MINI PROJECT REPORT ON

"*Ride Eazzy*"

BY

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Under the Guidance of

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In partial fulfillment of

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DEPARTMENT OF COMPUTER ENGINEERING

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CERTIFICATE

This is to certify that the partial project report entitled

Ride Eazzy

Submitted by

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Is a record of bonafide work carried out by them, under my guidance, in partial fulfillment of the requirement for the award of Degree of Bachelor of Engineering (Computer) at M.I.T. College of Engineering, Pune under University of Pune.

Date: Place:

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Abstract

In today's world, technology plays an important role in every industry as well as in our personal lives. Out of all of the industries that technology plays a crucial role in, ticket booking is definitely one of the most important. This merger is responsible for improving and enhancing ticket booking system.

Bus booking system is a broad field where innovation plays a crucial role in efficiency. Areas like Vehicle live tracking, QR code, information technology, and more have all made significant contributions in increasing efficiency and flow of Bus ticketing process.

Public transport bus services are generally based on a regular operation of transit buses along a route calling at agreed bus stops according to a published public transport timetable. So people wait for the bus on bus-stop as they are unaware about timings of buses which leads to time wastage. Another is conductor required to conduct fare collection and passenger may face cash problems. Like these, there are many problems faced by the current system

We've have brought a solution to these problem. Ride Eazzy is a paperless way of handling your bus ticket booking. It also provides Payment gateway for your ticket generated, so one further step towards going cashless and avoiding all the mess of change.

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1. Introduction

Public transport bus system are operated on their decided timetable and bus stops are also decided by the transport system. Passengers are unaware about bus stops and its time that's why passengers wait for the bus on bus-stop which become reason for time wastage. If passenger is new in that city and not well known about bus stops then there may be chances for reach at wrong place.

Another is conductor required to conduct fare collection and passengers may face cash problems. If meanwhile in bus route bus gets fail then passengers remain unaware about it and conductor may face problems for getting help. Like these, there are many problems faced by the current system. To overcome these all we come up with a new system using android application which will reduce waiting time for passengers as well as many other problems.

Due to busy lifestyle importance of the time in day to day life there is need of effortless transport. So we are providing an Android application for the same.

2. Literature Survey

We studied various android application available on the Play Store which are related to our topic i.e. bus ticket booking.

Bus ticket booking during the offline era posed various difficulties to the customers as well as the bus operators. Offline ticket booking reduced the scope of customers to choose different options based on their travel criterion. The bus operators find it difficult to monitor their bus seat filling information. Many small and medium bus service organizations do not have their own online bus ticket booking system.

Public Transport system (PTS) remains the major source of income in most of the developing countries like India. However, PTS now faces severe malfunctions and various security problems. First, there is a lot of confusion between the passengers regarding fares which lead to quarrels and chaos.

GPS is more popular technology which is used in many applications. This existing system gives information about vehicle position and route travelled by vehicle and this information can be monitor from any remote place or location. This system depends on

GPS and GSM technology. This system lags in some features like its track vehicle only on PC not on mobile.

- RedBus:

RedBus is easily the most popular bus ticket application in our country, which does not provide a single bus booking for Public Transport Organizations like B.E.S.T (which provide public transportation within a city).

This is a major issue and our project focuses on resolving the same issue on a national level. Providing for Public Bus Transportation ticket booking solution will help the 90% of daily commuters who use Bus as the means of public transportation rather than Auto rickshaws and other.

Also there is no concrete way to know the exact fares between two bus stops in our city and that is where our project comes into picture.

- There are no bus fare digital wallet system for the Public Transport System
- Dr. Prasun Chowdhury described a smart card technology for ticketing the passengers travelling in bus.

