ANDROID APP FOR BUS SAFETY

A project Report
Submitted in partial fulfillment of
The requirements for the award of the

BACHELOR DEGREE
In
Computer Application
From
University of Calicut

Submitted By

MUHAMMED ASLAM. T - SFAWBCA009

MUHAMMED RIFAYI .PV - SFAWBCA024

MUHAMMED BILAL .P - SFAWBCA047

MUHAMMED NADHIR HISHAM.M - SFAWBCA049

Carried out at

Department of Computer Application

Safa College of Arts & Science

POOKKATTIRI

MARCH 2025

Safa College of Arts & Science

POOKKATTIRI

Certificate

This is to certify that the project report entitled "**ANDROID APP FOR BUS SAFETY**" is a record of the work done by **MUHAMMED ASLAM T (SFAWBCA009) , MUHAMMED RIFAYI PV (SFAWBCA024) , MUHAMMED BILAL P (SFAWBCA047), MUHAMMED NADHIR HISHAM M (SFAWBCA049)**under our supervision and guidance. The report has been submitted in partial fulfillment of the requirement for the award of the Bachelor Degree in Computer Application from the University of Calicut for the year 2025.

Submitted for the University Exam on:

Head of the department: **Project coordinator:**

Mrs. Asia. P **Mr.Haneez Hussain. T**

Submitted to the project and viva-voce examination held on -----/-----/----

GET INSPIRED

RISS technologies

(AN ISO 9001 : 2008 CERTIFIED COMPANY)

Date: 11/03/2025

CERTIFICATE

This is to certify that **MUHAMMED ASLAM. T (SFAWBCA009), MUHAMMED RIFAYI. P V (SFAWBCA024), MUHAMMED BILAL. P (SFAWBCA047), MUHAMMED NADHIR HISHAM. M (SFAWBCA049),** students of **SAFA COLLEGE OF ARTS AND SCIENCE** has successfully completed their academic project entitled **"ANDROID APP FOR BUS SAFTY"** in **PYTHON with JAVA** under the guidance of our senior developers during the period **JUNE 2024 to FEBRUARY 2025.**

During this period they were found hardworking, punctual & efficient. We wish them a successful future.

For RISS TECHNOLOGIES

RISS TECHNOLOGIES MAVOOR ROAD CALICUT -1 C.C. CENTRE

Project Manager

2nd Floor, CC Centre, Mavoor Road, Calicut - 673 001. Ph: 0495 6999777, 9847478944
Web: www.risstechnologies.com, E-mail: risstechnology@gmail.com

Declaration

I hereby declare that the project report entitled "**ANDROID APP FOR BUS SAFETY**" was carried out by me as the Bachelor Degree Project in Computer Application under the guidance**Mr.HANEEZ HUSSAIN.T** and supervision of **Mrs. ASIA.P** Head of Department of Computer Application, Safa College of Arts & Science and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.

Date: Signature:

Place:

MUHAMMED ASLAM. T - SFAWBCA009
MUHAMMED RIFAYI .PV - SFAWBCA024
MUHAMMED BILAL .P - SFAWBCA047
MUHAMMED NADHIR HISHAM.M - SFAWBCA049

Acknowledgement

The success of the project depends upon the effort invested. At this pleasurable moment of having successfully completed our project. It's our duty to acknowledge and thank the individuals who have contributed to the successful completion of the project.

I wish to express our heartfelt gratitude to **Mr.HANEEZ HUSSAIN .T , SAFA COLLEGE OF ARTS AND SCIENCE** for her encouragement and inspiring guidance throughout the preparation of the project.

I express our deep sense of gratitude and sincere thanks to the head of department **Mrs. ASIA P** for the valuable guidance to do the project successfully.

I also thankful to our department faculties for their continuous motivation for the successful completion of our project.

I wish to express our love and respect to our parents, for their support, contribution and encouragement which helped us a lot to complete the project successfully.

I am very thankful to our friends for their support and contribution to complete this project successfully.

Abstract

Public transportation is a critical component of urban mobility, yet it faces challenges such as safety risks, inefficient management, and crime-related incidents. This system aims to enhance public transit by integrating multiple modules for bus drivers, police stations, passengers, administrators, and an advanced camera system equipped with face recognition technology. The system enables real-time communication among stakeholders, allowing for efficient bus tracking, criminal detection, and missing person identification. Passengers can access real-time information about nearby buses, routes, and safety alerts while also providing feedback and submitting complaints. The camera module plays a crucial role in enhancing security by detecting criminals and recognizing faces in real time. Additionally, the system optimizes transportation management, ensuring improved coordination and a safer commuting experience. By incorporating modern surveillance and tracking mechanisms, this solution provides a reliable, efficient, and secure public transportation network, ultimately improving passenger confidence and overall transit safety.

CONTENTS

INTRODUCTION

INTRODUCTION

Public transportation is an essential part of urban infrastructure, providing mobility to millions of people daily. However, ensuring the safety, efficiency, and proper management of public transit remains a significant challenge. Issues such as criminal activities, missing person cases, inefficient tracking, and lack of real-time communication between stakeholders hinder the effectiveness of the transportation system.

This system is designed to address these challenges by integrating multiple modules, including bus drivers, police stations, passengers, administrators, and an advanced camera module with face recognition technology. The system facilitates real-time interaction among these entities, enabling efficient bus tracking, security monitoring, and immediate response to safety concerns.

With features such as automated criminal detection, missing person identification, passenger feedback, and live bus tracking, this system aims to enhance public transport security and efficiency. By leveraging modern technology, it ensures a safer and more reliable commuting experience for passengers while optimizing public transport management.

SYSTEM ANALYSIS

System study is done in order to understand the problem and emphasize what is needed from the system. The information requirements of the user for their competitive world Require such system. The various techniques used in this phase are Observations, Interviews and Discussions. A complete understanding of software requirements is essential to the success of a software development effort. System Analysis refers to an orderly structured process for identifying and solving problems using a computer. It is the most essential part of the project development. It is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements to the system. Training, experience and common sense are required for the collection of the information needed to do the analysis.

EXISTING SYSTEM

In the current setup, the management of public transportation and security is fragmented, with limited or no integration of technology like real-time tracking, automatic criminal detection, or face recognition. The communication between bus drivers, police stations, and passengers is often manual and inefficient, resulting in delayed responses to safety concerns. Criminal identification and handling of missing person cases lack automation, making it difficult for authorities to manage these issues effectively. Furthermore, passengers do not have easy access to crucial safety data, such as bus locations or criminal alerts. The new camera module adds significant value by automating the detection of criminal activity and using face recognition, ensuring a quicker and more accurate response to potential threats. The proposed system fills these gaps, creating a more cohesive and secure public transportation experience.

DRAWBACKS OF THE EXISTING SYSTEM

- **Lack of Real-Time Monitoring** – There is no automated system for tracking buses, making it difficult for passengers and authorities to monitor bus locations and schedules.
- **Inefficient Communication** – Communication between bus drivers, police stations, and passengers is mostly manual, leading to delays in addressing safety issues.
- **No Automated Criminal Detection** – The current system lacks technology for identifying criminals in real-time, relying on manual verification, which is slow and ineffective.
- **Difficulty in Managing Missing Person Cases** – Authorities struggle to track and identify missing persons due to the absence of an automated face recognition system.
- **Limited Passenger Awareness** – Passengers do not have easy access to real-time safety alerts, such as criminal activities, bus delays, or emergency situations.
- **Security Gaps in Public Transport** – Without a surveillance system integrated with face recognition, criminals can move undetected, increasing security risks.
- **Delayed Response to Emergencies** – Manual methods of handling security threats result in slow responses from police and transport authorities.

PROPOSED SYSTEM

The proposed system introduces a unified platform that centralizes public transport and security management. The Admin module manages bus routes, approves bus drivers, tracks buses, and oversees interactions with police stations. The Bus Driver module allows drivers to register, update locations, and manage route schedules. The Police Station module enables law enforcement to handle criminal cases, missing persons, and bus-related complaints. The Users module gives passengers access to bus schedules, safety alerts, and the ability to submit reviews and complaints. Additionally, the Camera module uses advanced technologies like criminal detection and face recognition to further enhance safety by automatically identifying and flagging potential threats. This integration of camera-based security ensures that authorities and users have an added layer of protection and vigilance in the system.

