

REAL TIME TRAIN TRACKING SYSTEM FROM USER INFORMATION

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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DAFFODIL INTERNATIONAL UNIVERSITY

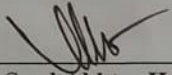
DHAKA, BANGLADESH

September 2019

APPROVAL

This Project titled “**Real Time Train Tracking from User Information**”, submitted by SARWAR SARKER, ID No: 153-15-631 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 18 September 2019.

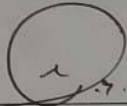
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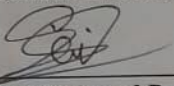
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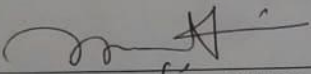
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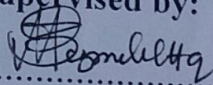
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DECLARATION

I hereby declare that this project has been done by me under the supervision of **Md Nazmul Hoq, Lecturer and Associate Head, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree.

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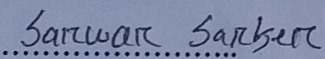
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ABSTRACT

The train is the most vital transport in Bangladesh but it is a matter of great sorrow that general information is not available for the people. They face various problems to find their desired information about train & its schedule. People looking for their necessary information about train on the internet but the maximum didn't get expected information about their specific train. Even many people spend money to know live location of the train via SMS. So, here in this project, I try to develop "Real-Time train tracking system form user information" website which helps users to get the live location of train. And it's absolutely free. Live train information is taken from registered users. One needs to just enter train name or train location in the search field to find their specified train information. In an emergency, a registered user can contact to other registered users via given contact number. This website also help people to find their train schedule details, search by giving starting point to destination point, the procedure of buying train tickets via SMS, and all stations important number, etc.

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Chapter 1

Introduction

1.1 Introduction

In Bangladesh, the train is the most useful and time-saving transport. But general information is not available. People always need to go here and there to know the schedule of trains. They are always puzzled with it. Even sometimes they know the right schedule but don't know the delay time of the train. Moreover, now people spend money to know train current location via SMS. I tried to make this website for users where they can get the same information like how much delay and current position of train instantly by Live Train Status. Users can view current information without cost. This information is taken from registered users of my website. This website may help people to get all kinds of Bangladesh train-related information for an example train schedule, train starting time from desired station and procedure of buying ticket via SMS, etc.

Here, people can view train schedule & current location of train without registration but, to make posts and communicate with other users, people have to complete the registration process. People may need to complete registration but, basic facilities are available for every user who wishes to visit the website.

1.2 Motivation.

The train is the most popular transport in our country for traveling. The train information knowing system is still quite difficult for people. People cannot find their specific train information easily. To know the current location of the train, people need to spend more than 4 takas via SMS. I thought the way of knowing about the train information should be easier and more comfortable for train passengers. Behind the thought about this, I was thinking about developing train tracking system where there will be no costs for knowing about the current location of the train. Where people can communicate with each other and there will be selectable options to know the exact info about the recent train location information.

1.3 Objectives

1.3.1 Improved User Satisfaction

My first objective is to give users the privilege to feel that they have satisfied over their needed information in our system. By providing useful features by this system, intended to make the user happy about service. Satisfied users to bring more users to use this service.

1.3.2 User Experiences

The main goal of our Train Tracking System is to give proper information about train to users. Where the users can get the train running information where they can easily find their needed train information. Besides that, users can post about the current train location and they can communicate with each other.

1.4 Expected Outcome

After passing the maximum part of feasibility case study, I am in a stage that I could imagine

User Sign Up: The user will sign with mail address and other information from here. It will be easy to register a new User. After the confirmation of user registration, he will access the user profile and get his/her desired Information.

Add Post: Any registered user can add post train information about train name, posting place, etc.

Post View: Any registered or non- registered users can view posted train information. They can get information from other users.

Admins: In my system to administrate teachers assigns by admin. Admin has the most privilege. Admin can add delete post information and can delete users.

View Contact: Only registered users can view other users contact numbers.

Notification: Only registered will get be notified about recent posts.

Messaging System: In my system, only registered users can communicate with each other via message.

1.5 Report Layout

Firstly, In Introduction chapter, I discussed the objective of the project, inspiration to work with the expected outcome in Chapter 1. Secondly, I discuss the background circumstances of my project. And so discuss the similar work, compared to other candidate systems, the scope and challenges of this system in Chapter 2. Thirdly, types of requirements like business process model, the requirement collection and analysis, web programming, use case model, relational database and design requirements defined in Requirement Specification Chapter 3. Fourthly, in design chapter 4 describes the design of our project visual view. In Chapter 5, I discuss the implementation of the database, interaction and test result of this project. Finally, in the sixth, the conclusion and future scope will discuss in Conclusion chapter 6.

Chapter 2

Background

2.1 Introduction:

In this chapter, I will try to give an overall idea about —“**Real-Time Train Tracking System from User Information**”. Here I have discussed about Train Tracking System Website. To develop such a system, a huge quantity of knowledge is required to predict and discover all the expectations that may occur [1]. Live train status helps you to provide an idea where the train now and what is the next station. Running train status provides information such as arrival time, delay time, train name, station position, and train status. So a large amount of research is required in this development. [2]

2.2 Related Works:

I have found several types of related work in our country. Their system provides train schedules, ticket prices, notice board, and station contact number etc. Some of them provides current location of train with a cost.

2.2.1 BD Railway website:

This is the official website of Bangladesh Railway. This website gives all basic information of train what is required for train journey. People can get information from staying home without any trouble. [3]

2.2.2 Rail Sheba:

Rail Shaba Application has been developed to ensure the availability of e-tickets to users easily. Users can buy train tickets via any VISA/MASTER, Amex cards and bKash. [4]

2.2.3 Amader Rail:

The system known as “Amader Rail” was developed to make sure the easiest way to access the offers provided by Bangladesh Railway. The app not only help to provide service like ticket availability or most recent train status but also help to notify train delay time.[5]

2.3 Comparative Studies:

2.2.1 BD Railway website:

Advantage:

1. Bangladesh Railway provides an accurate train schedule and price of tickets for people.
2. It provides E-Sheba, train related notice board and contact number of every station for public query or help.

Disadvantage:

1. This website takes so much time to reload.

2.2.2 Rail Sheba:

Advantage:

1. People can purchase tickets online via VISA or other cards.
2. Food ordering service is available for users on a journey.

Disadvantage:

1. This app doesn't support train schedule properly, just show the train status if the train is left or not.
2. This app gives service about buying tickets online, but the performance is not good enough according to people's rating.

2.2.3 Amader Rail:

Advantage:

1. Train tracking system is available for the user what gives the recent train location of train.
2. It provides rail information a centralized schedule with a notice board.

Disadvantage:

1. There will be a cost for tracking train for users.
2. Some feature for example "online ticket available" doesn't work properly

2.4 Scope of the problem

People will give information about train location, time and my website will give based on their information. So my project system can be used in all types social networking site for example Facebook, Twitter, etc. As my project needs information from people so I cannot use it on e-commerce.

To establish the project, need to work with the following factors related to the scope of the problem phases

2.4.1 List of Actors

2.4.1.1 User:

The User is the heart of any Train Tracking website. All things activate bases on users.

2.4.1.2 Admins:

In my system, the admin has to administrate the whole activity of our project. Admin has the most privilege. He can delete any posts or any registered user.

2.4.2 Actors viewpoint:

Different stakeholders perform totally different actions. Consequently, each of them encompasses a totally different reading of the system. Therefore, I have to acknowledge the wants from multiple points of reading, yet as multiple views of necessities. Assumptions area unit is given below: Stakeholder's read purpose

1. User friendly and economical system
2. Error free system
3. Spare privileges
4. Specify the wants greatly clearly

2.5 Challenges:

I faced different kinds of problems. Developing this project was not so easy for me. I was not skilled when I started developing this project. First of all the main and most important problem, I faced on database designing. It was actually the toughest parts of my project.

After this, I faced some logical problems to implement my project messaging system.

CHAPTER 3

Requirement Specification

3.1 Business Process Modeling

The process called Software Development Life Cycle (SDLC) is a procedure what is used by the software company to design, improve and check high-quality software. The SDLC target to make high-quality software what fulfill or satisfy customer desires, reaches completion within time and cost friendly. [6]

The process which helps us to find a profitable, high quality and useful product.

