A project report on

"Easy Travel"

Course Title: Application Development Sessional

Course Code: CSE 252

Submitted by:

Mahmudul Hasan tamim
Student ID: 2002002
Level-2, Semester -II

Md. Obaidullah Al Mahdy
Student ID: 2002020
Level-2, Semester -II

Md. Shamim Reja
Student ID: 2002027
Level-2, Semester -II

Department of Computer Science and Engineering

Faculty of Computer Science and Engineering

Hajee Mohammad Danesh Science and Technology University, Dinajpur

CERTIFICATE

This is to certify that the project report titled **"Teasy Travel"** has been carried out by **Mahmudul Hasan Tamim, Md. Obaidullah Al Mahdy, Md. Shamim Reja**, students of Level 3, Semester II, Department of Computer Science and Engineering, Hajee Mohammad Danesh Science and Technology University, Dinajpur, for the course Application Development Sessional (CSE 252). This report represents their original work conducted under my supervision and guidance.

Supervisor

Sumya Akter
Lecturer
Department of Computer Science and Engineering,
Hajee Mohammad Danesh Science and Technology University, Dinajpur

Abstract

Finding suitable travel system can be a difficult and time-consuming process for travellers. It often involves searching through multiple platforms, each offering different services, making it hard to compare quality, availability, and effectiveness. The “Essy Travel” aims to solve these problems by providing a single platform that simplifies the search and chose proper travel package .There are different catagories of buses also sre in different routes . Travellers can choose according to thir preferences . The platform also includes features like user registration and secure login, allowing users to manage their profiles easily. Additionally, registered users can get discount and additional discount for children. By offering an easy-to-use interface and bringing all key functions together, Easy Travel makes it simpler for travellers opportunities to meet their needs.

Table of Contents

Chapter 01
Introduction

1.1 Introduction

In today's fast-paced world, finding quality travel services can be a challenging and time-consuming task for travelers. The “Easy Travel” simplifies this by providing a centralized platform of good mode of transportation . It includes features like user authentication, profile management, travel processing .The platform ensures security, accessibility, and ease of use for all users.

1.2 Objective of the project

The primary objectives of the “Easy Travel” project are as follows:

- Develop a user-friendly platform for searching bus services.
- Implement secure user registration.
- More attractive features of travels.
- To enhance user experience with filtering.

1.3 Scope of the project

The project scope involves developing a platform that allows travellers to search and book specific busses within their budget while enabling to manage listings and applications. Key features include secure user profile management, filtering options .

1.4 Significance of the “Easy travel”

The “Easy Travel” simplifies the bus search process for travellers make informed decisions based on cost of routs and other factors like cost of different bus. It centralizes bus services, promoting traveling transparency.By leveraging technology, the platform promotes educational accessibility, quality, and efficiency, benefiting for travellers.

Chapter 02

System Overview

2.1 Overview:

The “Easy Travel” is designed to offer a seamless experience for users (travelers) to search and purcess bus ticket . The platform will feature secure user registration , a system for searching and purchesing ticket based on specific criteria, and get discount for registered users , additional discount for child member. The platform will ensure a smooth user experience with features like registration , fare calculation , discount , Efficient travelling and it will be deployed securely to provide reliable service. This system will cater to travellers impruve the overall travell process.

Key Features of the System:

- **User Registration :** Secure user registration and login functionality.
- **Fare calculation :** To calculate travel costs based on distance between cities and selected bus.
- **Users Profile:** Users can manage their personal information.
- **Discount:** TO offer discount to registered customers,perticularly children and frequent traveler.
- **Distance Calculation:** To calculate the shortest travel distance between cities using the fluid washer algorithm.
- **Efficient travel planning:** To provide users with travel options and facilitate efficient travel booking.
- **Error Handaling: E**nsure that incorrect input is managed efficiently and user can retray with correct data

Chapter 03

Proposed Methodology

3.1 Introduction

The methodology serves as a roadmap for implementing our Easy travel project, guiding us through accessing, organizing, evaluating, and refining data using various methods. In this chapter, we will outline the steps we are taking to complete the project and develop its prototype.