MODULE DESCRIPTION

Main Modules: -

1. ADMIN
2. BUS DRIVER
3. POLICE STATION
4. USERS
5. CAMERA

1. ADMIN

- ✓ Login
- ✓ Change Password
- ✓ Route management
- ✓ Route Point
- ✓ Manage police station
- ✓ View criminals
- ✓ View bus driver & approve or reject
- ✓ View approved bus driver
- ✓ View missing persons
- ✓ View users
- ✓ View app reviews
- ✓ View Complaints and Send reply
- ✓ Track location of bus
- ✓ View bus reviews

2. BUS DRIVER

- ✓ Register
- ✓ Login
- ✓ Change Password
- ✓ View profile and Edit profile
- ✓ View criminal details
- ✓ View missing persons
- ✓ Route time scheduling
- ✓ Update locations
- ✓ View bus reviews

3. POLICE STATION

- ✓ Login
- ✓ Change Password
- ✓ View Profile
- ✓ Manage Criminals
- ✓ Manage Missing Persons
- ✓ View Criminals and alert
- ✓ View Missing persons and alert
- ✓ View Bus based complaints and send actions
- ✓ View bus reviews

4. USERS

- ✓ Register
- ✓ Login
- ✓ Change Password
- ✓ View and edit profile

- ✓ View nearest bus
- ✓ View routes
- ✓ View criminals
- ✓ View missing persons
- ✓ Bus related Complaints to Police station and view actions
- ✓ Send bus reviews
- ✓ Send app complaints to admin and view reply
- ✓ Send Bus Reviews
- ✓ Send App reviews

5. CAMERA

- ✓ Criminal detection
- ✓ Face Recognition

FUNCTIONS OF DESKTOP APPLICATION

- The desktop application enables administrators to manage bus drivers, police officers, and system users while monitoring transportation safety in real-time.
- Authorities can track buses, view live locations, manage schedules, and oversee bus routes for improved efficiency and passenger convenience.
- The system automates security measures by detecting criminals and missing persons through face recognition, instantly notifying police stations for quick action.
- Passengers can submit complaints, report security concerns, and receive real-time safety alerts, ensuring a secure and well-monitored transportation environment.
- Police stations and administrators can access crime reports, review surveillance footage, and generate detailed security analysis reports.
- The communication module facilitates real-time interaction between bus drivers, police stations, and passengers to ensure a swift response to emergencies.

FEASIBILITY STUDY

A feasibility study is a preliminary study undertaken to determine and document a project's viability. The results of this study are used to make a decision whether to proceed with the project. If it indeed leads to a project being approved, it will - before the real work of the proposed project starts - be used to ascertain the likelihood of the project's success. It is an analysis of possible alternative solutions to a problem and a recommendation on the best alternative. It, for example, can decide whether an order processing be carried out by a new system more efficiently than the previous one. The feasibility study proposes one or more conceptual solutions to the problem set for the project. The conceptual solution gives an idea of what the new system will look like. They define what will be done on the computer and what will remain manual. It also indicates what input will be needed by the system and what outputs will be produced.

These solutions should be proven feasible, and a preferred solution is accepted.

1. Technical Feasibility

proposed system is technically feasible. Because This system is basically developed using python and android, for which the development kit is easily available and free of cost. This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology.

2. Economic Feasibility

This project is economically feasible. Because there is no need for any external equipment to run or work the project. This system is cost effective as well as time effective, thereby making it economically feasible.

3. Operational Feasibility

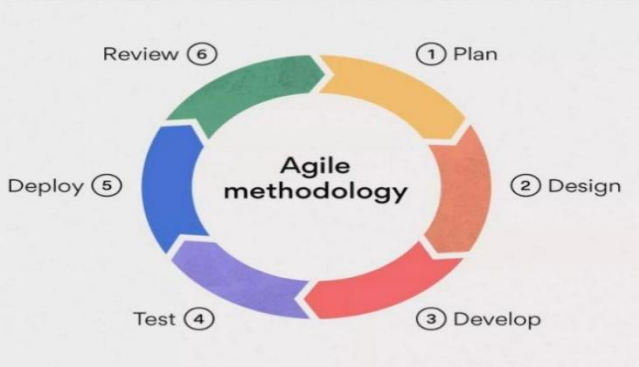
The project is operationally feasible because, Operational feasibility is a measure of how well a proposed system solves the problems. This reviews the willingness of the organization to support the proposed system.

SOFTWARE ENGINEERING PARADIGM

The software engineering paradigm which is also referred to as a software process model or Software Development Life Cycle (SDLC) model is the development strategy that encompasses the process, methods, and tools. SDLC describes the period that startswith the software system being conceptualized.

AGILE MODEL

The Agile methodology is a project management approach that involves breaking the project into phases and emphasizing continuous collaboration and improvement. Teams follow a cycle of planning, executing, and evaluating.



ADVANTAGES

1. Software is produced early in the software life cycle.
2. Risk handling is one of important advantages of the agile model, it is best Development model to follow due to the risk analysis and risk handling at The whole phase.
3. It is good for large and complex projects.
4. Strong approval and documentation control.
5. Break down the project into multiple, manageable units.

In this project we used agile model for mainly handling the risks when the project is done. Due to this model, we can complete every single unit fully. This is a simple and advanced model in software development. It is very effective in the case of large and complicated projects.

SYSTEM REQUIREMENTS SPECIFICATION

System Specification

Hardware and software requirements for the installation and smooth functioning of this product could be configured based on the requirements needed by the component of the operating environment that works as front-end system here we suggest minimum configuration for both hardware and software components. Working off with this software is requirements concrete on system environments. It includes two phases.

- Hardware Specification
- Software Specification

Hardware Requirements

- Processor : Pentium 4 or above.
- System Bus : 320 GB and above
- RAM : 8 GB or Above
- Storage : 20 GB or Above Hard Disk
- Monitor :SVGA color
- Keyboard : 108 Keys
- Mouse : Optical/scroll mouse

Software Requirements

- Operating System : Windows 10 Any 32 bit
- IDE :PyCharm, android studio
- Framework : Flask
- Database : MySQL Server

SYSTEM DESIGN

System design is the first in the development phase for many engineered products or system. It may define the process of applying various techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization. This phase is the first step in moving from the problem domain to the solution domain. It is an iterative process through which requirements are transmitted into ―blue print‖ for constructing the software initially. Blueprint depicts holistic new software. Some properties for the system design are:

- Verifiability
- Completeness
- Efficiency
- Traceability

1. Input Design

The decisions made during the input design are:

- To provide cost effective method of input
- To achieve the highest possible level of accuracy

Input design is the process of converting user-designated inputs to a computerized format. The input data are collected and organized in to groups of similar data.

2. Output Design

Output design generally refers to the results and information that are generated by the system. The results are of in interactive mode. A common user can also use the application. In output design the emphasis is given to the design of the hard copy and a soft copy of the information needed for the user.

3. Database Design

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. The term database design can be used to describe many different parts of the design of an overall database system. Principally, and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In the relational model these are the tables and views. In an object database the entities and relationships map directly to object classes and named relationships. However, the term database design could also be used to apply to the overall process of designing, not just the base data structures, but also the forms and queries used as part of the overall database application within the database management system. The process of doing database design generally consists of a number of steps which will be carried out by the database designer. Usually, the designer must: Determine the relationships between the different data elements and superimpose a logical structure upon the data on the basis of these relationships.

Normalization

Normalization is the process of decomposing a set of relations with anomalies to produce smaller and well-structured relations that contain minimum redundancy. It is a formal process of deciding which attributes should be grouped together in a relation.

First Normal Form

First Normal form (1NF) is now considered to be part of the formal definition of relational model.1NF is designed to disallow multivalve attribute, composite attributes, and their combinations. It states that the domain of an attribute must include only atomic values. A domain is atomic, if elements of the domain are considered to be indivisible units. We say that a relational schema R is in 1NF if the domain of all attributes of _R 'is atomic.

Second Normal Form

The second Normal form (2NF) is based on the concept of functional dependency. A relation R is in 2NF if it is in 1NF, and every non key attribute A of R is fully dependent on the primary key. That is, relation is said to be in 2NF if each attribute An in R meets one of the following criteria:

(a) It appears in the primary key.

(b) It is fully functionally dependent on the primary key.

The tables designed in the proposed system contain a primary key for uniquely identifying each user.

Third Normal Form

Third Normal form (3NF) is based on the concept of transitive dependency. A relation is said to be in 3NF if it is in 2NF and has no transitive dependencies. That is all the non key attributes should be functionally determined by the primary key. In the proposed system all attributes of tables are fully depends on the primary key only that is all non-key attributes are mutually independent.

