BRACT's

Vishwakarma Institute of Information Technology

PROJECT REPORT ON

PUBLIC TRANSPORT MANAGEMENT SYSTEM

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING

(ARTIFICIAL INTELLIGENCE)

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ABSTRACT:

Many cities lack a comprehensive public transportation network, such as the 'City Bus'. It can be challenging to board the correct buses along the route to arrive on time. Route Radar seeks to help individuals by ensuring smooth travel when utilizing public transportation. It provides you with vital information such as the serial number of buses running between the source and destination, the departure time of the bus from the starting point, the expected arrival time at the destination, and some other required details such as fare computation. Route Radar is presently only accessible for the 'City-Bus' network in Pune.

KEYWORDS:

Public Transport, City Bus, Website

INTRODUCTION:

Although Pune is a busy city, there are moments when figuring out the public bus system feels like a maze. Consider the following scenario: you're attempting to get somewhere, but you don't know which bus number will get you there when the next bus will arrive at your stop, how long it will take to get there, or how much the journey will cost. Such questions have the potential to make an easy bus ride stressful. However, what if you could avoid all the guesswork and have access to all the knowledge you require?

That's where Route Radar comes in. This user-friendly website simplifies the process of choosing the right public buses in Pune. Consider it your own personal bus guide, available on your phone. Route Radar provides information about the next bus to your stop, including the correct bus number. You can also easily identify the correct bus thanks to clear bus number displays. You may plan your trip more efficiently by examining the complete route of the bus, so you know precisely how long it will take to arrive at your location. You'll also know exactly how much to pay before you board thanks to Route Radar's fare calculation. Route Radar puts you in charge of your journey, saving time and without any worries. Now you can board with Route Radar for a smoother, smarter, and more convenient public bus ride experience in Pune.
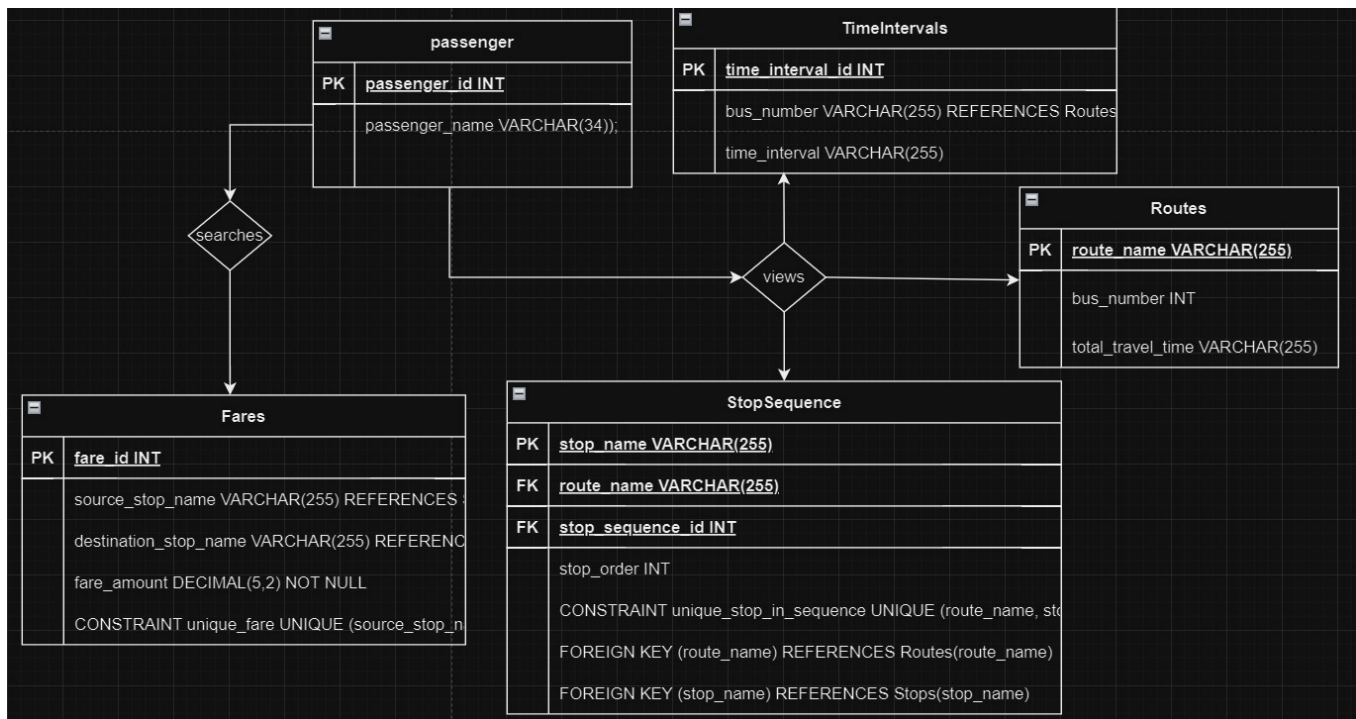
OBJECTIVES:

➢ Bus number information in advance: When user enters the source and destination they should get to know about the 'bus number' of all the buses which run through the given locations.

➢ Estimated time calculation: After entering source and destination, user should get to know about the approximate time required to reach the destination.

➢ Fare calculation: According to the entered source and destination, user should be informed about the price to be paid for the fare to travel between the desired locations.

➢ Time for next bus: Buses with a unique number come to the stop after a specific time interval. User should get to know the waiting time before the next bus arrives at the stop.
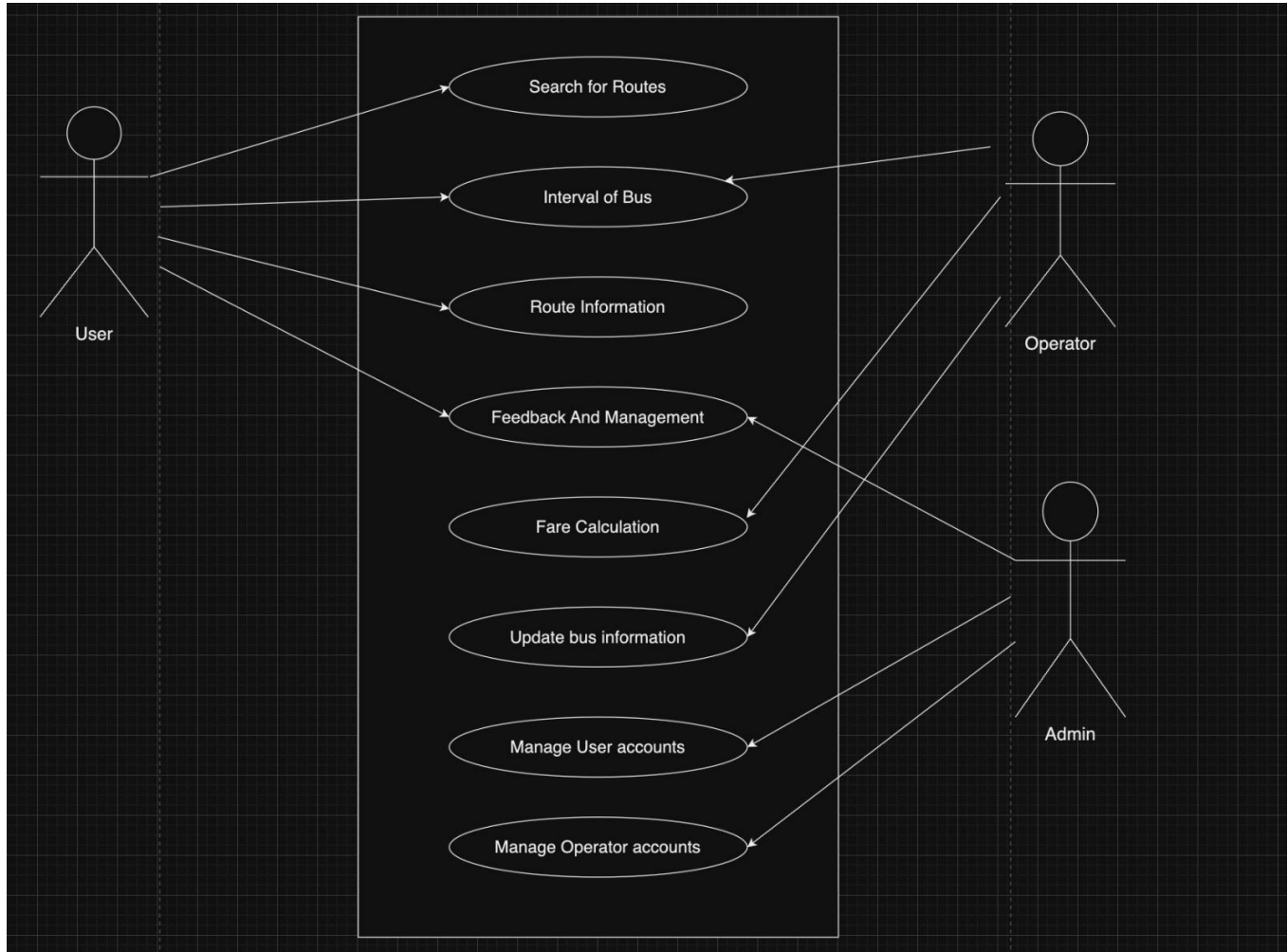
TECH STACK USED:

➢ HTML/CSS/JavaScript/ReactJS: These technologies are used to build the front-end of the website with which the user is going to interact.

➢ Backend Development: Node.js and Express.js is used for the back-end connectivity and some other functionalities.

➢ Database Management: MySQL is used for creation of database, tables and to manage the entire data used for the project.
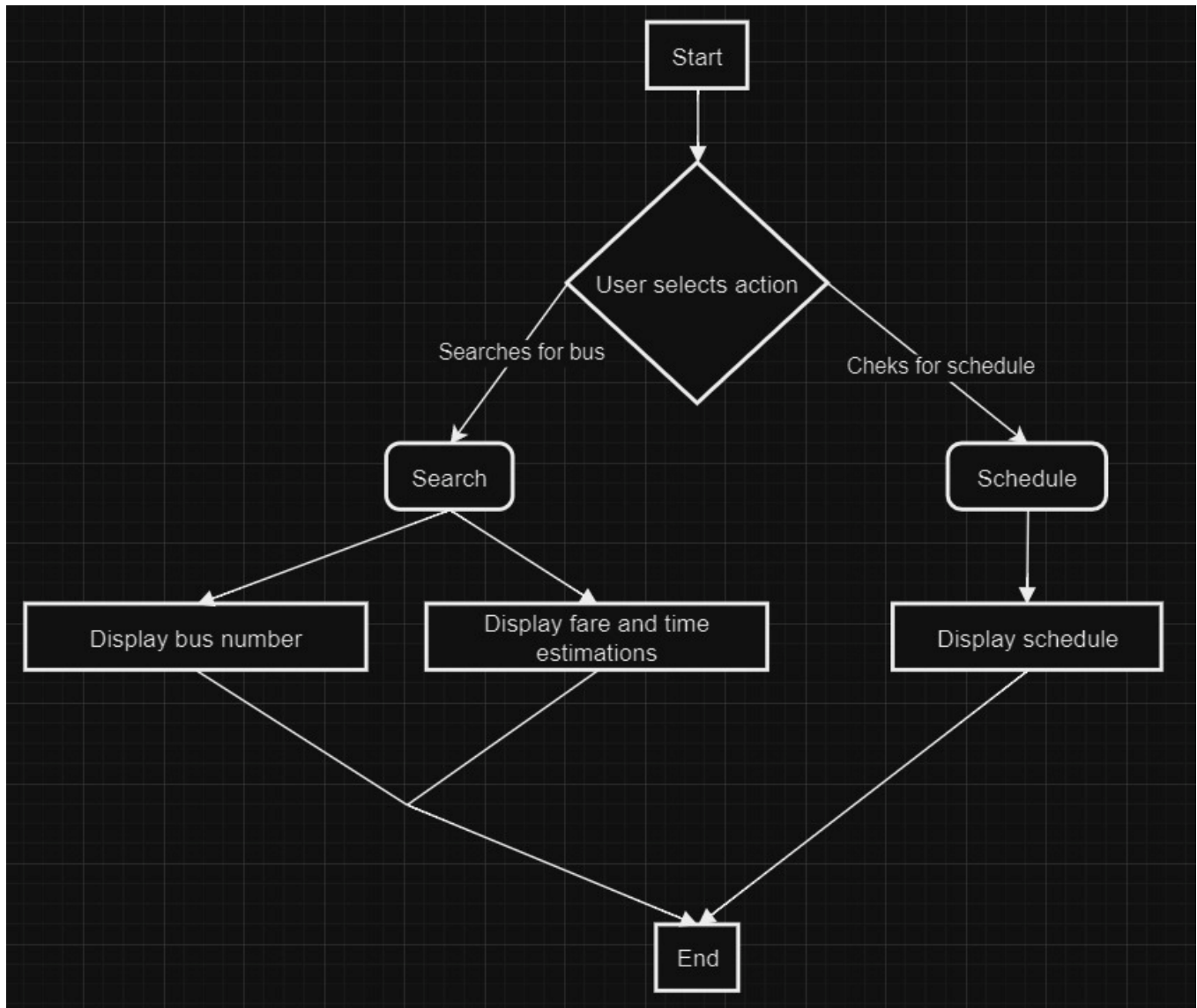
ER DIAGRAM:

passenger

PK	passenger_id INT
	passenger_name VARCHAR(34));

TimeIntervals

PK	time_interval_id INT
	bus_number VARCHAR(255) REFERENCES Routes
	time_interval VARCHAR(255)

Routes

PK	route_name VARCHAR(255)
	bus_number INT
	total_travel_time VARCHAR(255)

Fares

PK	fare_id INT
	source_stop_name VARCHAR(255) REFERENCES
	destination_stop_name VARCHAR(255) REFERENC
	fare_amount DECIMAL(5,2) NOT NULL
	CONSTRAINT unique_fare UNIQUE (source_stop_n

StopSequence

PK	stop_name VARCHAR(255)
FK	route_name VARCHAR(255)
FK	stop_sequence_id INT
	stop_order INT
	CONSTRAINT unique_stop_in_sequence UNIQUE (route_name, sto
	FOREIGN KEY (route_name) REFERENCES Routes(route_name)
	FOREIGN KEY (stop_name) REFERENCES Stops(stop_name)

searches

views

UML DIAGRAMS:

1. USE CASE DIAGRAM:
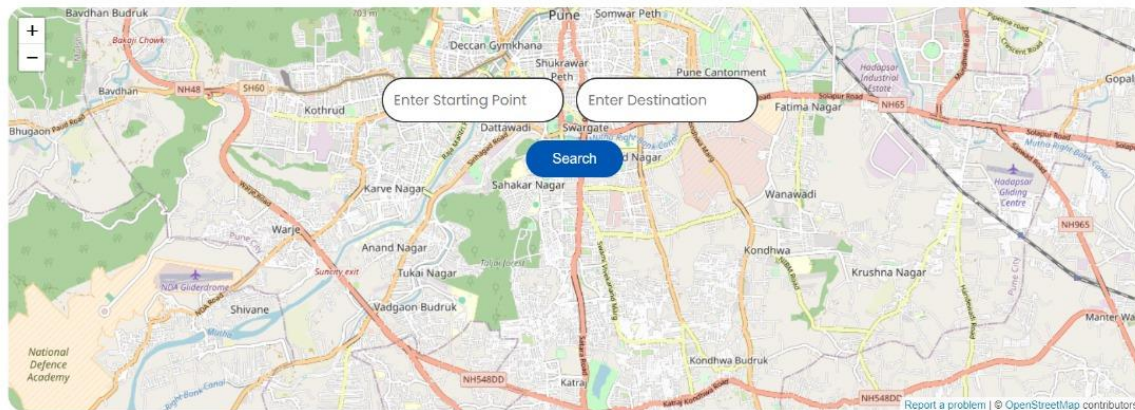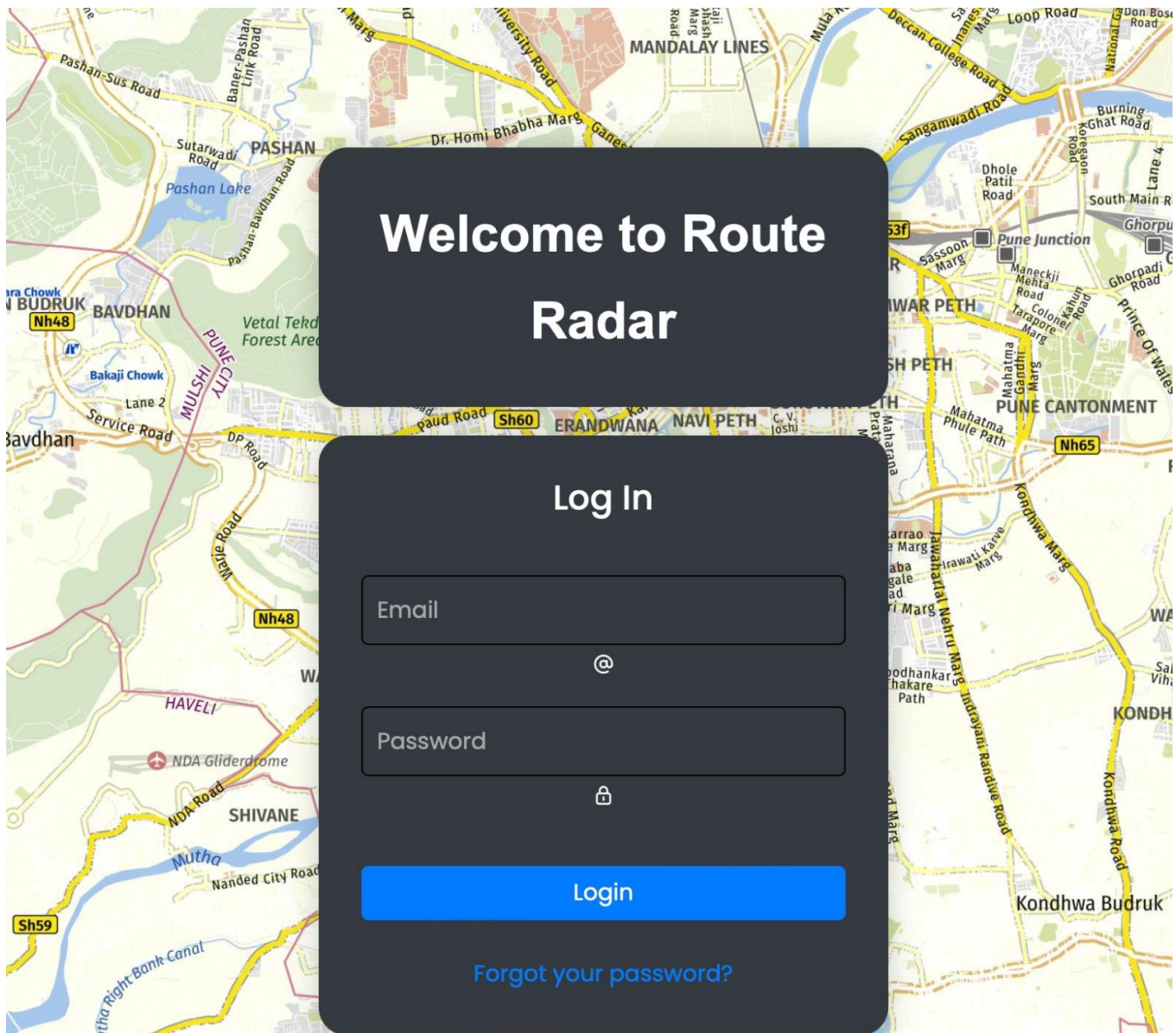
2. ACTIVITY DIAGRAM:

GRAPHICAL USER INTERFACE (GUI):

1. Home Page:

2. Login Page:

FUTURE SCOPE:

The current scope of the project is limited only for city bus network in the city of Pune. Further work in this project can lead Route Radar to functionalities like live bus tracking system. Increasing the database may lead to covering the bus networks in other cities too. Furthermore, this can also be used for other public transportations like local trains or metro railway network.

CONCLUSION:

Route Radar is an attempt towards making the life of people daily travelling through public transport means easier and ensuring a smooth journey for them without any worries. It has limitations in the current stage but this is definitely a model with great potential and future possibilities.