This project aims to create a unique solution for efficientl bus services within a specified budge, which may involve developing a software application or implementing a service for travelers. Successfully managing the project will require a combination of skills and strategies to ensure efficient completion of all tasks. The primary challenge will be to meet the project's objectives while adhering to established constraints. To facilitate this process, we will document all relevant details at the outset, providing a clear reference for stakeholders and ensuring clarity and alignment as we progress through the various phases of the project.

3.2 Requirement Phase

Engage stakeholders (travellers) to understand their needs, and ensure the system meets functional (user management, bookings) and non-functional (performance, security) requirements.

Engaging Stakeholders:

- Identify key participants, such as travellers,transport owner,transport manager.
- Understand their needs and expectations for the travel management system.

Functional Requirements:

- Managing bus profile,rent according to distnace ,including adding new users registration.
- Providing options to travel in different type of bus.

Non-Functional Requirements:

- Ensure smooth system performance, reliability, user-friendliness, security, and compatibility across various devices.
- Provide comprehensive documentation, including user stories, system usage guidelines, and detailed specifications.

Review and Approval:

- Schedule regular meetings with mentors to review progress and gather feedback.
- Obtain formal approval before moving to the design phase.

3.3 System Design Phase

In this phase, we'll create a blueprint that details how the EasyTravel system will function, focusing on how the various components will interact to provide an efficient platform for travelers.

3.4 System Design:

The flowchart outlines the process of a “Easy Travel” application, where traveler register, manage travel,member login,member discout, featuere are availabel.