TABLES

A database is a collection of interrelated data stores with minimum redundancy to serve many users quickly and efficiently. The general objectives are to make information access easy, quick, inexpensive and flexible for the user. In a database environment, common data is available in which several users can use. The concept behind a database is an integrated collection of data and provides a centralized access to the data from the program. The following tables are used in this project.

Login table

id	username	password	type
1	admin	admin	admin
2	rifayi@gmail.com	37	Police_station
3	rifayi@gmail.com	985	Police_station
4	user	1234	user
(Auto)	(NULL)	(NULL)	(NULL)

User table

id	name	place	post	phone_no	email	pin	LOGIN_id
1	nadhir	tirr	tanr	9090908734	vadr@gmil.moh	9087565	4
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Police Station

id	photo	stationname	email	place	phone	pin	post	city	si_name	LOGIN_id
1	/media/20241223142522.jpg	tirur police	rifayi@gmail.com	tirur	90371813456	676307	tirur	tirur	wbilal	2
2	/media/20241228143000.jpg	tirur police	rifayi@gmail.com	tirur	90371813456	676307	tirur	tirur	wbilal	3
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Bus Driver

id	drive_rname	driver_contact	bus_no	rc_of_bus	bus_name	license	post	pin	place	district	LOGIN_id	driver_emai
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Review

id	reviews	rating	date	USERS_id
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)

Complaints

id	date	complaint	replay	status	BUS_DRIVER_id	POLICE_STATION_id	USER_id
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Criminals

id	case	criminal_name	criminal_photo	POLICE_STATION_id
4	mdma	naadhir hishaam	/media/20250105213448.jpg	1
6	drugs deeling	rifayi	/media/20250106205631.jpg	1
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)

Location

id	latitude	logitude	BUS_DRIVER_id
(Auto)	(NULL)	(NULL)	(NULL)

Missing Person

id	name	photo	age	date	POLICE_STATION_id
2	bilal	/media/20250104143301.jpg	20	22-1-2020	1
3	aslam t	/media/20250105213506.jpg	20	22-1-2025	1
6	favas	/media/20250106205341.jpg	24	2-2-2024	1
7	suhail.c	/media/20250106205725.jpg	20	2-2-2025	1
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Route

id	source	destination
3	valanchery	malappuram
5	kottampara	thiruvegappura
6	valanchery	kuttippuram
(Auto)	(NULL)	(NULL)

Time Scheduling

id	time	date	BUS_DRIVER_id	ROUTE_POINT_id
(Auto)	(NULL)	(NULL)	(NULL)	(NULL)

Route Point

id	pointname	time	ROUTE_id
2	tirur	08:15	3
(Auto)	(NULL)	(NULL)	(NULL)

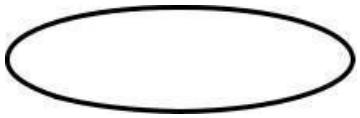
ARCHITECTURE DIAGRAMS/DFD

Data flow diagram issued to define the flow of the system audits resources such as information. Data flow diagrams represent one of the most ingenious tools used for structured analysis. A Dataflow diagram or DFD as it is shortly called is also known as a bubble chart. It is the major starting point in the design phase that functionally decomposes the requirement specifications down to the lowest level of details.
In the normal convention, A Data flow diagram has four major symbols.

1. Square: This defines source or destination of data

2. Arrow: which shows data flow

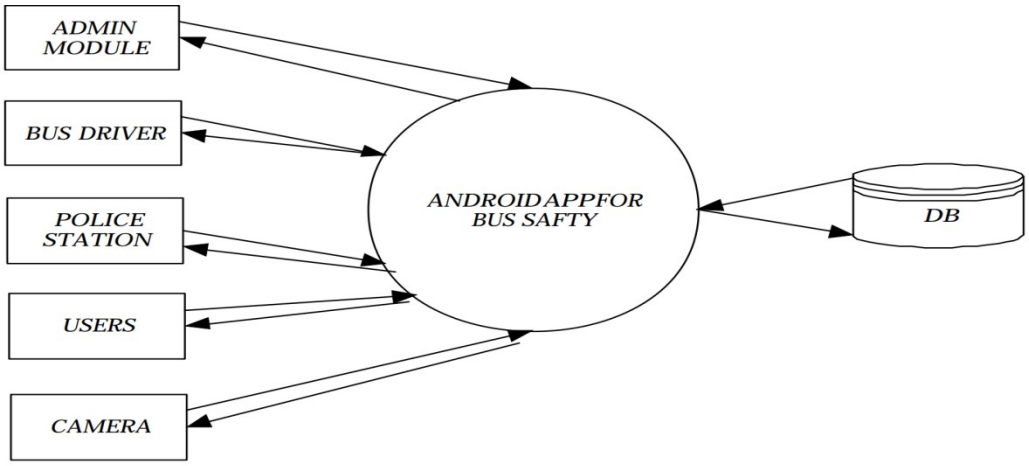
3. Circle: which represent a process that transforms incoming data into outgoing flow



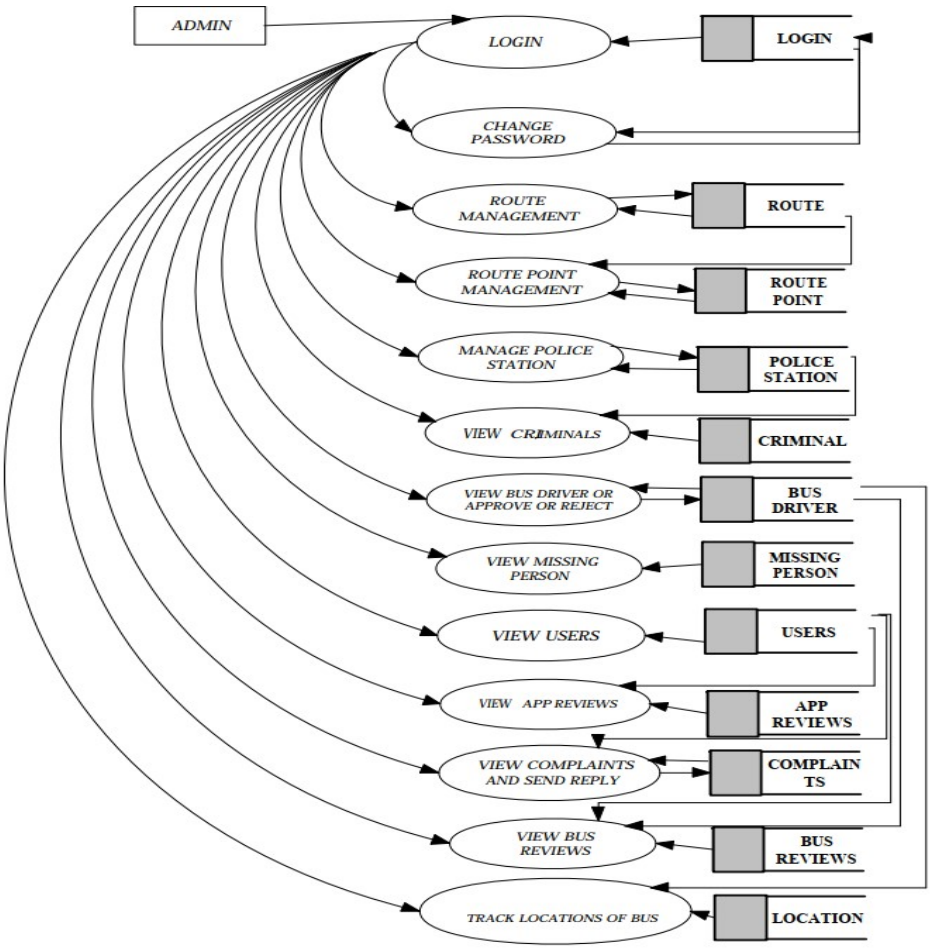
4. Open rectangle: which shows data store.