The smart card is mainly based on latest Radio Frequency Identification (RFID) technology. For this purpose, an interface is built between RFID setup and driver's mobile phone using a specifically developed Android app "SwipeNgo". The interface helps to send passenger ID from RFID reader to the driver's mobile phone via Bluetooth. The developed "SwipeNgo" app is installed in driver's mobile phone and receives passenger ID from the RFID card reader via interface when passenger get into the bus. Along with the passenger ID, "SwipeNgo" also keep records of the stoppage name/no. into database in mapping with the Global positioning system (GPS) coordinates. The exact fare between source and destination is calculated and deducted from the balance when the passenger gets down from the bus. This information regarding balance is also sent to the RFID setup where the fare is displayed. There is a separate announcement system which alerts the passengers prior to the next halt

3. Problem Definition/scope

The ticket booking system when it comes to our City Transport Buses is lethargic and causes a lot of trouble to the people as well as the conductor and the management. The trouble of always keeping the exact change and keeping the paper ticket is a trouble through hell.

Also the conductor has to keep track of every person entering the bus, where there journey started and what is there final destination. Generate the ticket for them, and handle all the money is too troublesome for a single person in such crowded buses.

So we have come up with a solution for all this mess. Generation of ticket using QR Code. Also avoiding the daily mess of making the payment for the ticket is totally avoidable. You have to scan the QR code at your start location for starting your journey and then again scan the QR code at your end location and in the process your ticket is generated and you get the exact estimate of your journey.

Now you can make the payment for your journey in a span of 30 days or your account will be blocked. Also we have an E-Wallet which will contain all your due bill list and the ones that are paid, making it efficient for you to keep track of your journey. Also you can pay these bills via our online payment gateways which makes this system go totally cashless and more efficient.

4. Software Requirement Specification (SRS)

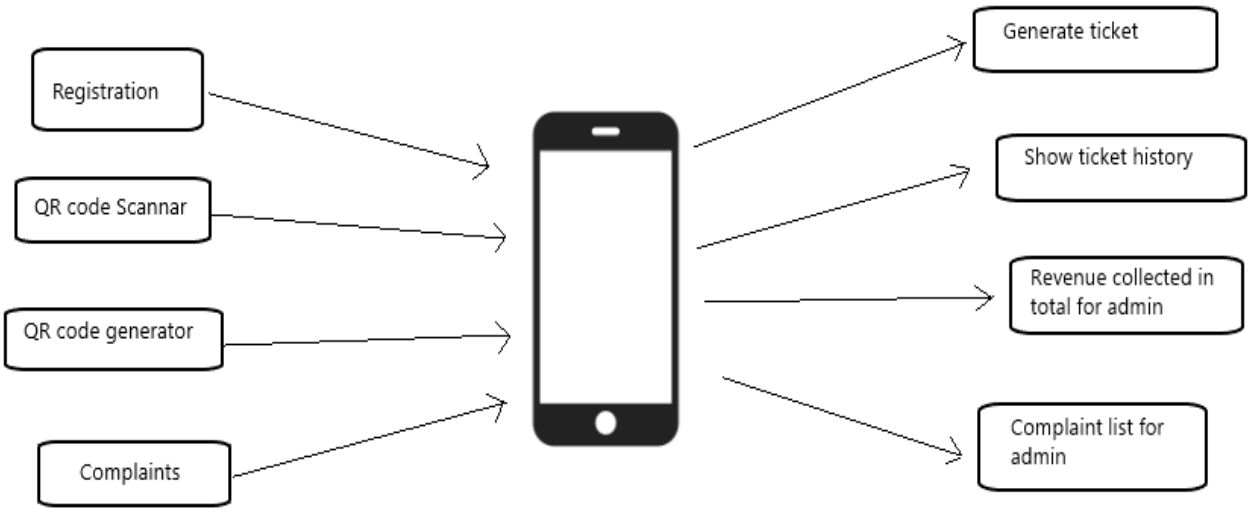
Purpose	The purpose of this document is to describe the Ride Eazzy. This document contains the functional, behavioral and non-functional requirements of the project
Scope	Ride Eazzy is the only e-ticket booking service for our public transport buses in Pune. With the feature of online payment it will make the bus ticket booking system cashless and more efficient in every way possible.
Product perspective	Ride Eazzy is a replacement for the lethargic Ticket booking service in PMPML buses.
Product functions	QR code generator/scanner. Journey and its respective fare Record. Online Payment Gateway. User registration and blocking of their service. Emergency Bus breakdown complaint. Revenue generator.
Operating Environment	Ride Eazzy is an Android app so can work on any smartphone with android version 7.0 and higher.
Design & Implementation constrain	The QR code will be generated and scanned from The same page, other details are stored in database. It will use Firebase to store user's data. Requires Internet service.
Assumptions and Dependencies	Android version : SDK 24 Internet connection. GPS support. Call and SMS service.
External Interface requirement	User Interface