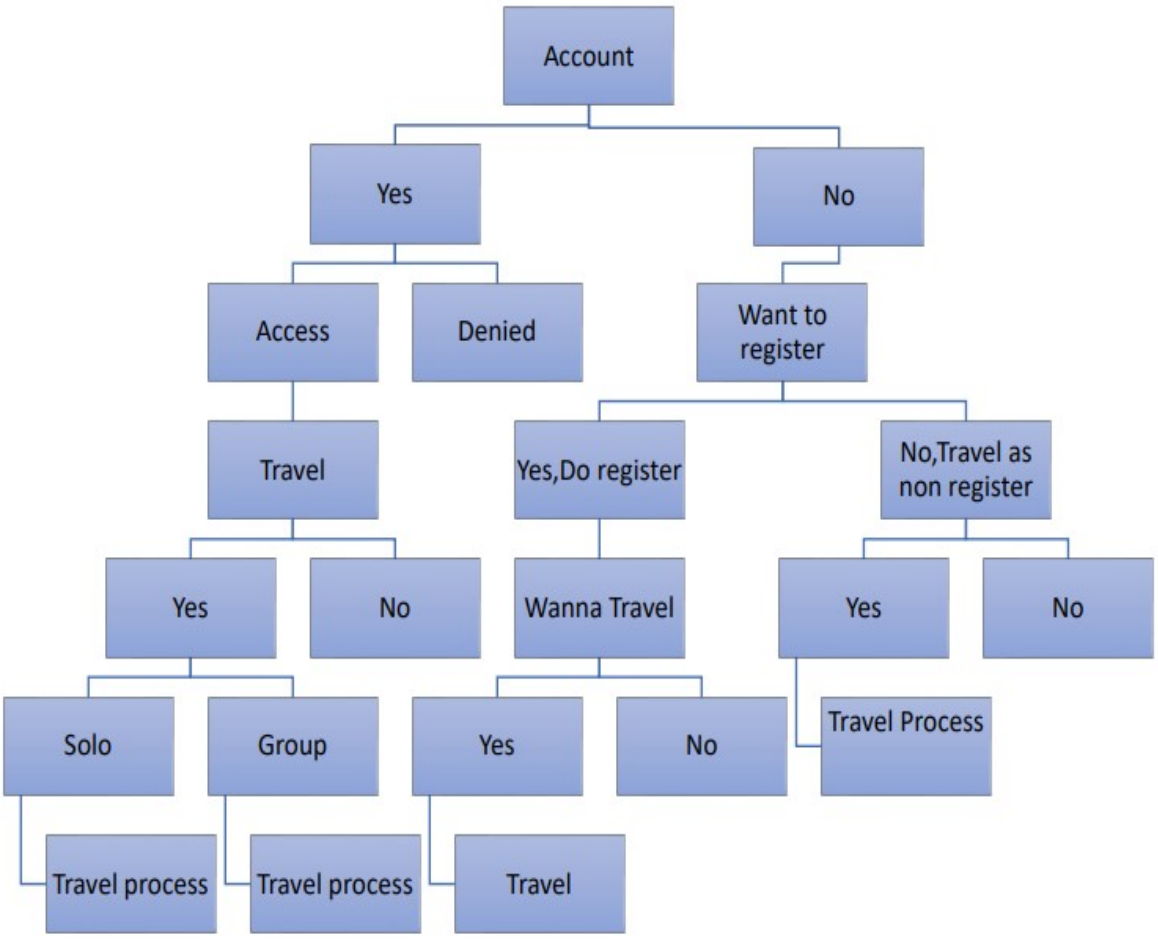

Figure 3.1: System Design of the project

3.5 Road Diagram

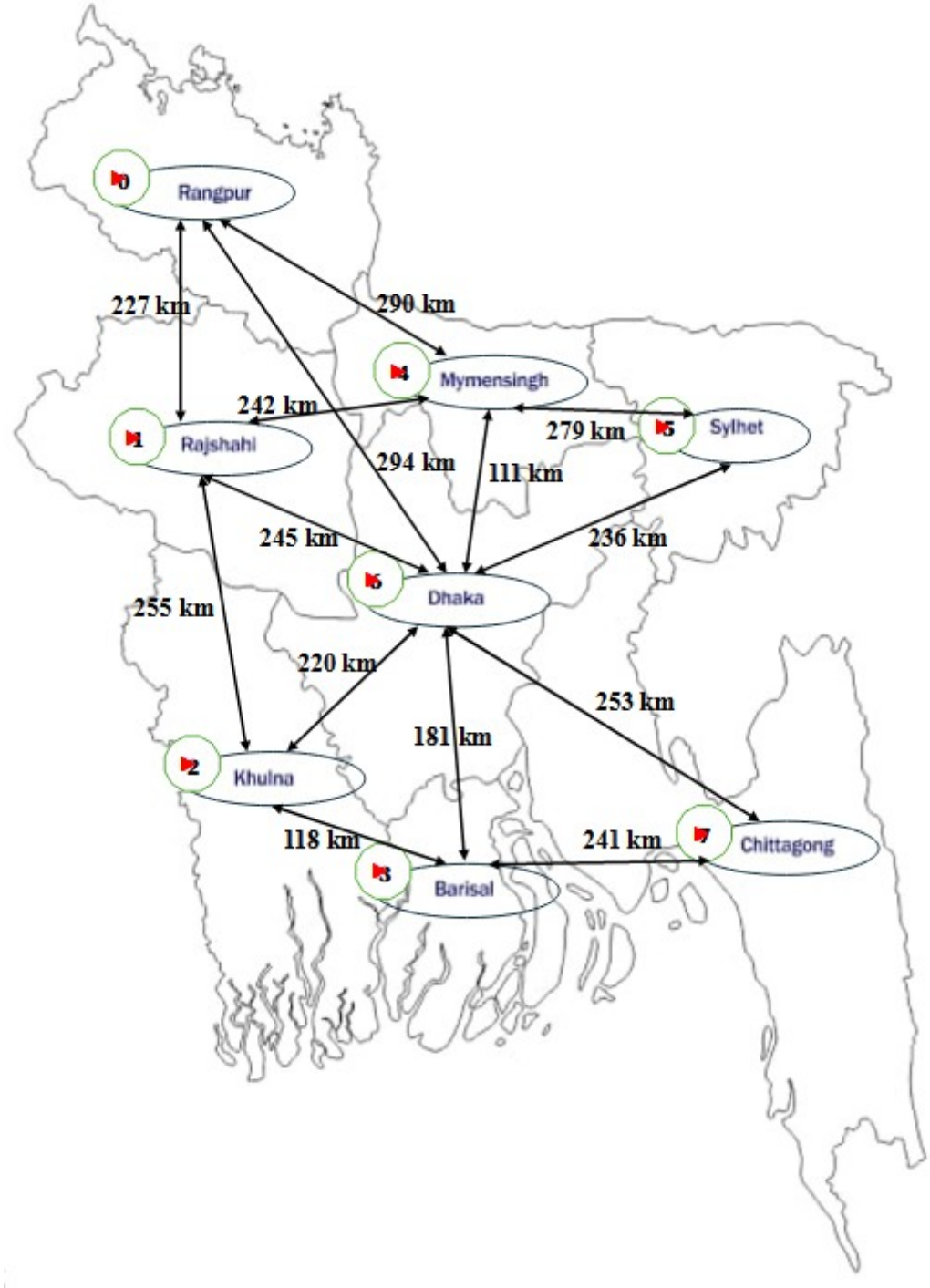

Diagram that the Aplication to be developed following this prototype.

3.6 Implementation Phase

Develop code using C++ for the Application . ensuring adherence to best practices . Implement core functionalities for student management and profile updates, while coordinating development through GitHub.

Code Development:

- Writing code based on the system design using React for the frontend and Python-Django for the backend.
- Adhering to coding standards and best practices while collaborating with the development team.
- Utilizing IDEs like VSCode for development, and integrating version control with GitHub for smooth collaboration.

Functionality Development:

- Developing core functionalities such as fare calculation management handling within thefunction.
- Enabling features for updating profiles, managing bus.
- Coordinating code versioning and collaboration through GitHub for streamlined development and teamwork.

3.7 System Testing Phase

During the System Testing Phase, Esay Travel Portal will undergo rigorous testing before deployment. This stage involves simulating real-world usage to evaluate data accuracy and functionality. The focus will be on identifying and fixing bugs to ensure the system is error-free and reliable, meeting user requirements before going live. Through thorough testing, we aim to deliver a high-quality application that provides a seamless user experience for travelers.

3.8 Deployment Phase

The Deployment Phase involves preparing the Application for installation on target systems and providing necessary documentation for seamless setup and usage. It includes ensuring compatibility, conducting testing in the deployment environment, and executing the deployment process efficiently. The goal is to transition the software from development to production while

minimising downtime and disruptions, ensuring that it functions flawlessly and meets user requirements in the live environment.

- Prepare the application for deployment on target systems.