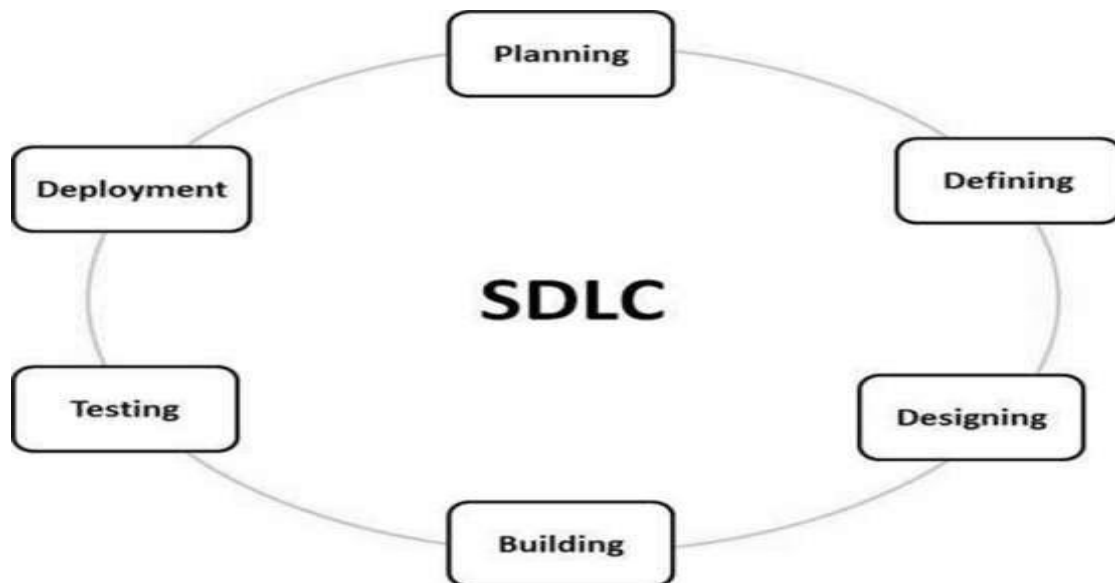


Figure 3.1.1 Software cycle

When a software is produced, the SDLC draws the correct organization & decommissioning of the item when it turns into a heritage. The philosophy of SDLC, as a method, adds of accompanying steps: observation (necessities and plan), improvement, checking, discharge and upkeep.

3.2 Requirement Collection and Analysis

For generalizing my system, I have to define all categories of the current train tracking system. To develop such a system a huge amount of information is needed to predict and figure out all the expectation that will occur. Strategies for train tracking differ from platform to platform. So a lot of research is needed in such development. Foremost an efficient plan was needed. There were lots of challenges to solve. Here is the technical requirement of my system.

3.2.1 Server Requirement

Windows Operating System, PHP version 7.2, MySQL database

3.2.2 Operating System

Windows

Windows ten could be a laptop computer software package developed and discharged by Microsoft Corporation as a part of the Windows NT family of operating systems. It was formally opened in September 2014 following a short demo at Build 2014. The primary version of the software package entered a public beta testing method in October 2014, leading up to its client release on July 29, 2015. [7]

Linux

Linux might be a Unix-like and primarily POSIX-compliant portable computer OS (Operating System) which is assembled below the model of free and American Standard Code for Information Interchange document package development and distribution. The method part of OS is that the OS kernel, associate OS kernel initial discharged on day, 1991 by Linus Torvalds. [8]

Web Server:

A program that uses Hypertext Transfer Protocol to serve the files to users is known as web server. Dedicated computers and appliances could also be mentioned as web servers additionally. In response to their requests, that are forwarded by their computers' HTTP clients.

3.2.3 Web Programming**PHP**

A general-purpose programming language originally designed for web Development is known as Hypertext Preprocessor (or simply PHP). In 1994 Rasmus Lerdorf created PHP & it is now produced by The PHP Group. For Personal Home Page PHP originally stand for. But it now stands for the recursive initialize PHP: Hypertext Preprocessor. A command line interface (CLI), embedded into HTML code may be executed by PHP code or it can be used in combination with various web template systems, web content management systems, and web frameworks. Usually PHP code is processed by a PHP interpreter implemented as a module in a web server or as a Common Gateway Interface (CGI) executable. The interpreted and executed PHP code is combined by the web server for the results which may be any kind of data, including images, with the generated web page. Many programming tasks can be made by PHP outside of the web context, such as standalone graphical applications and robotic drone control.

JavaScript

The most ordinarily used as a shopper facet scripting language is JavaScript what implies JavaScript code where it is written into AN HTML page. Once AN HTML page with JavaScript is requested by a user, the script is distributed to the browser and it's up to the browser to try one thing with it.

MySQL

MySQL is an Oracle-upheld open source social database the executive's framework (RDBMS) in view of Structured Query Language (SQL). MySQL keeps running on for all intents and purposes all stages, including Linux, UNIX and Windows. In spite of the fact that it very well may be utilized in a wide scope of uses. MySQL is regularly connected with web applications and internet distributing. MySQL is an imperative segment of an open source undertaking stack called LAMP. Light is a web advancement stage that utilizes Linux as the working framework, Apache as the web server.

3.3 Use Case Modeling and Description

UML use case diagrams can be used to explain the functionality or process of a system in a horizontal way what represent the details of specific features of a system.

3.3.1 Use Case Model (Admin and User)

Use case graph is the needed framework/programming prerequisites for another product program immature. Use cases define the general manner and not the accurate method for getting it going and not the specific procedure of making it done (how). Use cases once specified can be denoted both textual and visual representation (such as UML). A key concept of use case modeling is that it helps us design a system from the end user's perspective.

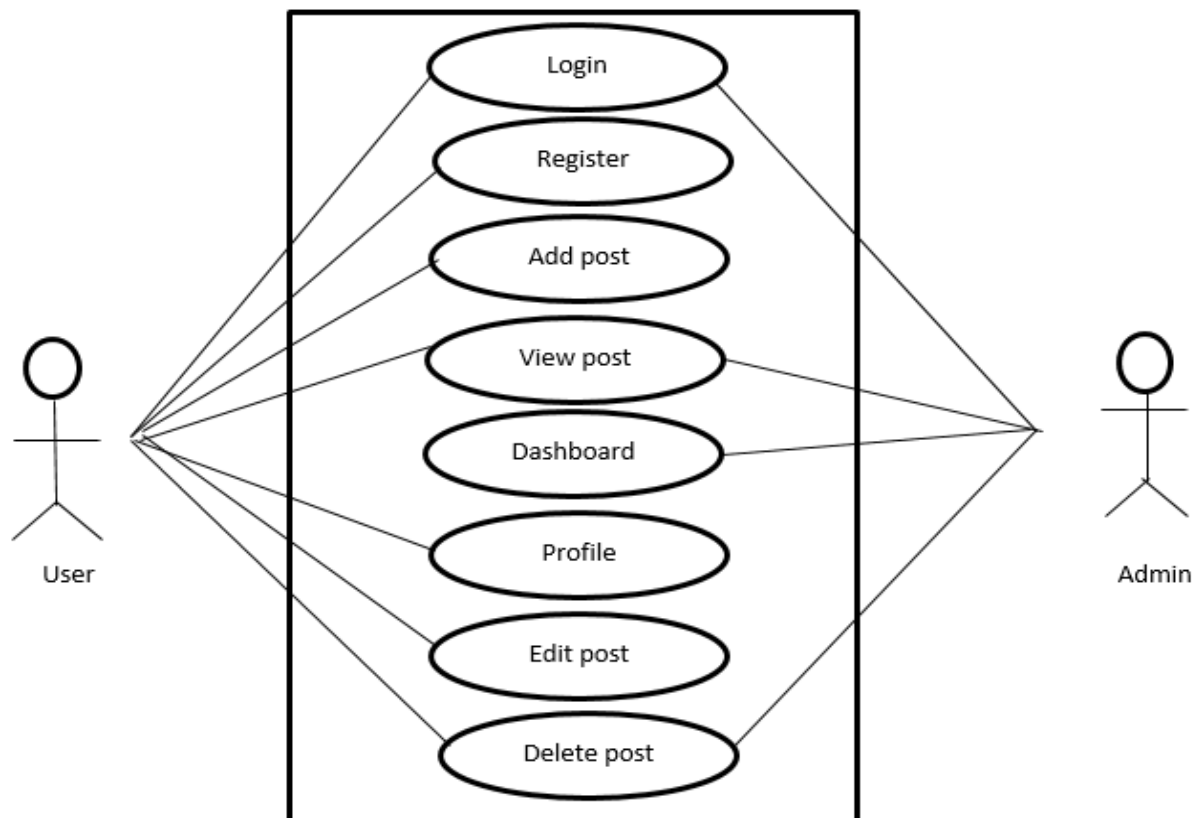


Figure 3.3.1.1 Use case model for admin and user

3.4 Logical Data Model

Logical data model is a procedure that is used to describe and observe the requirements needed to support the business process within the latitude of equivalent material structures in organizations. The ER model or ER Diagram is one kind of Logical data models, contains the entity, attributes, tables, and relations. In our system the users have to register first, then he will be able to login. Then the users would follow the following process to ask any question and use team system.

