selection is greatly reduced to personal preference. React.js has some advantages compared to other previous frameworks, such as a faster learning curve, support and future development programs from the organization (Facebook), and strong documentation that has made it an easy-to-read and useful service framework.

2.2 MERN-BACKEND

- **Node JS**

Node Js is a software platform that helps create unique network applications and events. It includes built-in HTTP libraries that allow developers to create their web server and additionally create awesome web applications. Node.js creates event and event managers for all applications. When I / O performance occurs, the corresponding handle is lined up to perform and the retrieval function exits the event after the completion of the I / O function. Certain I / O functions are currently running outside the server event line. Therefore, NodeJs performs I / O functions humbly and does not interfere with any documentation, allowing the event loop to respond to other requests. The Node module provides a public API (Application Programming Interface) that can be used after the module is installed in an existing script. Basic modules come with Node installation and are synchronized when the Node cycle begins.

- **Express JS**

Express.js is an open-source server format written entirely in JavaScript, designed specifically for use with Node.js. Due to its reliability and widespread use Express has become a standard Node software. Express with Node.js can be considered as similar to what Ruby on Rails is on Ruby. Express is designed to work and is naturally small, placing only a thin layer over Node web features. Due to its lightweight design and standard adjustment, Express serves as the basis for some JavaScript components including feathers, KeystoneJS, Kraken, and Sails, which are designed for certain types of applications unlike Express, which only provides powerful performance standard server features such as route navigation, HTTP cache, and template view Power efficiency is one of the most important requirements of this application, we show battery status performance. Express is a "server-side" or "back-end" framework. It is not

comparable to customer-side organizations such as React, Angular & Vue. It can be used in conjunction with those frameworks to build a complete application.

- **MongoDB**

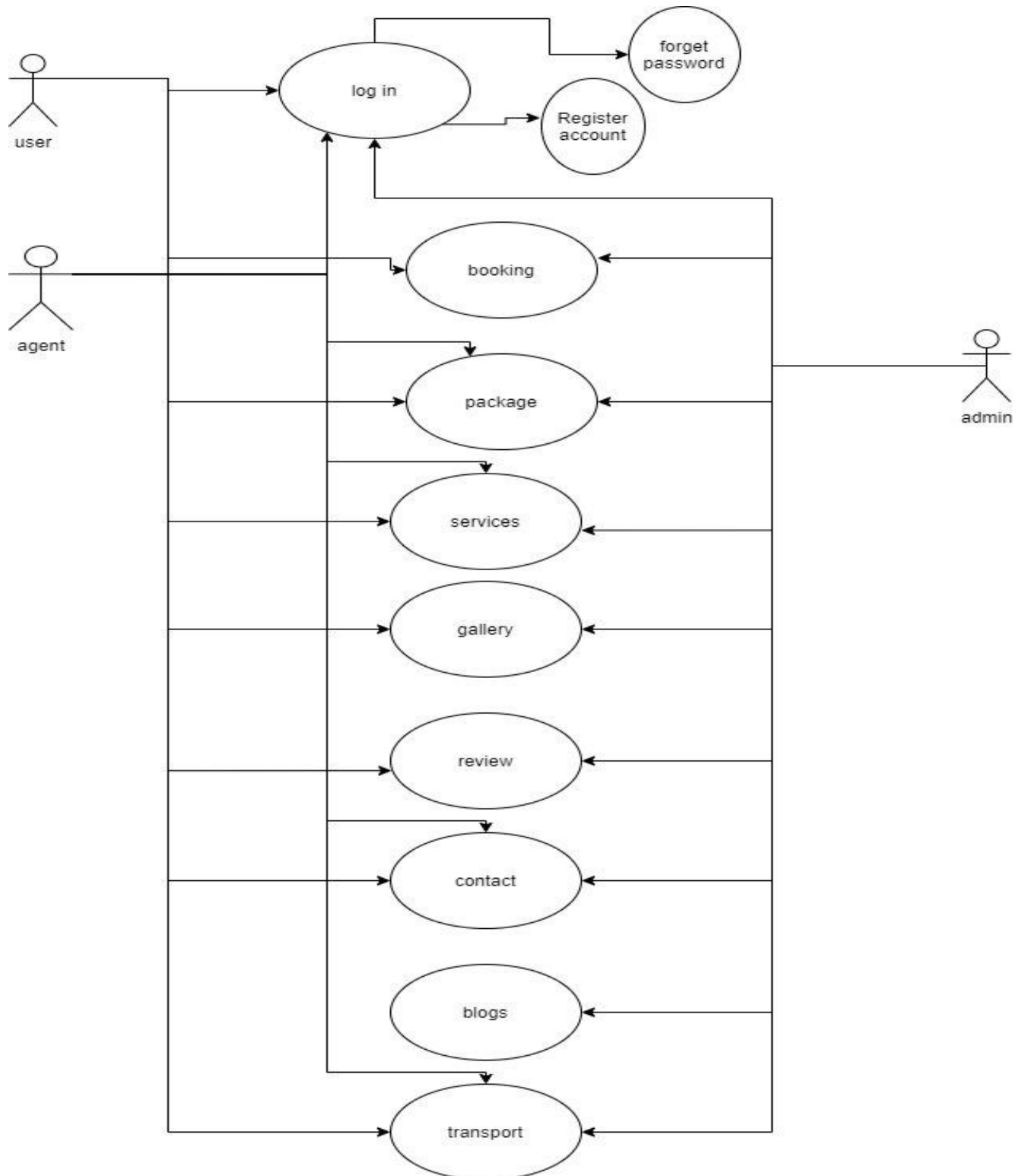
There are many items under the MongoDB umbrella. It is the next Database of NO which means it is not the only Database. MongoDB stores data in flexible scripts, such as JSON. The document model is mapped to objects in your app code, making data easier to work with. MongoDB is a database that is distributed in its context, high availability, horizontal scale, and distributed locations are built-in and easy to use. MongoDB directed to text, no database following. MongoDB is used for its flexibility, Flexible Query Model, Native Aggregation, Schema.