- Provide necessary documentation for installation and usage.

3.9 User Training and Feedback:

Establishing a feedback mechanism is essential for gathering user input and insights on their experiences with “Easy Travel”. This can be achieved through surveys, feedback forms, or dedicated channels where travelers can share their suggestions, concerns, and ideas for improvement.

Analyzing this feedback allows for continuous enhancement of the platform, ensuring it adapts to user needs and changing requirements. Regular engagement with users and integrating their input into future development fosters a collaborative, user-focused approach to improving “Easy Travel”.

3.10 Maintenance Phase

Establishing a system for ongoing maintenance and updates is crucial to ensure the continued functionality and relevance of “Easy Travel”. This phase includes key activities aimed at managing and optimizing the platform over time.A robust system for identifying, prioritizing, and resolving issues is vital to maintain system integrity. Monitoring performance and user feedback helps detect emerging problems and prioritize resolutions effectively.

The maintenance phase also focuses on continuous improvement. Regularly gathering user feedback, keeping up with industry trends, and assessing performance can guide the prioritization of new features and enhancements. Adopting an iterative development approach ensures “Easy Travel” stays aligned with user needs and technological advancements.

By maintaining a systematic approach, “Easy Travel” can adapt to changes, mitigate risks, and remain a reliable and efficient tool for tutor-student management.

chapter 4

Inner functionalities

class &object: This application based on class object featuere.there are travellers class ,using this class when new traveller are registered.new object are created.

Data Structuere: in this application vector used as data structuere to store data.

We store class in vector to store data.

Algorithom : Innitially we don't have routs to connect all citys,by using floyed -warshal's algorithom we generate sortest path between every city .