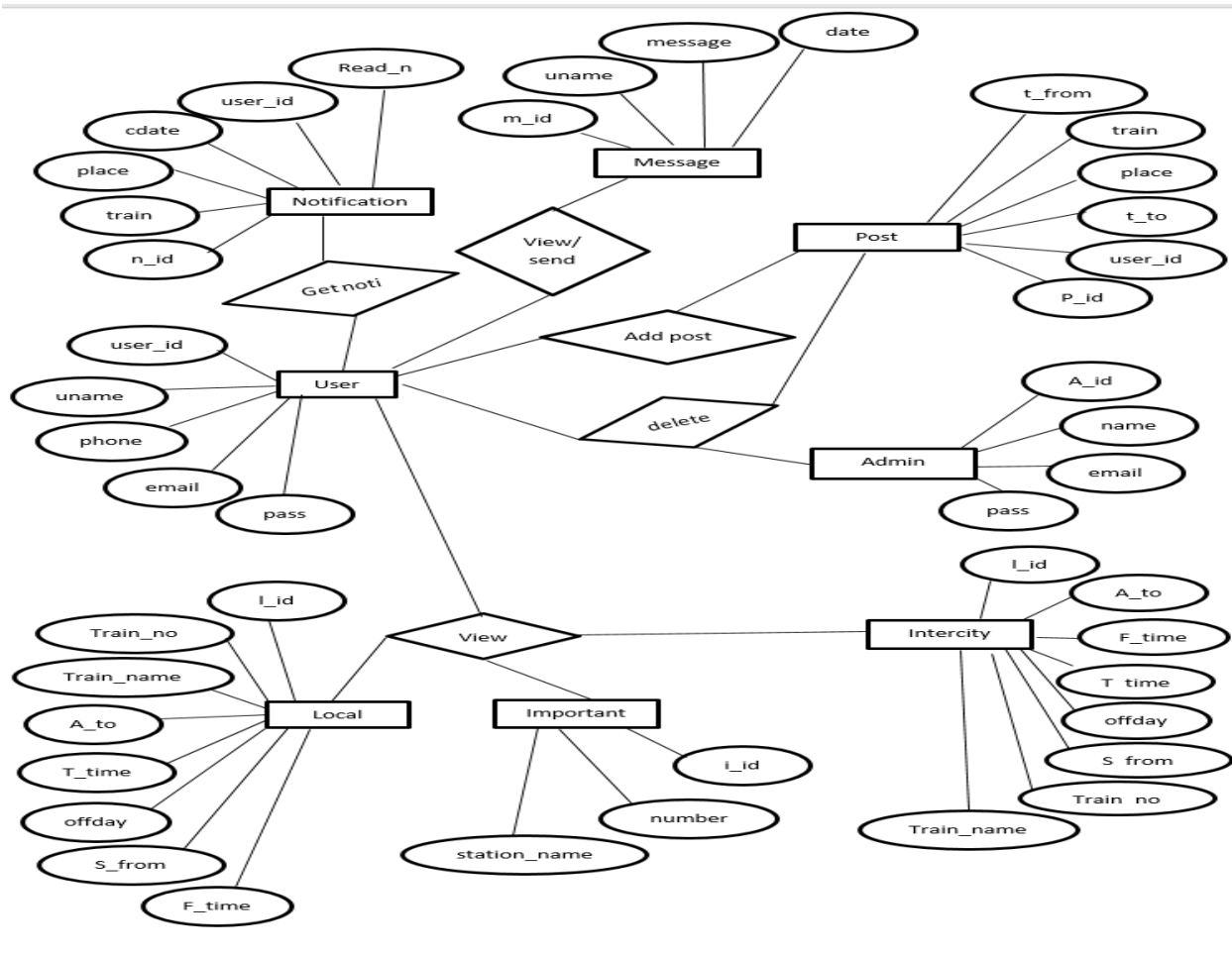


Figure 3.4.1 Entity relationship model

3.5 Design Requirements

Design requirement means how friendly my system to any user and how to easily implement this design to the users view or front-end. While developing my system I have kept in mind reach my goals with the designing system following criteria;

1. Make the system simple and flexible for the user.
2. Make the system compatible.
3. Efficiency
4. Easy to access
5. Delivery time
6. Optimize site performance
7. Security is essential
8. Site search is important

CHAPTER 4

Design Specification

4.1 Front-end-Design:

Front-end design is the design of the front side of my system that can be viewed by a general customer and vendor.

HTML

- ☐ **Basic HTML**

All kinds of HTML5 [9] Tags, Element, Attributes, Headings, Paragraph, Line Breaks, Lists, Font, image Tables, Media and Charset.

- ☐ **HTML Forms**

Checkbox, Input, Text fields, Radio Button and Text area etc.

- ☐ **HTML5**

Header, Footer, DOCTYPE, Canvas, etc.

CSS

- ☐ SASS / SCSS

- ☐ Concept of Menu (Multiple, Single, Dropdown)

- ☐ Temple Design Using CSS div

- ☐ Advanced CSS (Border-radius, box, layer, display, float, position gradient)

- ☐ Basic CSS (Selector, internal, class, external, inline, id, background, font, margin, Border, list CSS, color, hovering and elements)

4.1.1 User/Guest home page

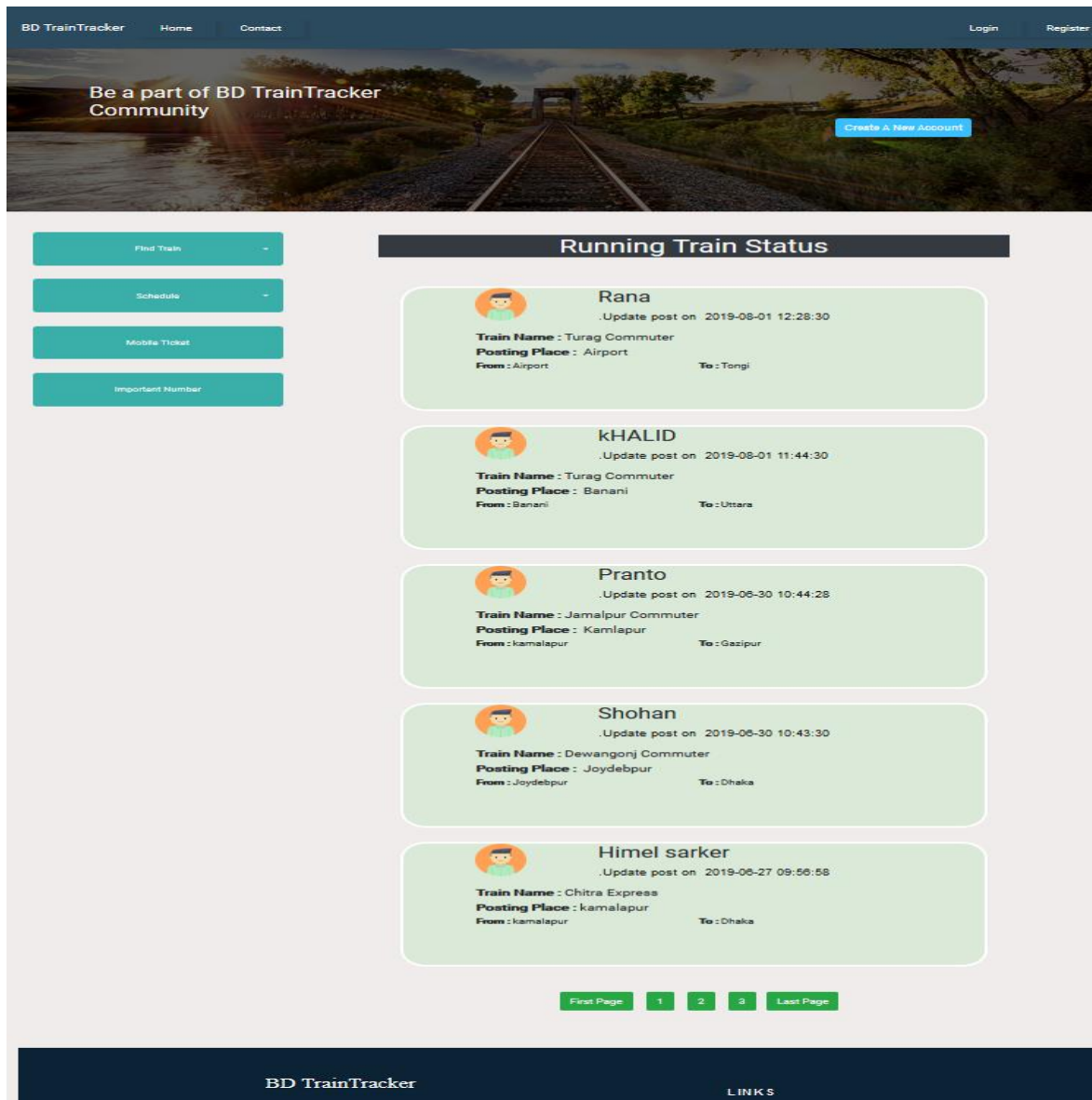


Figure 4.1.1.1 Home page

This is the Home Page of my Train Tracking system website named BD Train Tracker. Here, the user can see the navbar at the level and some of the drop down buttons, A Multilanguage button for login, signup and search input field and also many posts from users.