DATA FLOW DIAGRAM

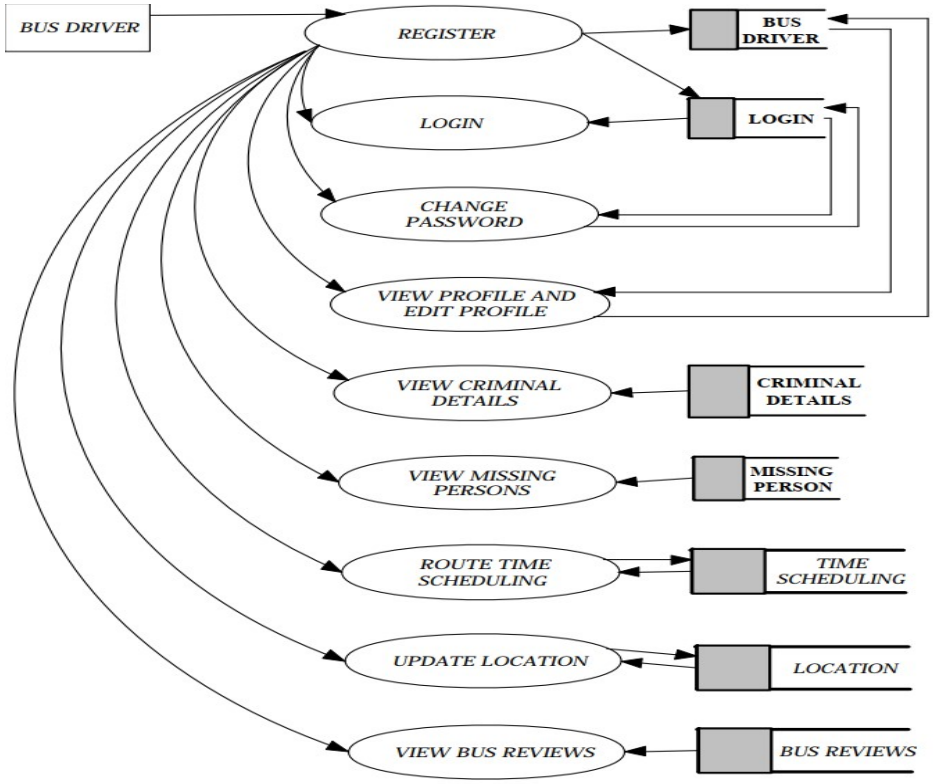
Level 0



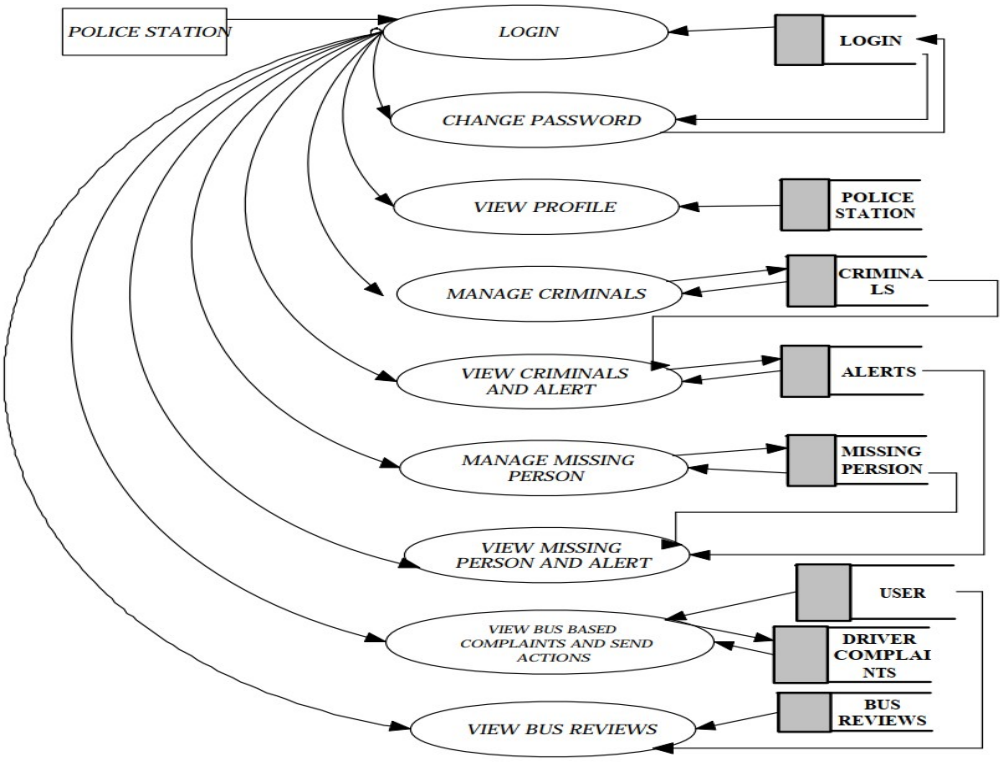
Level 1



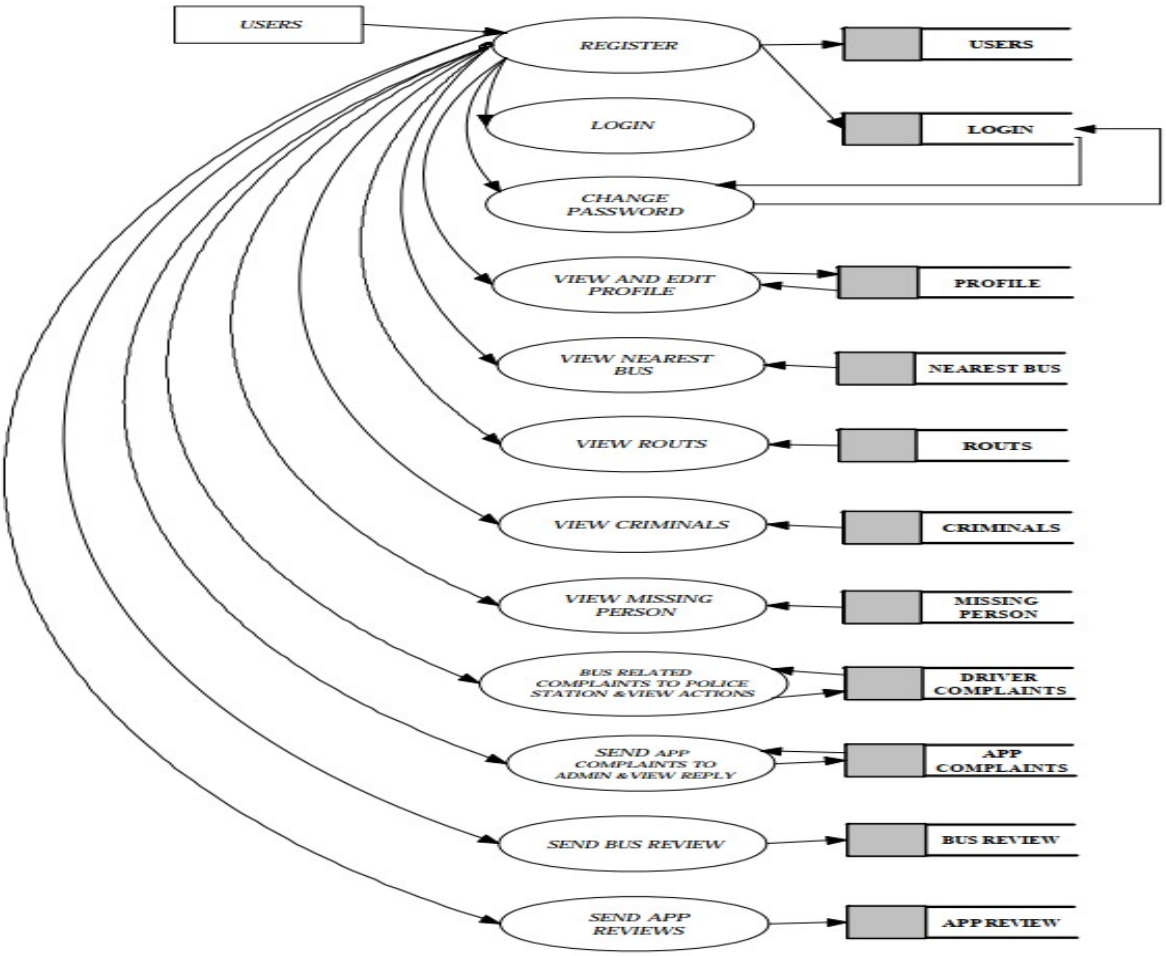
Level 1.1



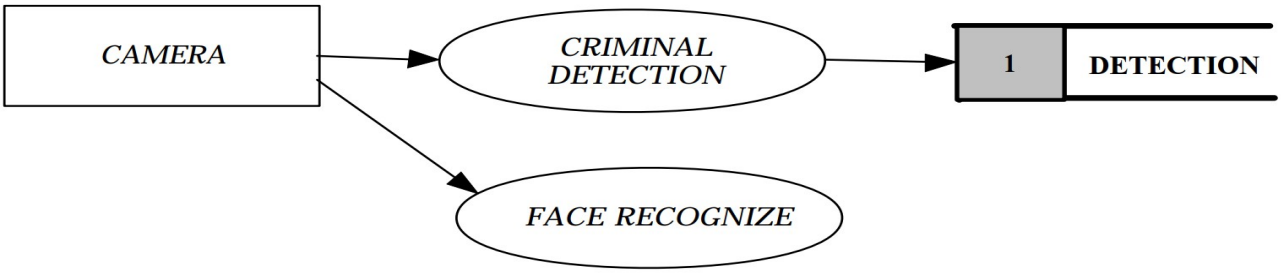
Level 1.2



Level 1.3



Level 1.4



SYSTEM DEVELOPMENT

System development is a series of operations to manipulate data to produce output from computer system. The principles activities performed during the development phase can be divided into two major related sequences:

.