- **Working of MongoDB**

Documents store data with the help of key-value pairs. Data is stored in JSON format and the backend MongoDB converts the binary data known as BSON. Now, all of these connections are stored in data. A collection is a group of documents. These collections are stored in the MongoDB database. This makes fetching of data extremely efficient than other databases.

2.3 Design Approach

Use case diagram:

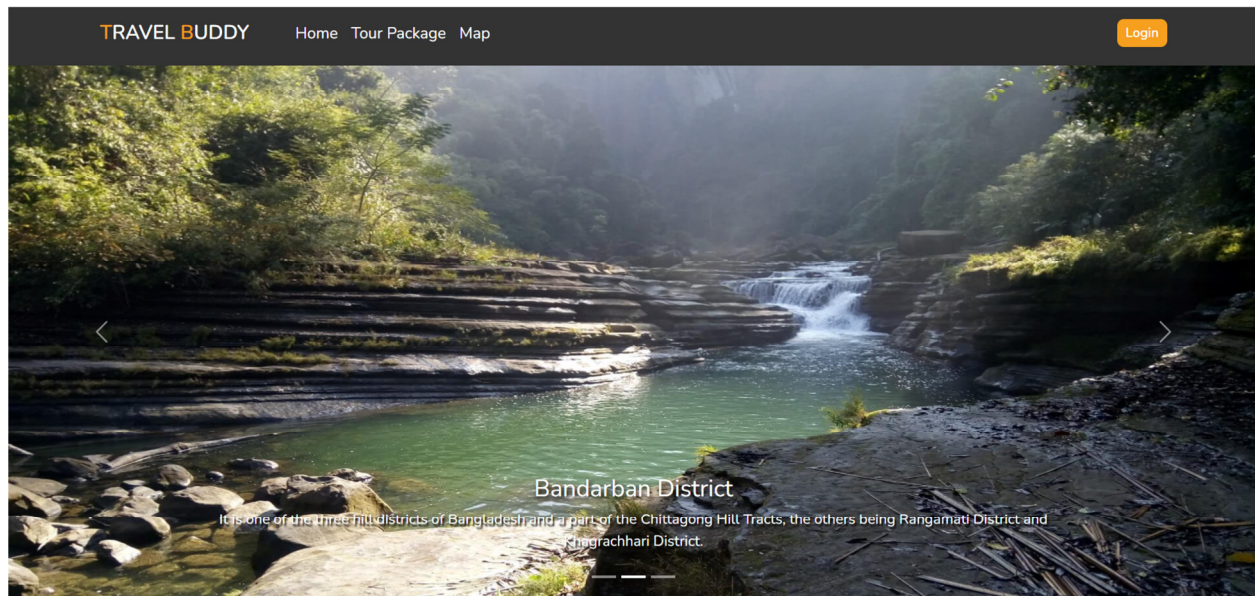


CHAPTER 3: Result & Analysis

3.1. Result & Analysis:

The project is evaluated on its effectiveness in how it is helping the users achieve their desired assistance. It could be any of the use cases out of several ones that our project offers to them.