4.1.2 User registration page

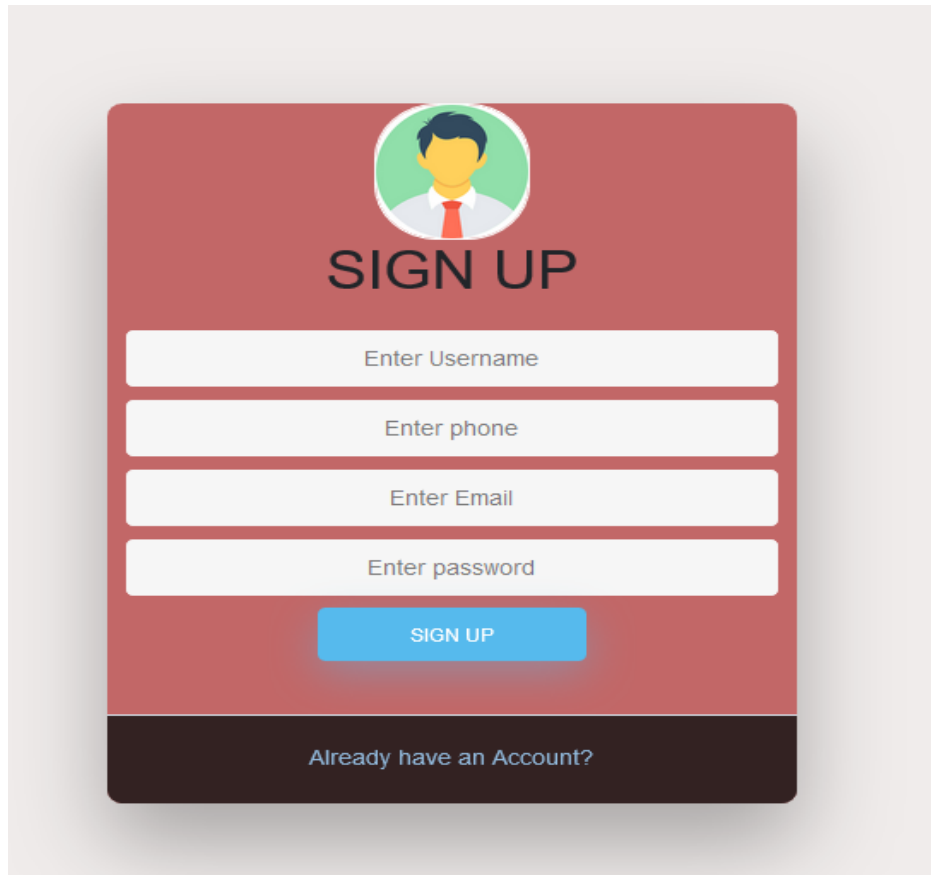
A user registration page mockup. It features a red background with a white circular profile icon of a person with dark hair and a red tie. Below the icon, the text "SIGN UP" is displayed in large, bold, black capital letters. Underneath, there are four white input fields with red borders, each containing a placeholder text: "Enter Username", "Enter phone", "Enter Email", and "Enter password". Below these fields is a blue button with the text "SIGN UP" in white capital letters. At the bottom of the form, there is a dark grey bar with the text "Already have an Account?" in white.

Figure 4.1.2.1 Registration page

Before ask any question or help others users is required is to register as a user in this system, for register an account they needs field like name, email address, password. The user must be provided their unique email address and 6 digit minimum character password.

4.1.3 User login page:

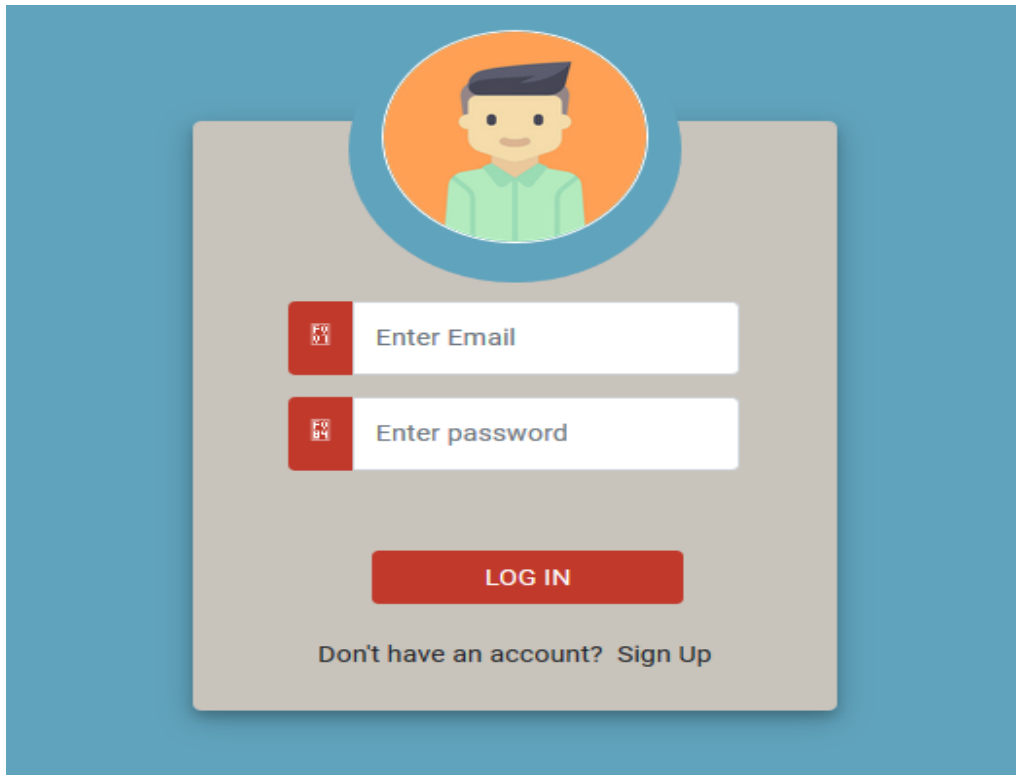


Figure 4.1.3.1 Login page

Users can access all features after they login with valid user information. Login page contains email and password and also a check button to save cookies after login for a long period of time.