City Code	0	1	2	3	4	5	6	7
0	0	227	∞	∞	290	∞	294	∞
1	227	0	255	∞	242	∞	245	∞
2	∞	255	0	118	∞	∞	220	∞
3	∞	∞	118	0	∞	∞	181	241
4	290	242	∞	∞	0	279	111	∞
5	∞	∞	∞	∞	279	0	236	∞
6	294	245	220	181	111	236	0	253
7	∞	∞	∞	241	∞	∞	253	0

initial routs on greed

City Code	0	1	2	3	4	5	6	7
0	0	227	482	475	290	530	294	547
1	227	0	255	375	242	481	245	498
2	482	255	0	118	331	456	220	359
3	475	426	118	0	292	417	181	241
4	290	242	331	292	0	279	111	364
5	530	481	456	417	279	0	236	489
6	294	245	220	181	111	236	0	253
7	547	498	459	241	364	489	253	0

Bus Type	Fare/Km
Ac Sleeper coach	6.25
Non AC sleeper coach	5
AC Chair coach	3.75
Non AC Chair Coach	2.5
Local chair coach	1.75

fare calculation ;there are different type of bus services.this application calculate automaticly with castomar input.

Chapter 5

Result and Discussion

5.1 Home Page

```
----" WELCOME TO EASY TRAVEL SERVICES "----

Do you have "Easy Travel" account account ?
Yes(1) : No(0)
```

Fig-4.1: Home Page

The “home” page of the “Easy Travel” features a simple, user-friendly layout with two button. Confurming account checking……

```
----" WELCOME TO EASY TRAVEL SERVICES "----

Do you have "Easy Travel" account account ?
Yes(1) : No(0)
1
Enter your name : Tamim
Enter your Mobile No : 01743928700
Congratulations Sir..!
You are our registered customar
Do you want to travel?
YES(1) : NO(0)
```

for Login user have to put their name and mobile no as they registered befor. This allows users to easily access to travel guide. whether they are searching for travel opportunities in suitable fare and bus.

5.2 Registration Page

```
----" WELCOME TO EASY TRAVEL SERVICES "----

Do you have "Easy Travel" account account ?
Yes(1) : No(0)
0
Do you want to register your account ?
Yes(1) : No(0)
1
ENter your Name:Mahdy
ENter your Age:25
ENter your MobineNo:01705915568
Congratulations sir.You have complited registration.
Do you have "Easy Travel" account account ?
Yes(1) : No(0)
```

Fig-4.2: Registration Page

The “registration” page of the “Easy Travel” allows travelers sign up easily. Users need to fill in required fields like Name, age, mobile no. After registration they got 10 % discount on every ticket as registered member.

5.3 Travel Catagory

there are different type of travel option like solo travel,group travel,
in group travel traveller can have adult and child passenger.

```
Enter your travel Catagory :
Option 1 : Solo travel
Option 2 : Group travel
2
Enter number of adult passenger :5
Enter number of child passenger :2
```

5.4 Sample output.

For a registered member ,if he wants to travel from rangpur to khulna in group with 5 adult member and 2 child member.then he got 10 % discount for adult member and 50 % discount in child member .

```
Hi Mahdy Wish you a happy journey with your team.
Distance between Rangpur & khulna is 482 KM
Your Teah have 5 Adult member & 2 child member.
AC Chair Coachticket price is : 12649 TK.
As You are our honorable member you got 10 % Discoount for Adult passenger  & 50 % Discount for Child passenger
Price for you : 9938 TK only
Happy Journey..
```

Chapter 06
Conclusion

6.1 Conclusion:

In conclusion, the “Easy Travel” stands as a testament to the integration of innovative technology and user-focused design principles . , this platform offers a comprehensive solution for travelers navigating the complexities of finding bus services.

By prioritizing user needs, the platform ensures a seamless experience for travelers and service providers. The intuitive interface, combined with powerful management tools, underscores our commitment to simplicity and efficiency in the educational landscape.

As we approach the deployment phase, we are confident that the “Easy Travel” will not only meet but exceed user expectations. With continuous feedback mechanisms and a dedication to ongoing improvement, we are committed to ensuring this platform remains a trusted resource for those seeking quality educational support.

6.2 Limitations:

The system currently offers limited online functionality, which may hinder user experience. Additionally, it is resource-intensive, potentially leading to performance issues during peak usage.

6.3 Future Work

Integrating AI can enhance user personalization by offering tailored tutor recommendations based on individual preferences. Expanding features in both the mobile app and the web application will improve user engagement and convenience, making the platform more versatile and user-friendly for students and tutors alike. These enhancements will help the platform better meet the evolving needs of its users.