	- User friendly Home screen with all available functionalities. - Payment Gateway. - Simple lists for user's history records. <u>Hardware Interface</u> - Smartphone <u>Software Interface</u> - Android version : SDK 24 - Internet Connection. - SMS service.
Functions	- Auto generated list of all your previous Journey details. - User Registration and Log-in. - All previous user's revenue list alongside Complaint list from the employee regarding Bus breakdown for the admin. - Ticket generator using QR code scanner and QR code generator using the employee page. - Blocking user who do not pay there fare under the given time span. Password forgot module
Other Requirements	

5. System Overview

The proposed system is based on Android Operating system which will not only provide e-ticket to the users but also help them to keep the track of their journey with all the details, in a digitized way.

Android is a Linux-based operating system designed primarily for touch screen mobile devices such as smart phones and tablet computers, developed by Google in conjunction with the Open Handset Alliance. Android was built from the ground-up to enable developers to create compelling mobile applications that take full advantage of all a handset has to offer. The system is specified on android operating system only because the market share of Android is high. Android also comes with an application development framework (ADF), which provides an API for application development and includes services for building GUI applications, data access, and other component types.



The above figure reflects the overview of the app. Input to the system is the information entered by the customer, employee and admin which includes:

- Aadhaar card no, ID, customer's name, phone number, birth date, password
- Employee name, mobile number, dob, employee id, password for the employee
- Customer ID and the customer's Aadhaar number for blocking.
- Route No and Station name for generation of the QR Code

Customer Registration module

This module provides the customer to register in the app by providing Aadhaar card no, name, mobile no, birth-date and generating a self-password. After this the user gets registered in the database

Login Page module

This module provides three drop down options of: Admin, Employee and Customer. Depending upon the type of user, the user will select the respective category. The user will fill in the fields of User ID and Password and gets access.

Forgot password module

This module provides for password re-generation for the user who must have forgotten his/her password. The user has to enter his Id and mobile number. It generates an OTP and sends it to the user number.

Admin module

This module provides the admin with various functionalities such as Employee registration, Blocking User- where the admin can block a certain user on various pretexts. Also has an activity which shows the revenue generated through the user.

Employee Registration module

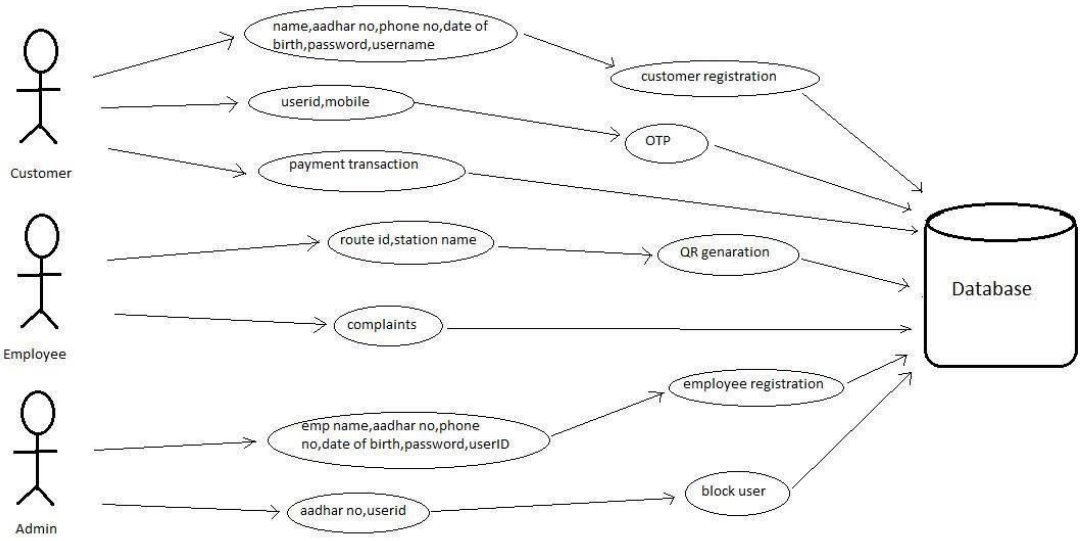
This comes under the Admin module. This module provides the admin to register a specific employee by providing the details such as Name, Aadhaar number, Date of birth, Phone number. Then the Employee will assign certain Id and password for that respective employee and send it to him.