4.1.4 Main Page:

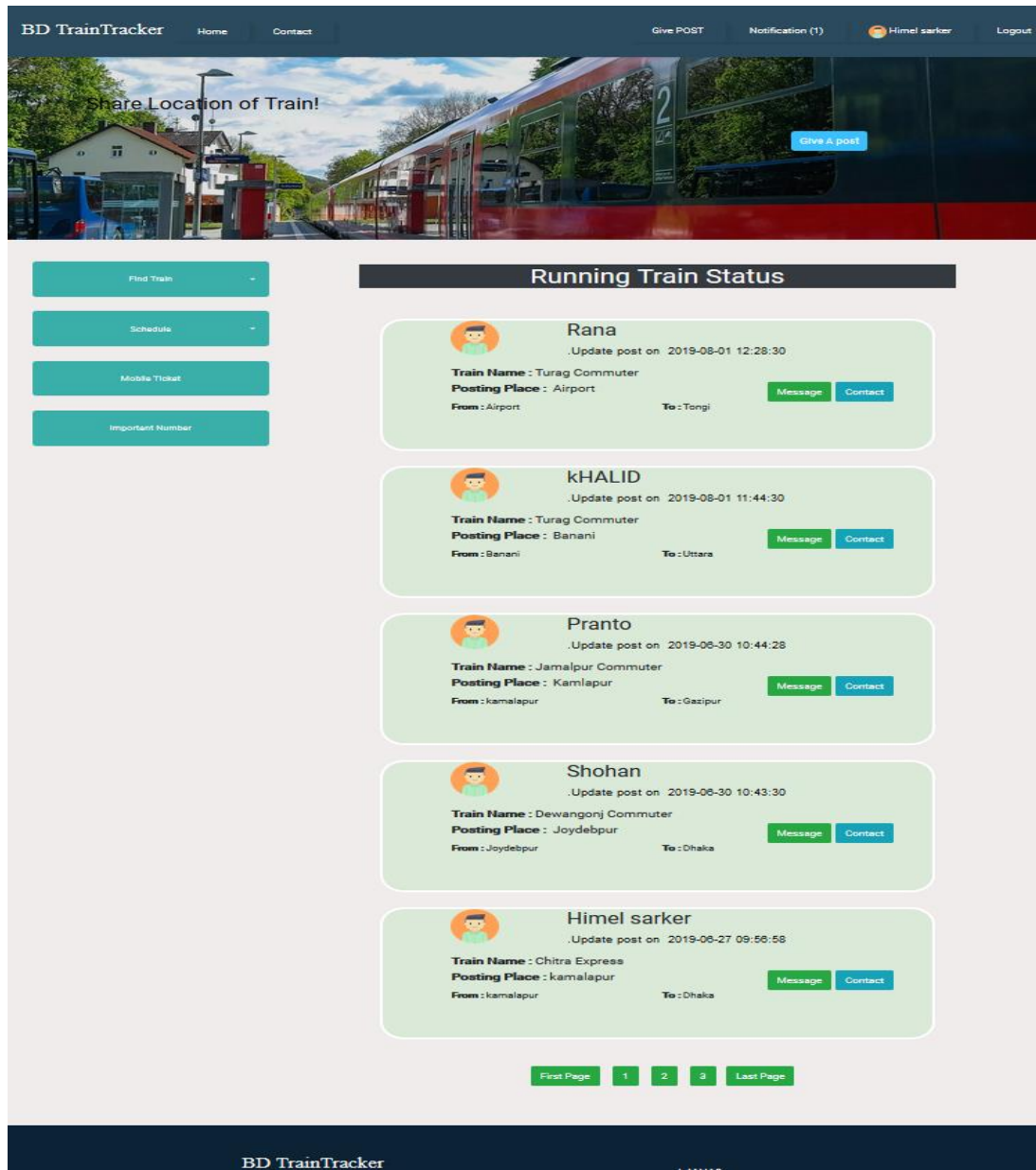
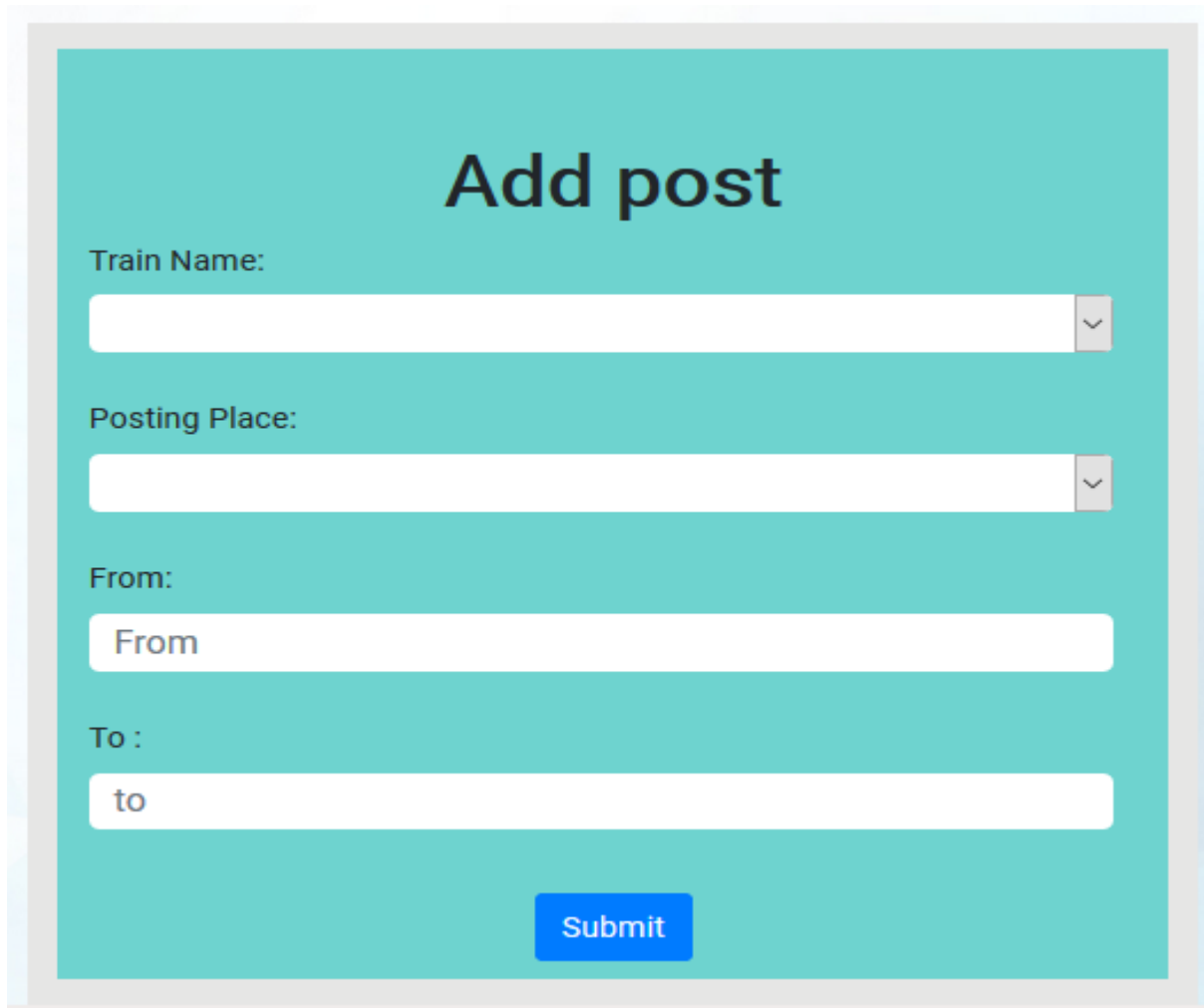


Figure 4.1.4.1 Main Page

This page is for only registered users, Users can view post information with profile, contact and messaging option to communicate with each other. They can view that information after completing the authorization or when the login is done successfully.

4.1.5 Add Post:



The image shows a web form titled "Add post" on a teal background. The form contains four input fields and a submit button. The first two fields are dropdown menus labeled "Train Name:" and "Posting Place:". The next two are text input fields labeled "From:" and "To :", with placeholder text "From" and "to" respectively. A blue "Submit" button is located at the bottom center of the form area.

Figure 4.1.5.1 Post page

Users can post running train information of specific train with a place for other users.

4.1.6 View Notification:

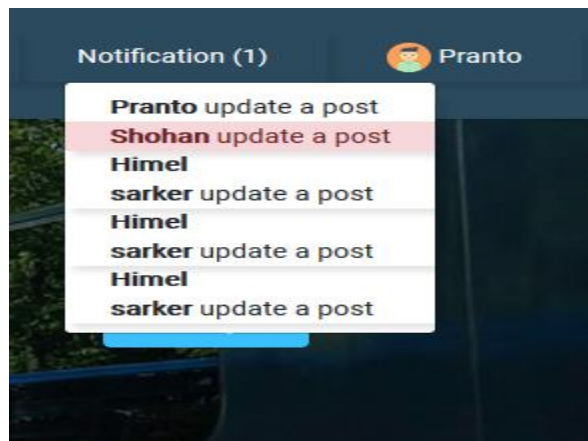


Figure 4.1.6.1 Notification bar

When a user post running train information, then every user will get the notification.



Figure 4.1.6.2 View Notification

After clicking the notification, other users can view the last added train information.