3.1.1 Homepage, Signup, Login



Home page

TRAVEL BUDDY Home Tour Package Map [Login](#)

Please Register

Your Name


Your Email

Your password

Retype password

[Register](#)

Already register? please login.

 [Login with Google](#)

Signup Page

TRAVEL BUDDY Home Tour Package Map [Login](#)


Please Login

Your Email

Your password

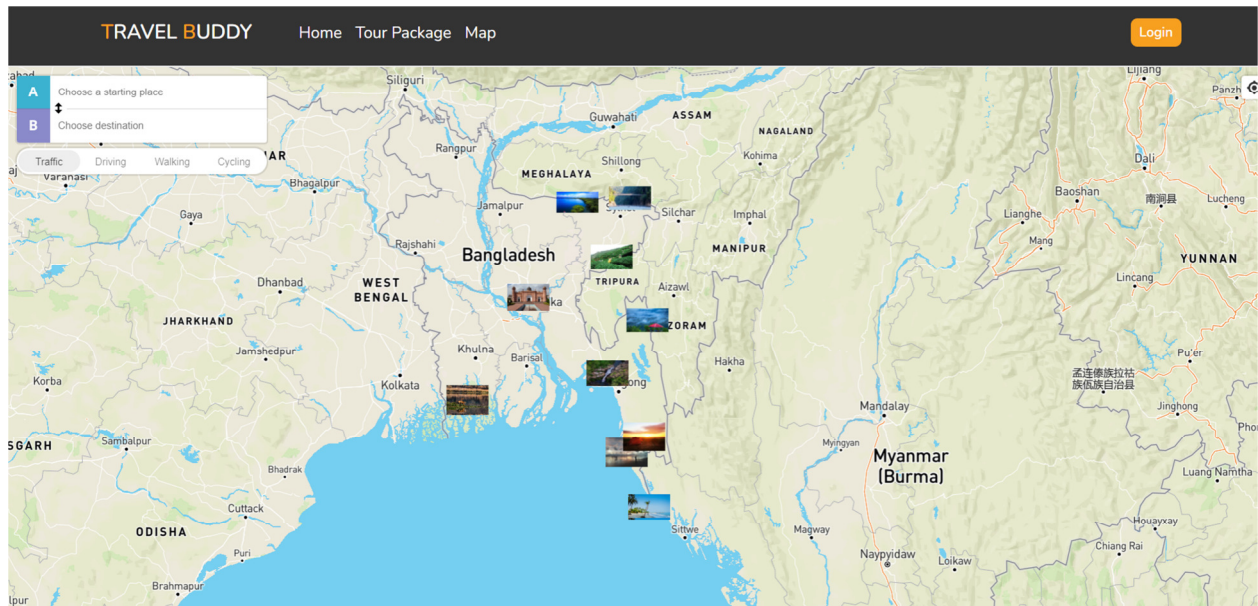
[Login](#)

[Create a new account?](#)

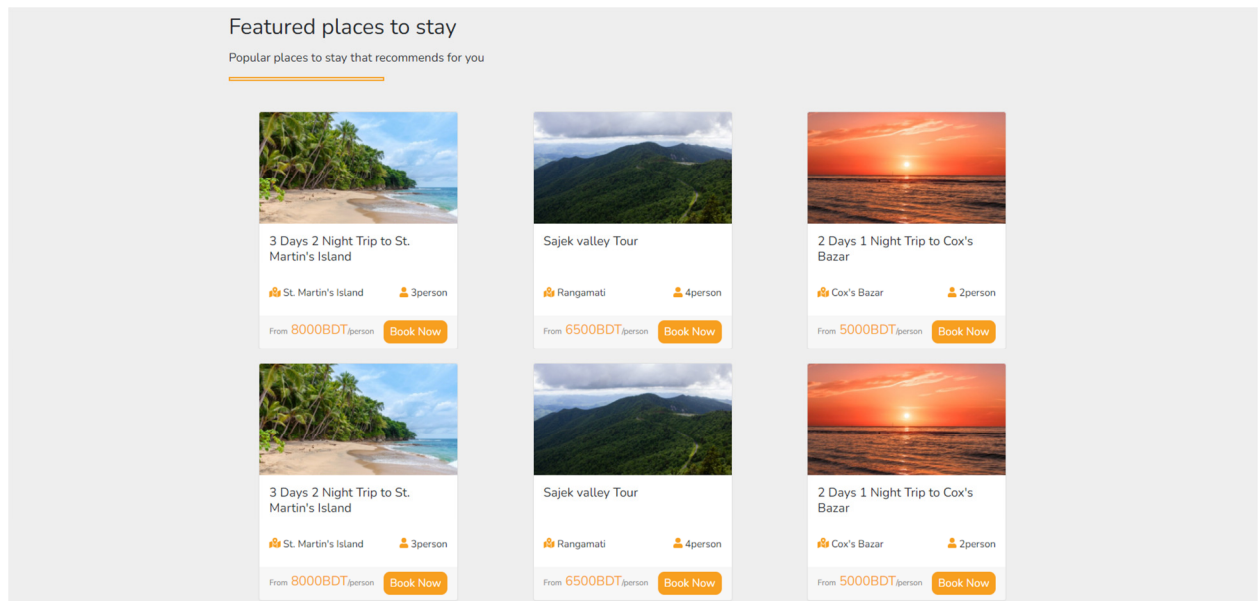
 [Login with Google](#)