Employee module

This module provides the employee with various functionalities such as generating QR code where he has to enter the Route ID and the current Station name and it will generate QR code and also the further stations will retrieved from the database. The employee can also generate a Complaint if the Bus breaks down and it will be send to the admin.

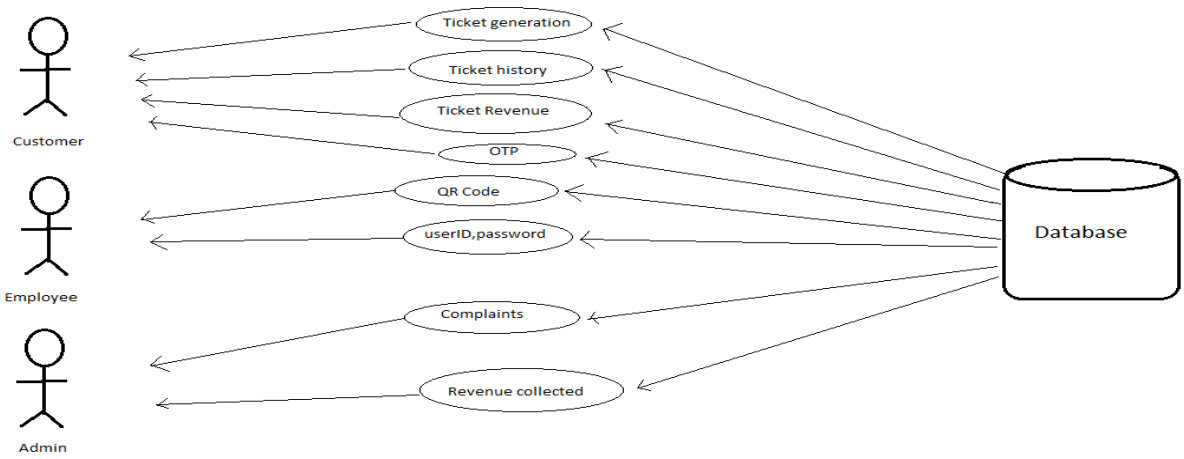
6. UML Diagrams:

Use Case Diagram



Input System

Response System



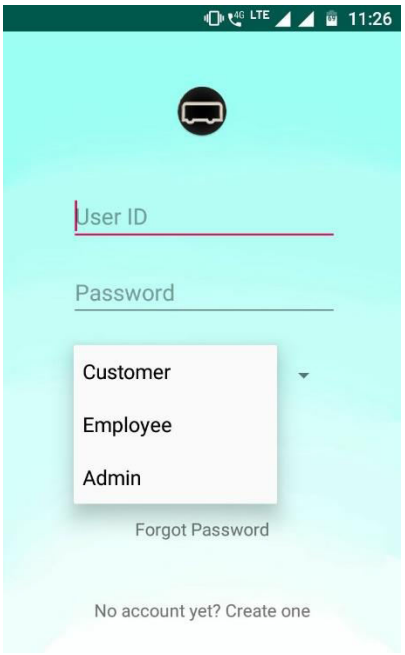
7. Platform/Technology

Platform: Windows, Mac, Linux.