4.1.7 Contact:

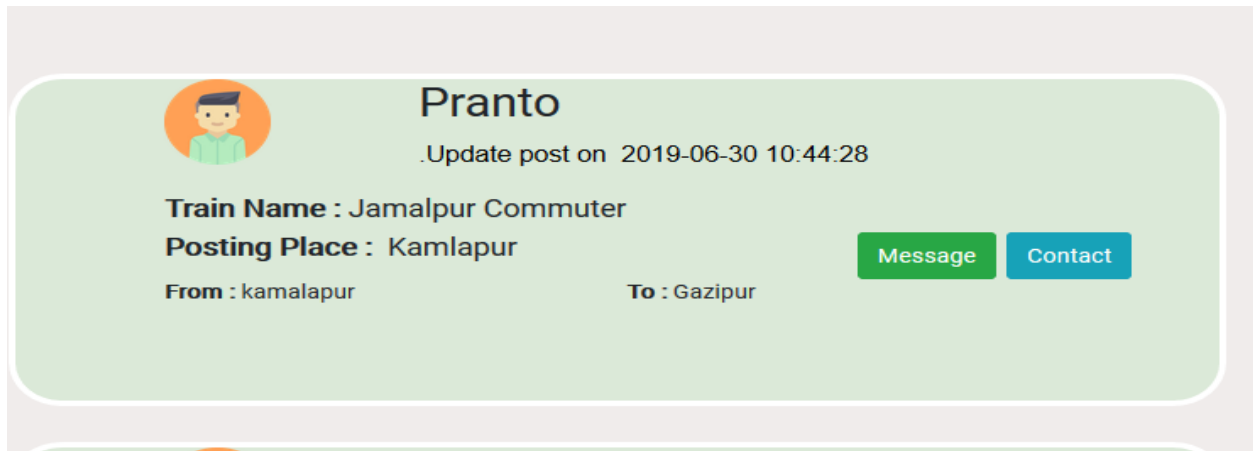


Figure 4.1.7.1 Contact Button

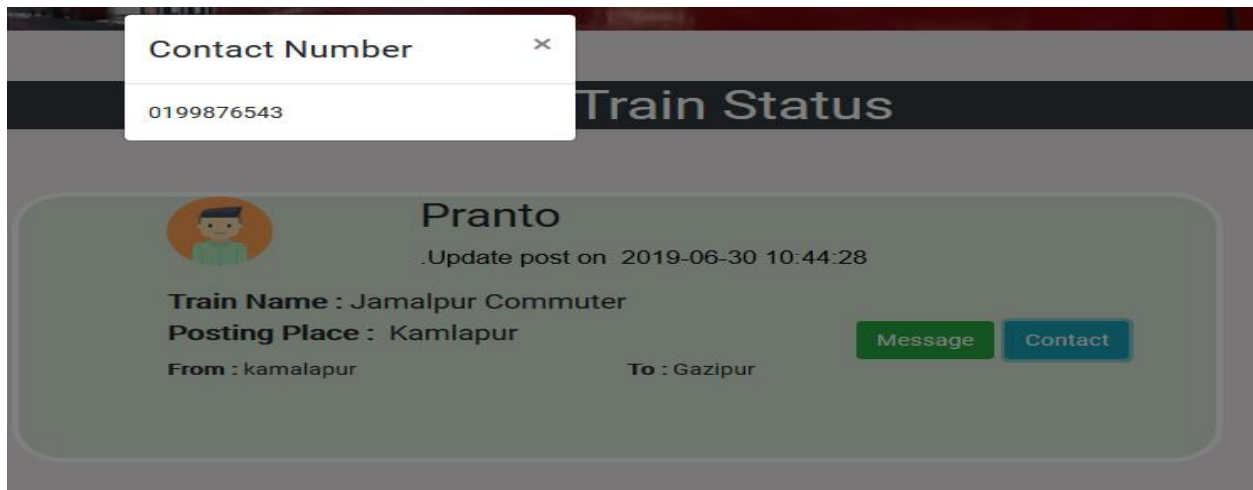


Figure 4.1.7.2 View Contact Number

In this section, only registered users can view other user's contact numbers after clicking the contact button.

4.1.8 Messaging System:

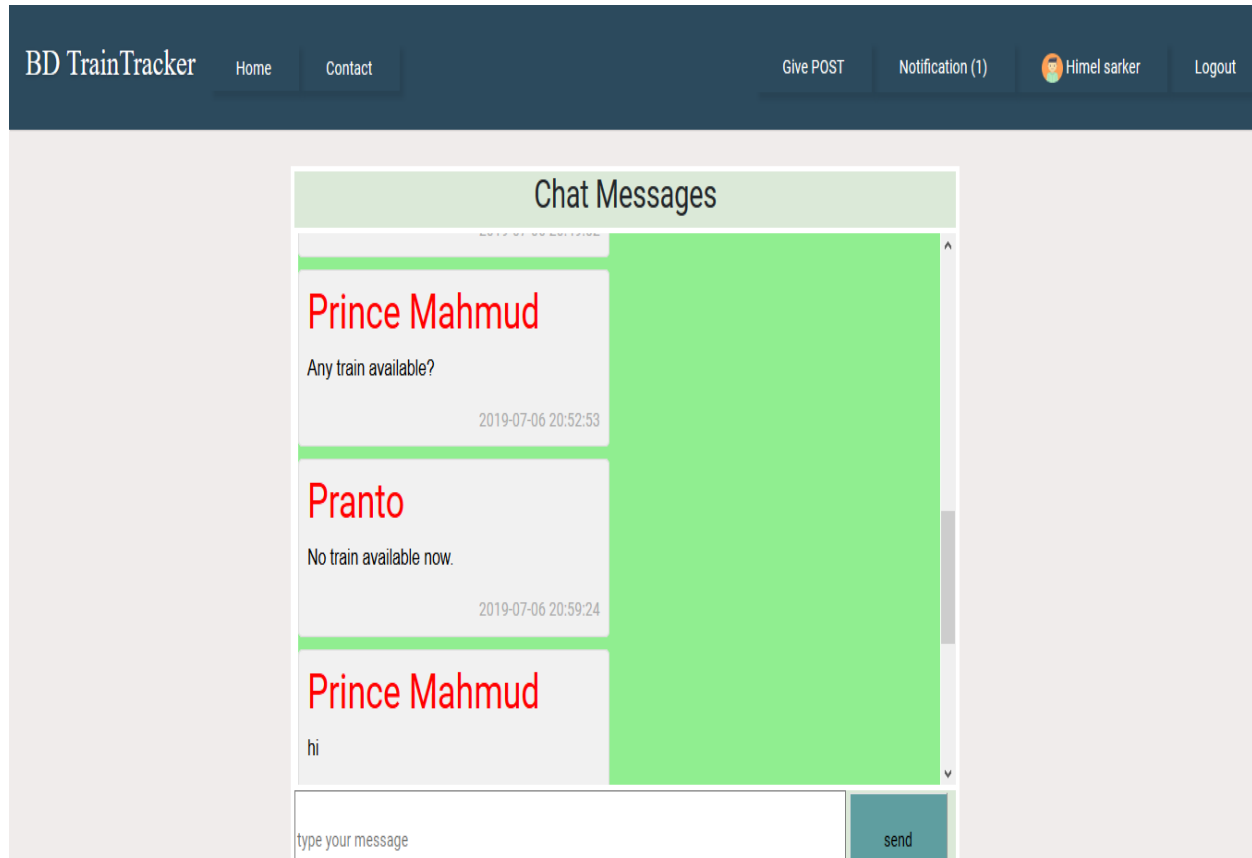


Figure 4.1.8.1 Messaging page

This page is for only registered users, one user can communicate with other users through messages.

4.1.9: My post page:

The screenshot displays the 'My Post' page of the BD TrainTracker application. The top navigation bar includes the 'BD TrainTracker' logo, 'Home', and 'Contact' links. On the right, there are links for 'Give POST', 'Notification (1)', a user profile for 'Himel sarker', and a 'Logout' button. The left sidebar contains four teal buttons: 'Find Train', 'Schedule', 'Mobile Ticket', and 'Important Number'. The main content area is titled 'My Post' and features a table with the following data:

Train Name	Place	From	To	Edit Action	Action
Chitra Express	kamalapur	kamalapur	Dhaka	Edit	Delete

The footer of the page contains the 'BD TrainTracker' logo and a 'LINKS' section.

Figure 4.1.9.1 My post page

In this section, only registered users can view their previous post information. He can edit and delete his post, for this he has to click edit option to edit and delete option to delete posts.

4.1.10 Running Train Info:

The screenshot displays the 'Running Train Info' page of the BD TrainTracker application. The interface includes a dark blue header with the site name 'BD TrainTracker' and navigation links for 'Home' and 'Contact'. On the right side of the header, there are links for 'Give POST', 'Notification (1)', a user profile for 'Himel sarker', and a 'Logout' button. A teal sidebar on the left contains menu items: 'Find Train', 'Schedule', 'Mobile Ticket', and 'Important Number'. The main content area has a dark grey header with the title 'Running Train Info'. Below this, there is a search form with two input fields: 'Train Name: Enter Train Name' and 'Location: Enter Location', followed by a green 'VIEW' button. The footer is dark blue and contains the text 'BD TrainTracker' and 'LINKS'.

Figure 4.1.10.1 Running Train Info page

This section is for both (registered/unregistered) user, they can easily find current train location previous post information like delay time, position, etc. They can view an expected result with query output by input train name or location.

4.1.11: Train info:

BD TrainTracker

Home Contact

Give POST Notification (1) Himel sarker Logout

Find Train

Schedule

Mobile Ticket

Important Number

Train Info

Train Name: Location: [VIEW](#)

BD TrainTracker

LINKS

Figure 4.1.11.1 Train Info page

This section is for both (registered/unregistered) user, they can easily find all intercity/local train related information like schedule, offday, etc. They can view an expected result with query output by input train name or location.

4.1.12 Intercity Train Schedule:

The screenshot displays the 'BD TrainTracker' website interface. The top navigation bar includes links for Home, Contact, Give POST, Notification (1), a user profile (Himel sarker), and Logout. The left sidebar contains buttons for Find Train, Schedule, Mobile Ticket, and Important Number. The main content area is titled 'Intercity Train Schedule' and lists four train services:

Train Name	Starting Station	Arival Station	Departure	Arival Time	OffDay
Subarna Express	Chittagong	Dhaka	06:40	13:20	Friday
Subarna Express	Dhaka	Chittagong	15:00	22:05	Friday
Mohanagar Goduli	Chittagong	Dhaka	15:00	22:30	No
Mohanagar Goduli	Dhaka	Chittagong	07:40	15:40	No

Figure 4.1.12.1 Intercity Train Schedule Page.

Users can find all kinds of intercity or international like Moitree Express train from here. They can know intercity train starting point to destination point, schedule, offday, etc.

4.1.13 Local Train Schedule:

The screenshot displays the 'BD TrainTracker' website interface. The top navigation bar includes links for Home, Contact, Give POST, Notification (1), a user profile for Himel sarker, and a Logout button. On the left sidebar, there are four teal buttons: Find Train, Schedule, Mobile Ticket, and Important Number. The main content area is titled 'Local Train Schedule' and lists four train services in green-bordered boxes:

- Dhaka mail**: Starting Station : Chittagong, Arival Station : Dhaka, Departure : 22:30, Arival Time : 08:00, OffDay : No.
- Chittagong mail**: Starting Station : Dhaka, Arival Station : Chittagong, Departure : 22:30, Arival Time : 08:10, OffDay : No.
- Karnaphuli express**: Starting Station : Chittagong, Arival Station : Dhaka, Departure : 10:30, Arival Time : 21:30, OffDay : No.
- Karnaphuli express**: Starting Station : Dhaka, Arival Station : Chittagong, Departure : 08:25, Arival Time : 19:25, OffDay : No.