Login page

3.1.2 Maps, Tour package, Reviews



Map page with pinned location



Tour packages

REVIEW

Shahara Tabassum

Lorem ipsum dolor sit amet consectetur, adipisicing elit. Nam, quas qui, tempora aperiam, possimus numquam quia ex quibusdam rem atque accusamus porro harum error perferendis adipisci. Voluptatibus modi eligendi laudantium ducimus amet sunt, quod commodi ipsa possimus, minima facere doloribus.

★★★★★

Dr. Shohana Rahman Deeba

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★★★★☆

Farjana Khaleque Arusha

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★★★★★

Reviews

3.1.3 Features for login user

The screenshot shows a user interface for a travel website. At the top, there is a navigation bar with the logo 'TRAVEL BUDDY' and links for 'Home', 'Tour Package', 'Map', 'My Booking', 'Blogs', and 'Add Review'. A user is logged in as 'ABDULLAH RYADH 1711646642' with a 'Logout' button. Below the navigation bar, there is a 'Write a story' button. The main content area displays a grid of six travel blog posts, each with a featured image, a title, a short description, and the author's name. The posts are: 1. 'Kuakata - The Daughter of Sea...' by ABDULLAH RYADH 1711646642. 2. 'Jaflong, The Best Tourist Destin...' by Abdulrah Riyadh. 3. 'Sajek Valley..' by Abdulrah Riyadh. 4. 'Chittagong Hill Tracks.....' by Farjana Khaleque Arusha 1721075. 5. 'Saint Martin Bangladesh, The Onl...' by Shahara Tabassum 1721236. 6. 'Lalokhal the blue water...' by ABDULLAH RYADH 1711646642.

Blogs: Users can post blogs

TRAVEL BUDDY Home Tour Package Map My Booking ▾ Blogs Add Review Signed in as: ABDULLAH RIYADH 1711646642 Logout

Add your review

Details

★★★★★

[POST](#)

TRAVEL BUDDY

" The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." – Marcel Proust

Company

- [About](#)
- [Services](#)
- [Event](#)
- [Add your hotel](#)

Platform

- [Browse Library](#)
- [Library](#)
- [Partner](#)
- [News & Blogs](#)
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Subscribe

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Add Review

3.1.4 Login as Admin

ADMIN PANEL Home Booking ▾ Add Service All Service Signed in as: admin Logout

Title	User Email	Date	Action
Explore Bangladesh By Air, Flight Awaits Date of journey	abdullah.riyadh@northsouth.edu	2021-12-21	Delete
Explore Bangladesh By Rail, Train Awaits Date of journey	abdullah.riyadh@northsouth.edu	2021-12-22	Delete
Explore Bangladesh By Road, Bus Awaits Date of journey	abdullah.riyadh@northsouth.edu	2021-12-22	Delete
Explore Bangladesh By River, Launch Awaits Date of journey	abdullah.riyadh@northsouth.edu	2021-12-28	Delete

TRAVEL BUDDY

" The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." – Marcel Proust

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Manage Transport Bookings

ADMIN PANEL Home Booking Add Service All Service Signed in as: admin Logout




Sajek valley Tour
 Booked by: ABDULLAH RIYADH 1711646642
 Price:6500
 Date:2021-12-15

Approve Delete



3 Days 2 Night Trip to St. Martin's Island
 Booked by: Aonla Online
 Price:8000
 Date:2021-12-22

Approve Delete



2 Days 1 Night Trip to Cox's Bazar
 Booked by: 1685495989
 Price:5000
 Date:2022-01-21

Pending Approve Delete

Manage Tour Bookings

ADMIN PANEL Home Booking Add Service All Service Signed in as: admin Logout

Service Title

Price

Location

days

Number of Person

Description

img url

[Add Service](#)