- External system development
- internal system development

CODING

A code is an ordered collection of symbols designed to provide unique identification of entity or an attribute. Code also shows interrelationship among different items. Codes are used to identify, access, sort, matching records. The code ensures that only one value of code with a single meaning is applied to give entity or attribute as described in various ways.

FRONT END:

Python – An Overview

Python is an interpreter, object-oriented, high-level programming language with dynamic semantics. Its high-level built-in data structures, combined with dynamic typing and dynamic binding, Python's simple, easy to learn syntax emphasizes readability and therefore reduces the Debugging Python programs is easy: a bug or bad input will never cause a segmentation fault. Instead, when the interpreter discovers an error, it raises an exception. Python is meant to be an easily readable language.

.

BACK END:

MySQL Database

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications—which may run either on the same computer or on another computer across a network (including the Internet). Structured Query Language is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control SQL commands are grouped into four major categories depending on their functionality.

- **Data Definition Language (DDL)**

These SQL commands are used for creating, modifying, and
Dropping the structure of database objects. The commands are CREATE, ALTER, DROP, RENAME and TRUNCATE.

- **Data Manipulation Language (DML)**

These SQL commands are used for storing, retrieving, modifying, and deleting data. These Data Manipulation Language commands are: SELECT, INSERT, DELETE AND UPDATE.

SYSTEM TESTING

Testing is an important step in the software engineering process that could view rather than constructive. Testing is the process of executing a program with the intent of finding an error. A good test is that has the probability to find an as yet undiscovered error. Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding.

Testing Strategy:

Unit Testing

Unit testing focused verification efforts on the smallest unit of software design, the module. This is also known as ―module testing. The modules are tested separately. This testing is carried out during the programming stage itself. In this testing step each module is found to be working satisfactorily as regard to the expected output from the module.

Integration Testing

The integration testing is a systematic testing for constructing the program's structure, while at the same time conducting tests to uncover errors associated within the interface. The objective is to take unit tested modules and build a program structure. All the modules are combined and tested as a whole. Here correction is difficult because the vast expenses of the entire program complicate the isolation of causes.

System Testing

After performing the validation testing, the next step is output testing of the proposed system since no system could be useful if it doesn 't produces the required data in the specific format. The output displayed or generated by the system under consideration is tested.

IMPLEMENTATION

Implementation is the stage of project, when theoretical design is turned into a working system. The most crucial stage is achieving a successful system and confidence that the new system will work effectively. Implementation means converting a new or revised system design into an operational one.

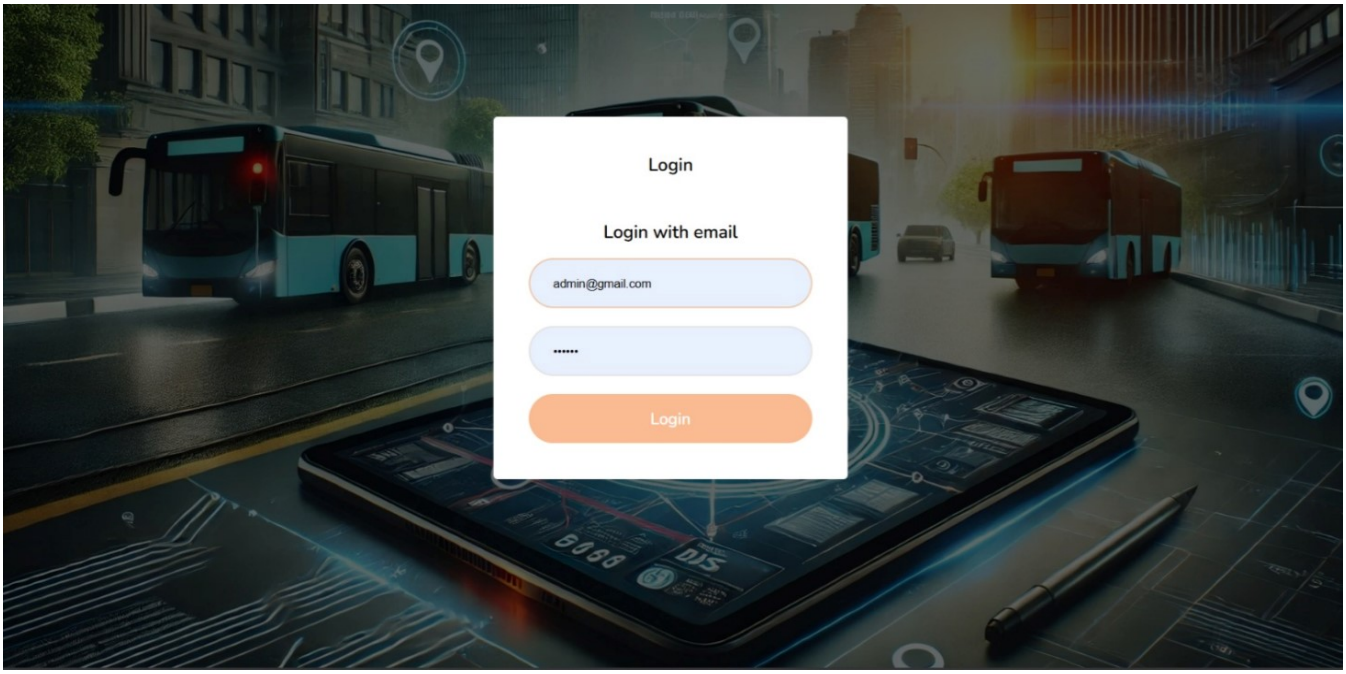
There are several activities involved while implementing a project:

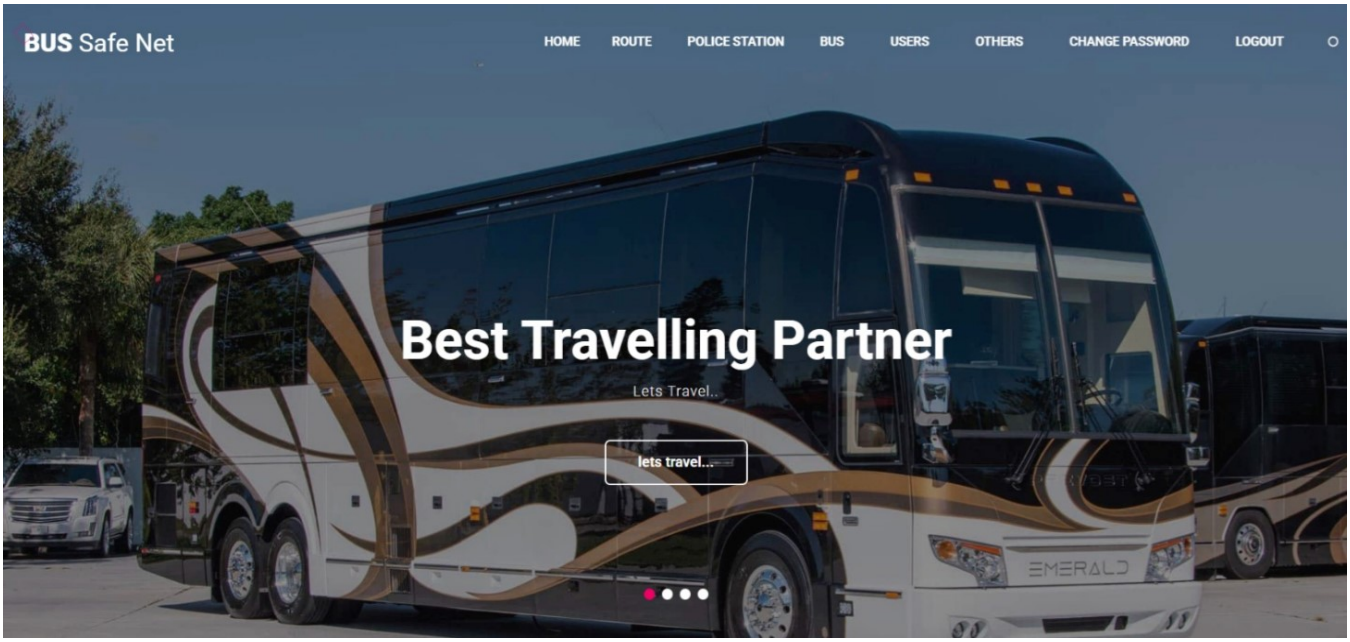
- Careful planning.
- Investigating the current system and its constraints on implementation.
- Design methods to achieve the changeover.
- Training of the staff in the changeover procedure and evaluation of change over