Figure 4.1.13.1 Local Train Schedule Page.

Users can find all kinds of local/mail/express train information from here. They can know local train starting point to destination point, schedule, offday, etc.

4.1.14: E-Ticket Procedure:

BD TrainTracker

Home

Contact

Give POST

Notification (1)

Himel sarker

Logout

Find Train

Schedule

Mobile Ticket

Important Number

Bangladesh Railway Ticket Booking via Mobile

Bangladesh Railway introduced the mobile ticketing system to make easier the traveling by train, which was also known as SMS ticketing. The mobile operator companies Grameenphone, Robi and Banglalink were providing this service to their customers.

At present, the mobile operator companies are not providing this mobile-based ticketing service without Robi. By using this system, a subscriber can book the train tickets without going to the railway station. There are two ways to train travelers for booking tickets, the train travelers can use anyone process for booking primarily.

STEP : 1

*131#

STEP : 2

Select Option

1. Book Train Ticket

2. Purchase Train Ticket After Booking

3. Purchase Train Ticket

STEP : 3

Enter PIN Number

STEP : 4

Enter Journey Date(DD)

STEP : 5

Select Start Station

1. Dhaka Kamalapur

2. Dhaka Airport

3. Chittagong

STEP : 6

Select Destination

(Enter first 3 characters of Destination Station)

Figure 4.1.14.1 E-ticket page.

This section is for both (registered/unregistered) users, they can view the procedure of buying an e-ticket.

4.1.15 Important Station Number:

The screenshot shows the 'BD TrainTracker' website interface. The top navigation bar includes links for Home, Contact, Give POST, Notification (1), a user profile for Himel sarker, and a Logout button. On the left sidebar, there are four buttons: Find Train, Schedule, Mobile Ticket, and Important Number. The main content area is titled 'Bangladesh Railway Station Important Number' and displays a list of 10 stations with their respective important numbers.

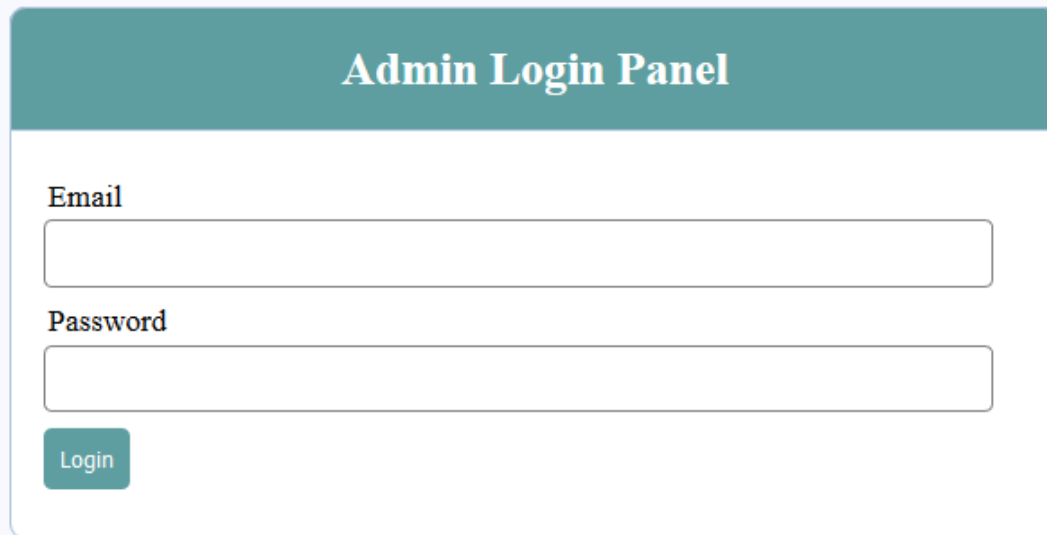
Station Name	Number
Dhaka	9358634, 8315875
Tejgaon	9112007
Dhaka Cantonment	9860761
Dhaka Bimanbondar	8924239
Tongi	9801058
Ghorasal Flag	74206
Zinardi	62046
Bhairab Bazar	71477
Bharamman Baria	52006
Ashuganj	74221
Narsinghdi	62046

Figure 4.1.15.1 Important Number page

By using those all-important numbers, any user can contact with station master for help.

4.2 Back-end Design

4.2.1 Admin login page



The image shows a web form titled "Admin Login Panel" in a teal header. Below the header, there are two input fields: one for "Email" and one for "Password". Both fields are empty and have a light gray border. Below the password field is a teal button with the text "Login" in white. The entire form is set against a light purple background.

Figure 4.2.1.1 Admin login page

This is the Admin login page. To log in this system admin must use his email address and password. After login admin will get access to the whole system.

4.2.2 Dashboard (admin panel)

BD TrainTracker					Home	View Posts	Logout
Users Details		Users Post					
Name	Train Name	Place	From	To			
Tipu Sarker	Jamuna Express	kamalapur	Kamalapur	Gazipur			
Apu Islam	jamuna express	kamalapur	kamalapur	tongi			
Himel sarker	Titash Commuter	Tongi	Tongi	kamalapur			
Jamil Hasen	Jamuna Express	Tejgaon	Tejgaon	Tongi			
Tariqul Islam	Turag Commuter	Airport	Airport	kamalapur			
Walid	Titash Commuter	Tejgaon	Tejgaon	Tongi			
Prince Mahmud	Titash Commuter	Airport	Airport	Kamalapur			
mn	Turag Commuter	Tongi	Dhaka	Comilla			
Jesmin	Turag Commuter	Tongi	Tongi	Gazipur			

Figure 4.2.2.1 Admin dashboard (admin panel)

The admin dashboard often called Admin or admin panel. Admin can see all user's information. All those can select from top navigation.

4.2.3 View Post (admin panel)

Users Post					
User Name	Train Name	Place	From	To	Action
Apu Islam	Jamuna Express	kamalapur	Kamalapur	Gazipur	Delete
Apu Islam	jamuna express	kamalapur	kamalapur	tongi	Delete
Apu Islam	Titash Commuter	Tongi	Tongi	kamalapur	Delete
Jamil Hasen	Jamuna Express	Tejgaon	Tejgaon	Tongi	Delete
Jamil Hasen	Turag Commuter	Airport	Airport	kamalapur	Delete
Prince Mahmud	Titash Commuter	Tejgaon	Tejgaon	Tongi	Delete

Figure 4.2.3.1 View Post page (admin panel)

The objective of this part are those that require a specific answer, admin can delete any users post.

4.3 Interaction design and UX

My System will be going to help train travelers, especially a part of current train location information. Most of the traveler wants to get train information easily but they don't get those types of services. So I not only provide online help services but also with 100% take care of them. I can guarantee my system will give you this type of service with quality. My system provides users valuable time to save, guidelines, quality, and accuracy. With the reliable form and security of all information about my system.

4.4 Implementation Requirements

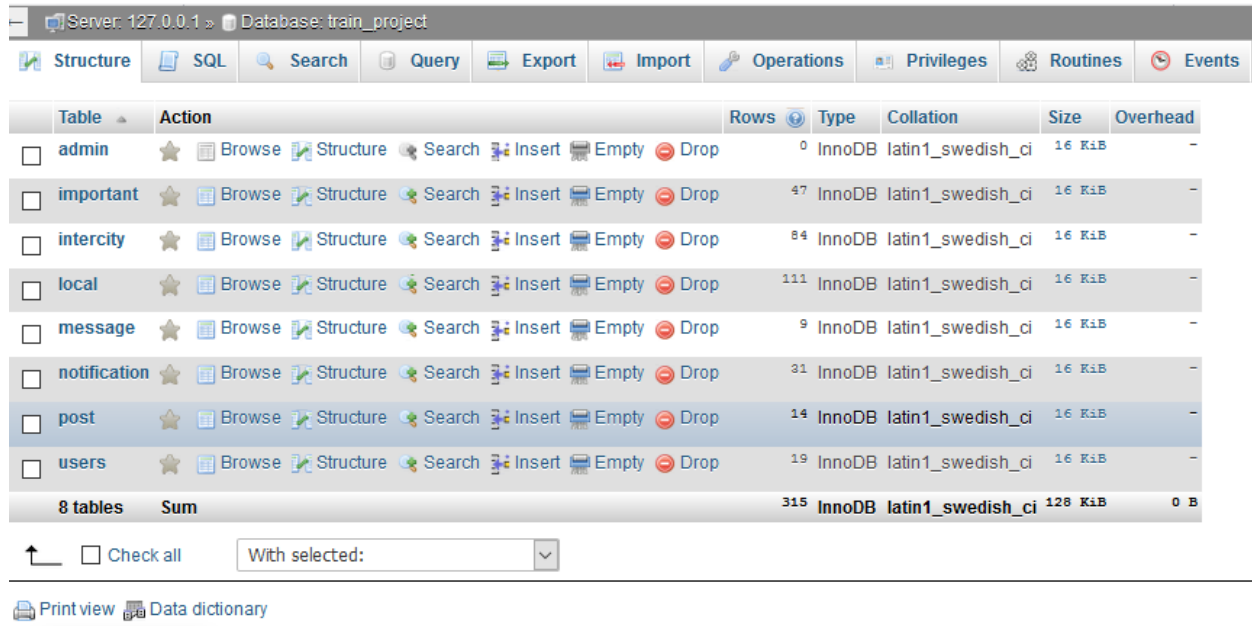
I discuss all the technical requirements previously. If every portion is ready than I surely start the implementation of our system.