TRAVEL BUDDY

" The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." ~ Marcel Proust

Company

- About
- Services
- Event
- Add your hotel

Platform

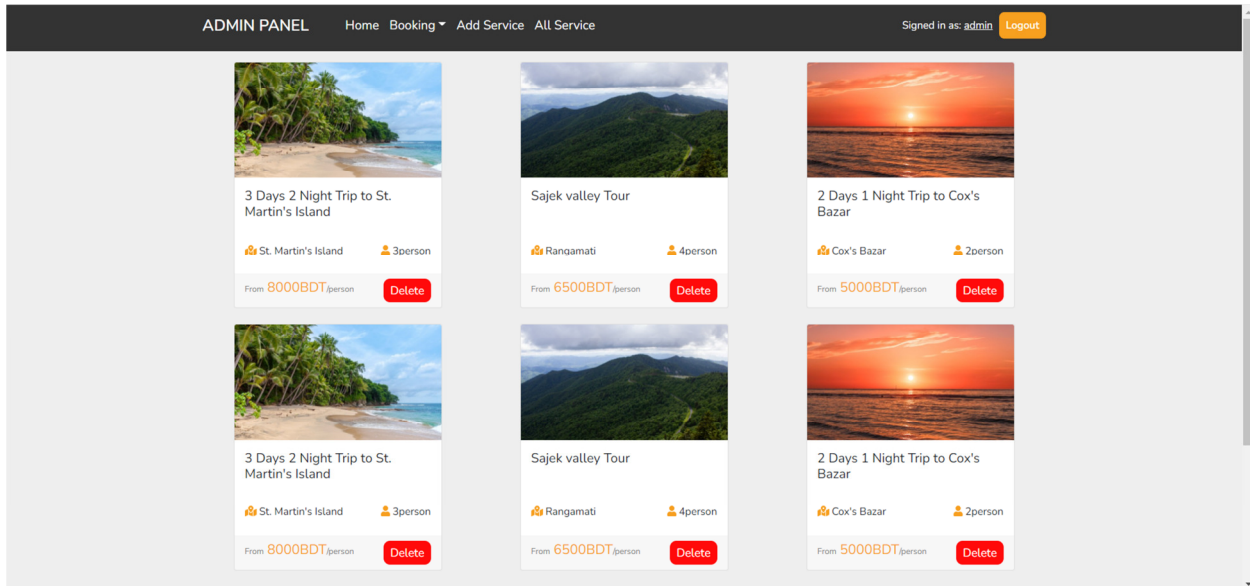
- Browse Library
- Library
- Partner
- News & Blogs
- FAQ

Subscribe

your email address

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Add Services



Add Tour Services

3.2. Time progression

We worked on the project for two semesters and we divided our time on working on multiple aspects of the project.

3.3. Project Timeline

The timeline leading up to that goal involves planning, iterative prototyping, implementing, and getting user feedback. The tentative timeline is as follows:

Period(week)	Objective & Milestone
1st - 2nd	Team formation
3rd - 4th	Idea construction
5th - 6th	Literature review & Obtain relevant resources
7th - 8th	Project Proposal Submission
9th - 10th	Use case Diagram, Data collection

11th - 12th	Interface design
13th - 14th	Pages with HTML/CSS/Bootstrap/JS
15th - 16th	React Integration
17th - 19th	Backend with Node & Express
20th - 21st	Database Interaction
22nd - 23rd	Final Testing & Debugging
24th - 25th	Final Report & Presentation

CHAPTER 4: Conclusion and Future Work

4.1 Conclusion

The purpose of this project is to design a website using which one can get and perform nearly all the operations related to traveling in Bangladesh. The offers of accommodation, special offers, last minute, early booking, hotels, and flights present in the online environment and the ease of accessing them from home or office facilitates will make traveling more easy, efficient and enjoyable.

4.2 Future Plan

It is worth mentioning that this project work is open for further enhancement, with the expectation that it becomes more robust and better enhanced; covering every single tourist sites all over the world. In the aspect of tourism, Internet and web technologies have made more readily available information on tourist locations, accommodations, transportation, shopping, food, festivals, and other attractions, thus improving the whole tourism experience. Besides, we have planned to create a mobile application in the near future that will allow clients to access our service while being on the go, at any time and in any place. This can increase brand recognition as well. The website maintenance effort is moderate but the application can be regularly updated as per user requirements. We can also develop this app so that it can be extended for iOS and others in the future.

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