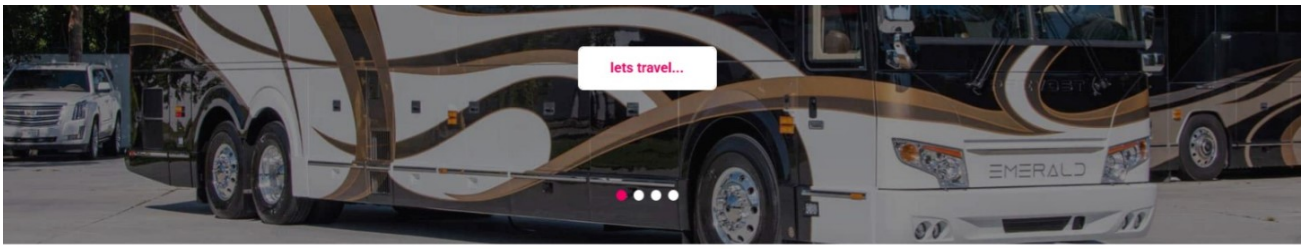
Method Implementation is the final stage, and it is an important phase. The first task in implementation planning, which is deciding on methods to be adopted. After the system was implemented successfully, training of the user was one of the most important sub tasks of the developer.

APPENDIX

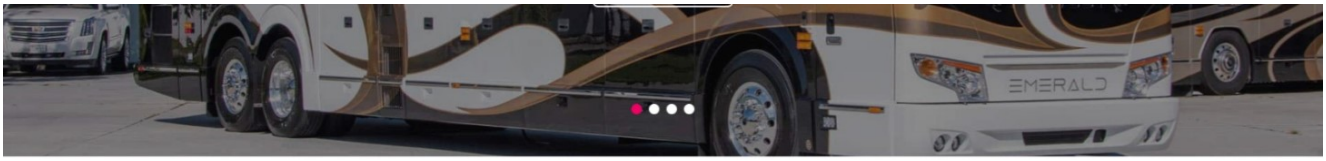
WEB APPLICATION SCREEN SAMPLES







Route	
Source	
Destination	
	Add

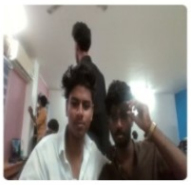


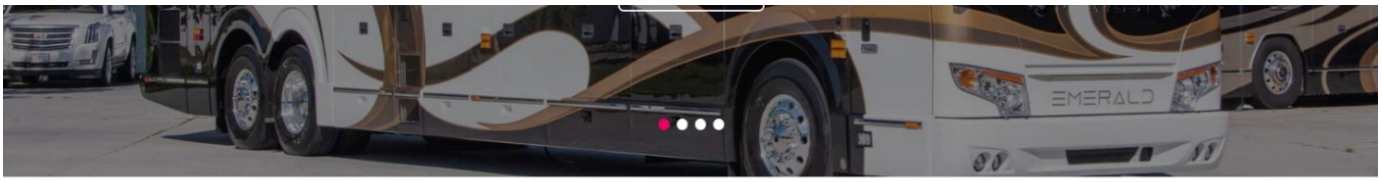
Search by routename Go

Slno	Route	Source	Destination		
1	valanchery	valanchery	kottakkal	Edit	Delete
2	tirur	kuttippuram	kuttippuram	Edit	Delete
3	kozhikode	kozhikode	tirur	Edit	Delete
4	koppam	koppam	pattambi	Edit	Delete

Name	
Photo	Choose File No file chosen
Phone number	
Email	
Place	
District	
State	
Pin	
Post	
	Add

search by name Search

Slno	Name	Photo	Phone number	Email	Address		
1	valanchery		9037181717	rifayi@gmail.com	valanchery 676307 tirur malapuram kerala	Edit	Delete
2	tirur police station		7012755998	nadhirhis12@gmail.com	tirur 345567 tirur malappuram kerala	Edit	Delete

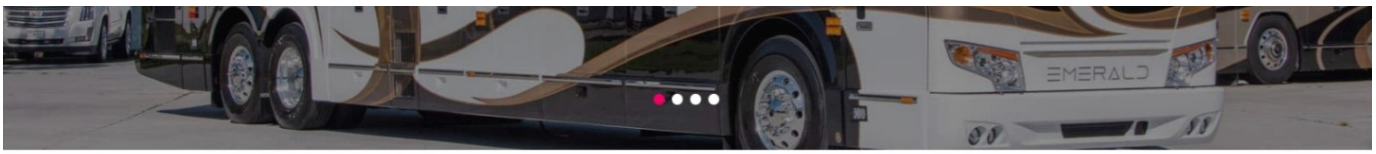


Search by name Search

Sl. No	Name	Photo	Description	Gender	Location	District	State	Police Station
1	nadhir		pocso	Male	tanalur	malappuram	kerala	valanchery
2	bilal		killer	Male	tirur	malapuram	kerala	valanchery

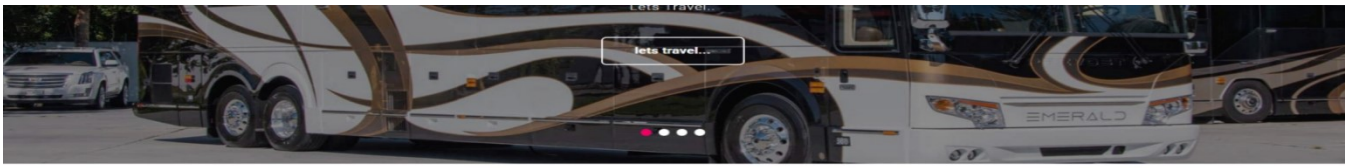
Search by name Search

Sl. No	Name	Photo	Last Seen Location	Date Missing	Gender	Height	Weight	Police Station
1	aslam t		valanchery	March 18, 2025	Male	176	52	valanchery
2	shahal		tirur	Feb. 2, 2025	Female	176	52	valanchery



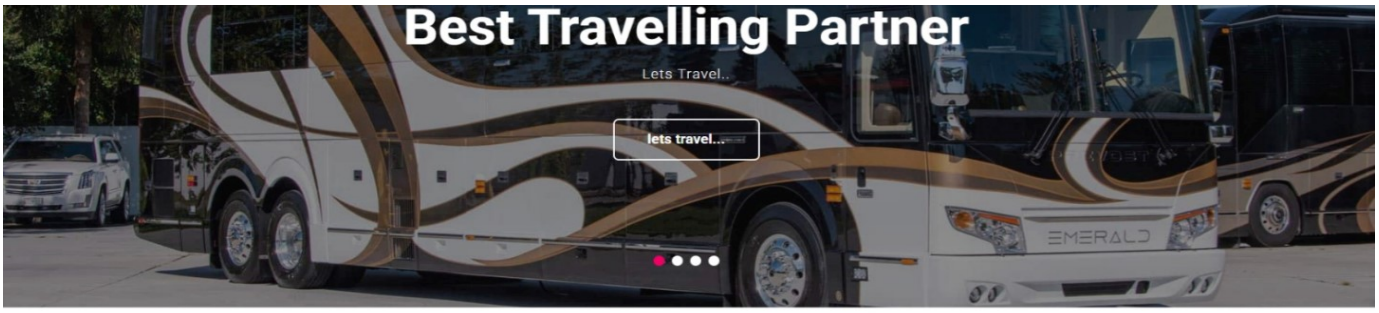
search by name Search

Slno	Bus Name	Bus Photo	Owner Name	Dob	Gender	Phone number	Email	Address	Action
1	five star		bilal	March 2, 2002	Male	9037181717	bilal@gmail.com	tirur 679571 tirur	Location track