Chapter 5

Implementation and Testing

5.1 Implementation of Database:

Database implementation is a very important part of any dynamic web project. Database provides information to the web pages when they call it. Here is the database table of my project.



The screenshot shows the MySQL database interface for the 'train_project' database. The 'Structure' tab is selected, displaying a list of 8 tables: admin, important, intercity, local, message, notification, post, and users. Each table row includes a checkbox, a star icon, a 'Browse' button, and icons for 'Structure', 'Search', 'Insert', 'Empty', and 'Drop'. The 'Rows' column shows the number of rows for each table, and the 'Size' column shows the size in KiB. A summary row at the bottom indicates 8 tables with a total size of 128 KiB. Below the table list, there is a 'Check all' checkbox and a 'With selected:' dropdown menu. At the bottom, there are links for 'Print view' and 'Data dictionary'.

Table	Action	Rows	Type	Collation	Size	Overhead
☐ admin	★ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐ important	★ Browse Structure Search Insert Empty Drop	47	InnoDB	latin1_swedish_ci	16 KiB	-
☐ intercity	★ Browse Structure Search Insert Empty Drop	84	InnoDB	latin1_swedish_ci	16 KiB	-
☐ local	★ Browse Structure Search Insert Empty Drop	111	InnoDB	latin1_swedish_ci	16 KiB	-
☐ message	★ Browse Structure Search Insert Empty Drop	9	InnoDB	latin1_swedish_ci	16 KiB	-
☐ notification	★ Browse Structure Search Insert Empty Drop	31	InnoDB	latin1_swedish_ci	16 KiB	-
☐ post	★ Browse Structure Search Insert Empty Drop	14	InnoDB	latin1_swedish_ci	16 KiB	-
☐ users	★ Browse Structure Search Insert Empty Drop	19	InnoDB	latin1_swedish_ci	16 KiB	-
8 tables	Sum	315	InnoDB	latin1_swedish_ci	128 KiB	0 B

☐ Check all With selected: ▼

[Print view](#) [Data dictionary](#)

Figure 5.1.1 Database Table

5.2 Implementation of Front-end Design

I show all of the design for the front-end and also discussed which page works for which and how in chapter 4. By HTML and CSS this system is implement all of that design and the interacting between design and back-end.

5.3 Implementation of Interactions

Interaction means action between two things. In my system, the interaction between database and the design is a pathway of JavaScript and PHP backend. For server side here used php and for client side here use HTML, CSS and JS. The interaction of the things is very fast and smooth. In computing, associate implementation could be a realization of a technical specification or formula as a program, code part, or different automatic data processing system through programming and reading. Several implementations might exist for a given specification or normal.

5.4 Testing Implementation

5.4.1 Theme Unit Testing

Unit testing is a process of software development. In unit testing, we test the smallest part of an application. Unit testing is individually and independently scrutinized for proper operation. It is done manually, often it is automated.

5.4.2 Browser Testing

My train tracking for the user's website easy-to-use browser automation provides a communicator testing API. By default, dusk doesn't need you to put in JDK or antioxidant on the user machine. Instead, dusk uses a standalone Chrome Driver installation. However, disengaged to utilize the other antioxidant compatible driver users want.

5.5 Test Result and Reports

Basically, test report is generated for testing a system in a formal way it gives an Opportunity to check every portion of the system Test result is needed for user acceptance because it helps the system developers to make the system more efficient and user-friendly. A generated test report describes the environmental condition which shows the variations of test outcomes.

To develop an ideal Train Tracking website, there are some tests to ensure the quality and reliability .Those may be

- ☐ Performance Testing
- ☐ Usability Testing
- ☐ Search Result Analysis
- ☐ Ask Question
- ☐ View Question
- ☐ Testing Login Validation

From those tests, I am going to check the Login Validation portion.

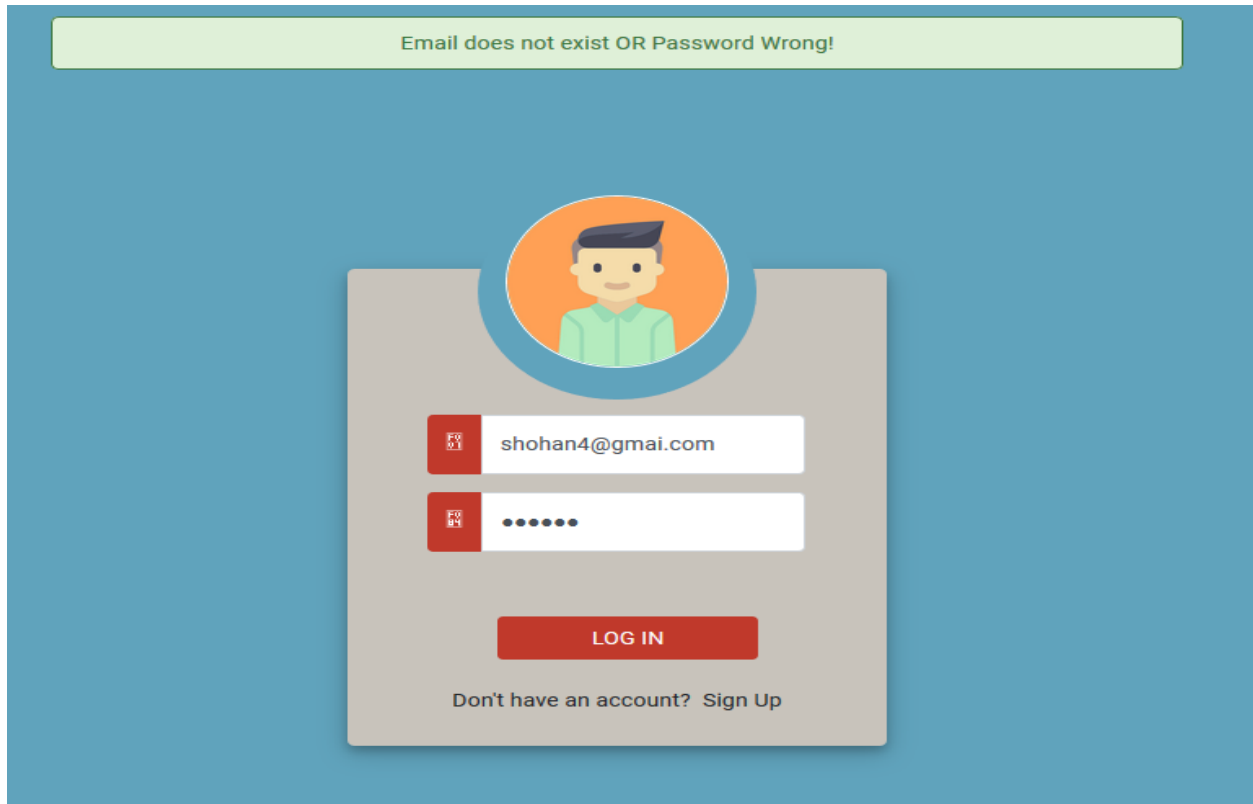


Figure 5.5.1 Login validation portion page

Now I can check the —Add to Login Validation in some aspects

- ☐ Add Email Address
- ☐ Add Password as credentials

Chapter 6

Conclusion and Future Scope

6.1 Discussion and Conclusion

After a long journey on this project here, I proudly announce that this system has been made to go for real-time user and the system will be used for various purposes. With time and progress, this system will be a common tool used by people for Real-time Train Tracking System. This project is a complex and useful web application. This could be a phenomenal project with a course of time.

This project ended, but only for right now. Because many things which may add in the future. I have a lot of scope for future work. All of the expected outcomes is fulfilled by this project. I can say that my project is better than any other Real-time Train Tracking System with a lot of new features.

6.2 Scope for Further Developments

In this project, there is some scope to add additional or new features. Or if anyone wants to keep working on it she/he has proper scope to work on it. Here are some key things that can be added.

- 1) Faster to load
- 2) Add Google map
- 3) System will implement the new UI if needed for good looks.

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Plagiarism Result:

ORIGINALITY REPORT			
30%	21%	0%	29%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
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Figure 6.1.2: Plagiarism Report