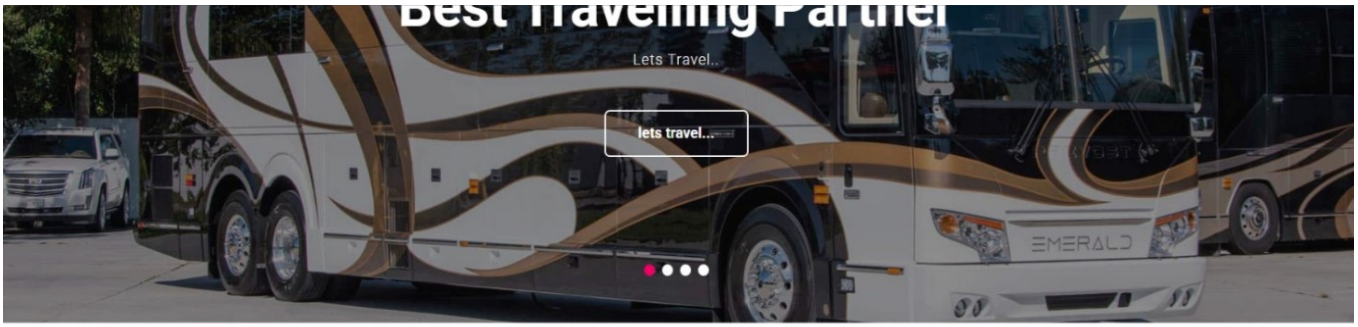
Search by name Search

Sl. No	Name	Gender	Date of Birth	Photo	Location	Email	Phone
1	muhammed rifayi	Male	March 2, 2005		moodal 679571 679571 malapuram kerala	rifaypvs@gmail.com	9037181717



From dd-mm-yyyy To dd-mm-yyyy Search

No data



search by bus Search

Slno	Date	User	Bus	Message
1	March 2, 2025	muhammed rifayi	bilal	over speed
2	March 2, 2025	muhammed rifayi	bilal	over speed

From dd-mm-yyyy To dd-mm-yyyy Search

Slno	Date	User	Review	Rating
1	March 2, 2025	muhammed rifayi	good	★★★★★
2	March 2, 2025	muhammed rifayi	good	★★★★★
3	March 2, 2025	muhammed rifayi	good	★★★★★

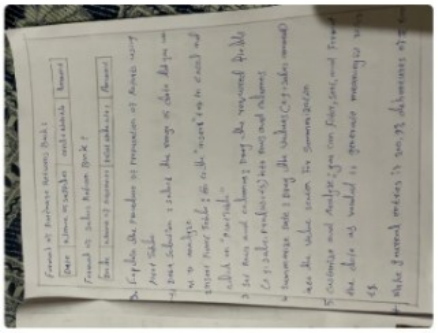
Current password	
New password	
Renter new password	
	Confirm

View Criminals

Search by Name Enter name Search

ID	Name	Photo	Gender	Description	Place	Pin	Post	District	State	Actions
1	nadhir		Male	pocso	tanalur	676307	tanalur	malappuram	kerala	Edit Delete view alert
2	bilal		Male	killer	tirur	676307	pattambi	malapuram	kerala	Edit Delete view alert

Police Station Profile



valanchery

Email: rifayi@gmail.com

Phone Number: 9037181717

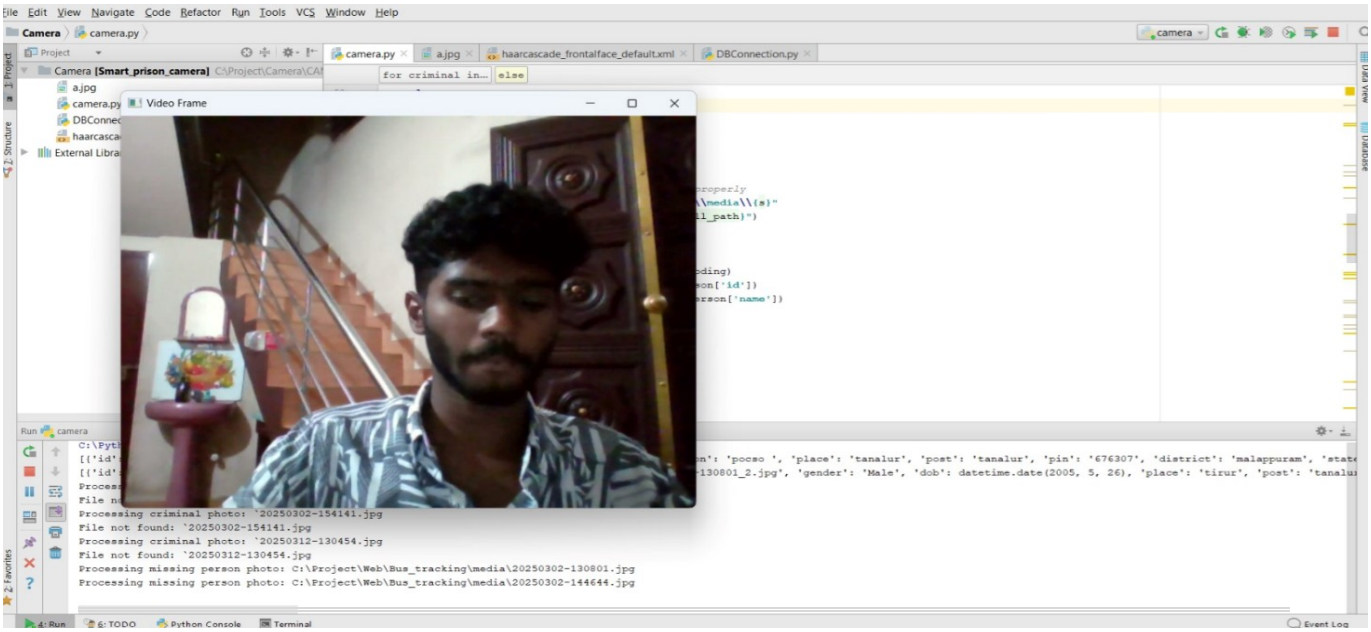
Place: valanchery

Post: tirur

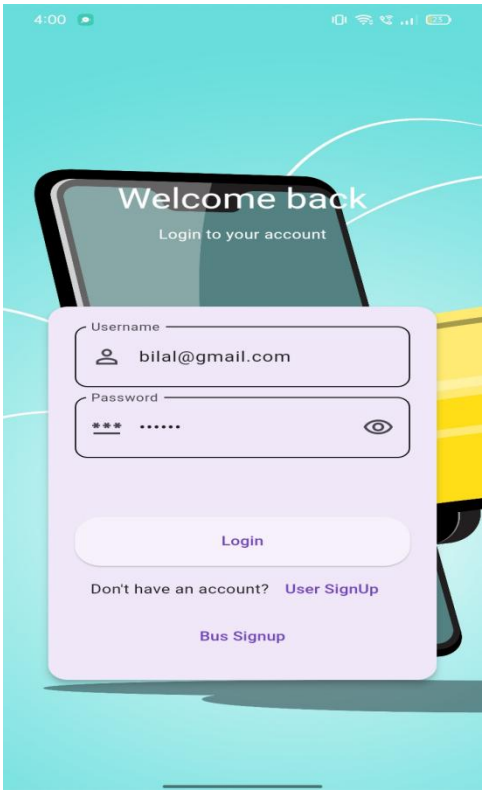
Pin: 676307

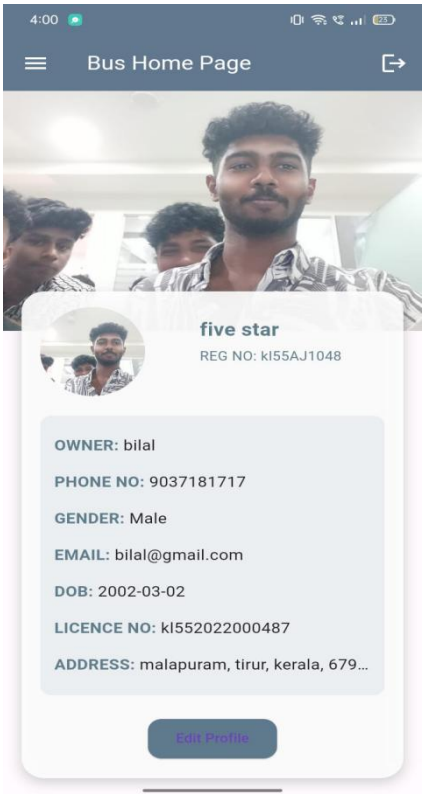
State: kerala

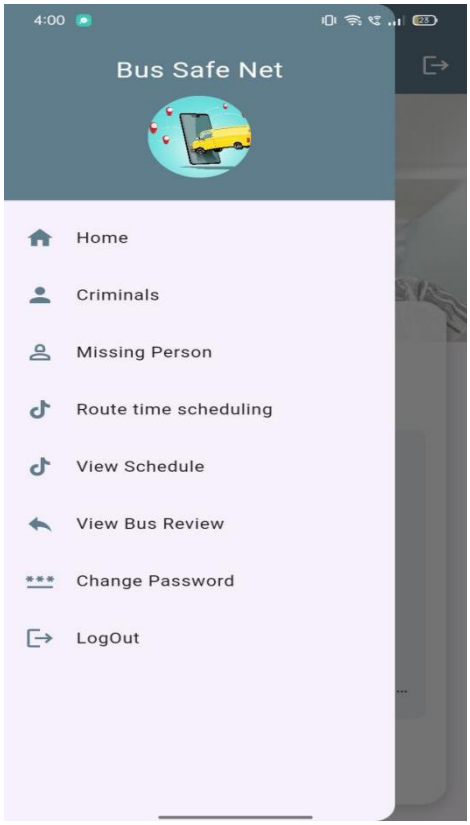
District: malapuram

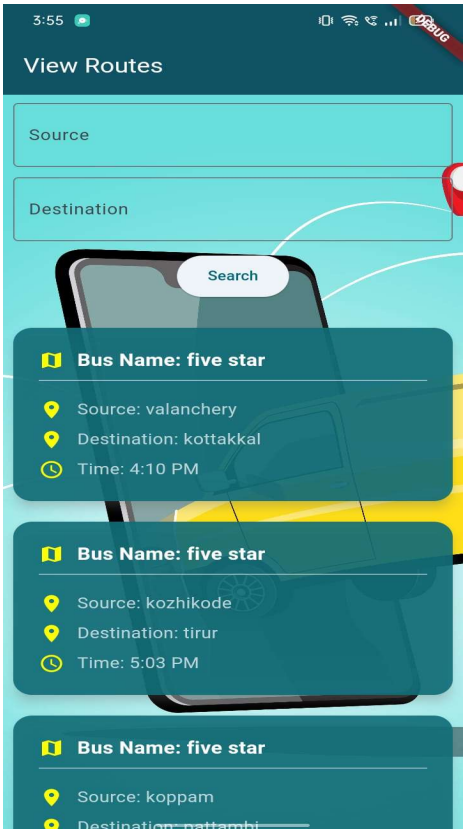


ANDROIDAPPLICATION SCREEN SAMPLE

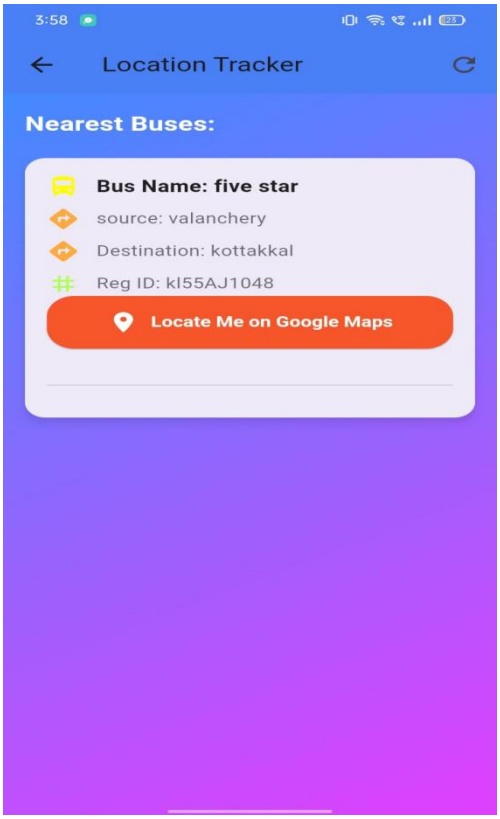


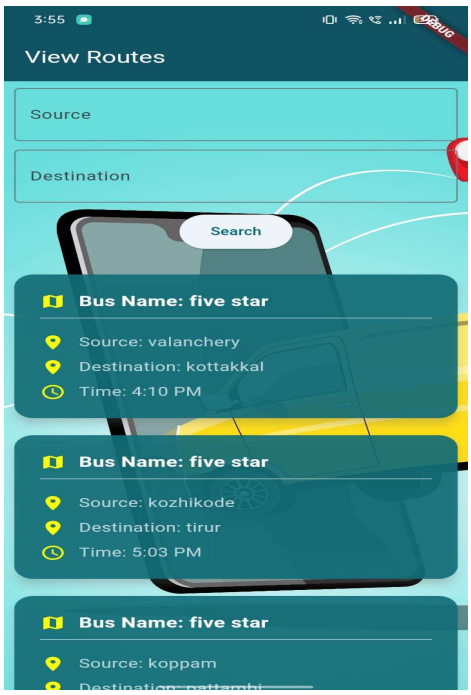


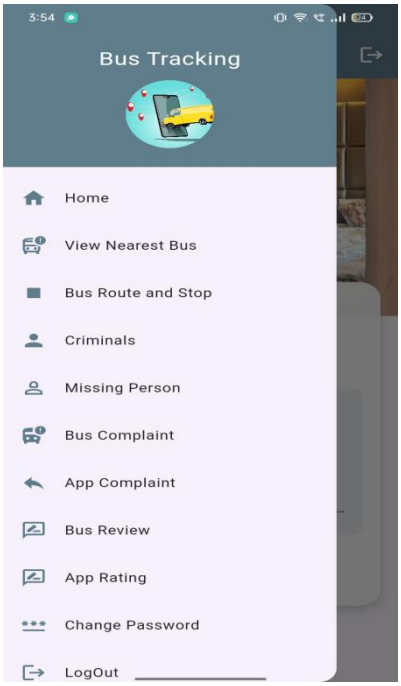





3:54
Home Page
nadhir
Phone: 9995577931
Gender: Male
Email: nadhir@gmail.com
DOB: 2004-03-11
Address: kerala, vanchery, , mlprm, 679...
Edit Profile


3:58
Location Tracker
Nearest Buses:
Bus Name: five star
source: valanchery
Destination: kottakkal
Reg ID: kl55AJ1048
Locate Me on Google Maps


3:55
View Routes
Source
Destination
Search
Bus Name: five star
Source: valanchery
Destination: kottakkal
Time: 4:10 PM
Bus Name: five star
Source: kozhikode
Destination: tirur
Time: 5:03 PM
Bus Name: five star
Source: koppam


3:54
Bus Tracking
Home
View Nearest Bus
Bus Route and Stop
Criminals
Missing Person
Bus Complaint
App Complaint
Bus Review
App Rating
Change Password
LogOut

FUTURE ENHANCEMENT

✧ **AI-Powered Predictive Analytics**

- Implement artificial intelligence (AI) to predict security threats based on historical data
- Identify high-risk areas and provide proactive safety measures.

✧ **Automated Emergency Response System**

- Integrate AI-driven emergency response, automatically alerting nearby police and medical teams in case of incidents.
- Enable instant SOS features for passengers in distress.

✧ **Integration with Smart Traffic Management**

- Sync with traffic control systems to optimize bus routes based on real-time congestion data.
- Reduce delays and improve transportation efficiency.

✧ **Multilingual Voice Assistance for Passengers**

- Introduce voice-based assistance in multiple languages to help passengers access bus information and safety updates easily.
- Improve accessibility for differently-abled individuals.

✧ **Crowd Monitoring and Overcrowding Alerts**

- Use AI to monitor bus occupancy and prevent overcrowding.
- Alert passengers about alternative routes when a bus is full.

CONCLUSION

The Public Transportation Safety and Management System is a comprehensive solution designed to enhance security, efficiency, and management within public transit networks. By integrating real-time tracking, automated criminal detection, face recognition technology, and improved communication, the system ensures a safer and more reliable commuting experience for passengers. It also enables authorities to monitor buses, detect threats, and respond swiftly to emergencies, reducing security risks and improving overall operational efficiency.

With its advanced features, including passenger feedback, emergency alerts, and automated surveillance, this system bridges the gap in existing transportation security measures. Future enhancements such as AI-powered analytics, IoT-based monitoring, and digital ticketing can further improve its effectiveness, making public transportation more secure and technologically advanced.

By adopting this system, transport authorities can significantly reduce crime, enhance commuter safety, and optimize transit operations, ensuring a more secure and efficient transportation environment for all.

BIBLIOGRAPHY

REFERENCES:

Books: -

- The art of computer programming
- Clean architecture
- Code complete

Websites: -

- https://developer.android.com/
- https://www.geeksforgeeks.org/
- https://www.codeproject.com/
- https://stackoverflow.com/
- https://github.com/