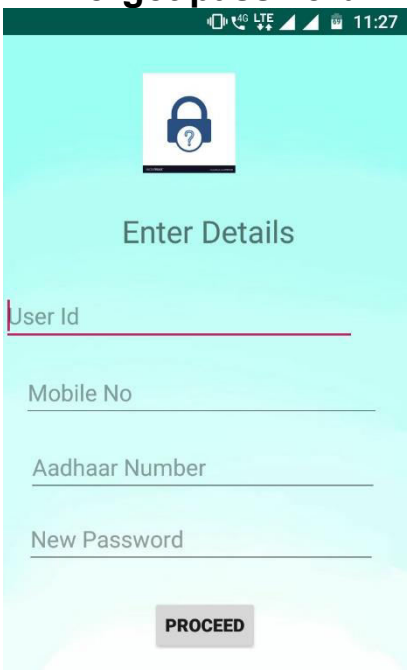
Technology : Android Studio

8.User Interface

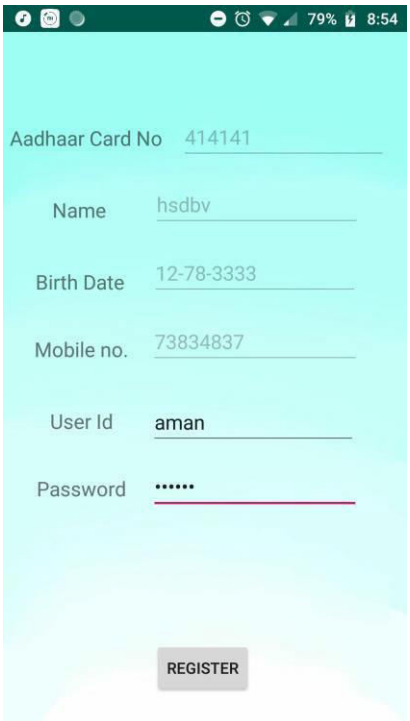
1. Login page



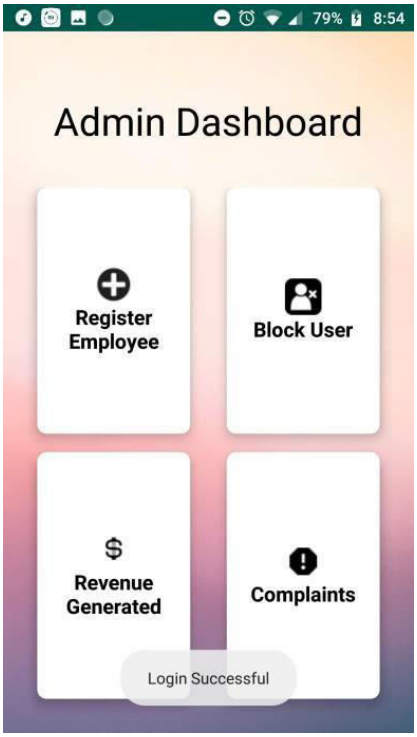
2.Forgot password



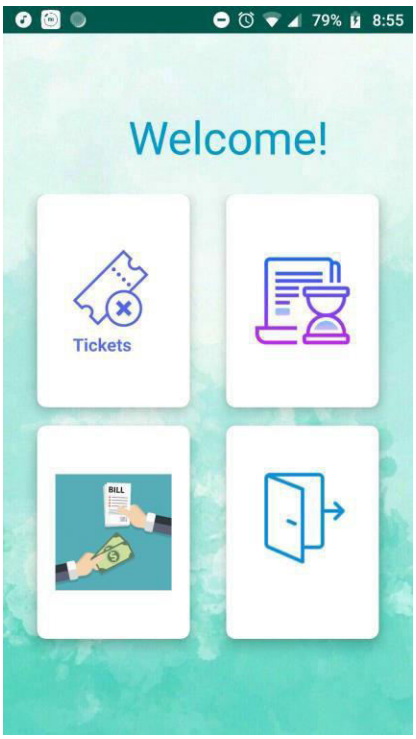
3. User Registration



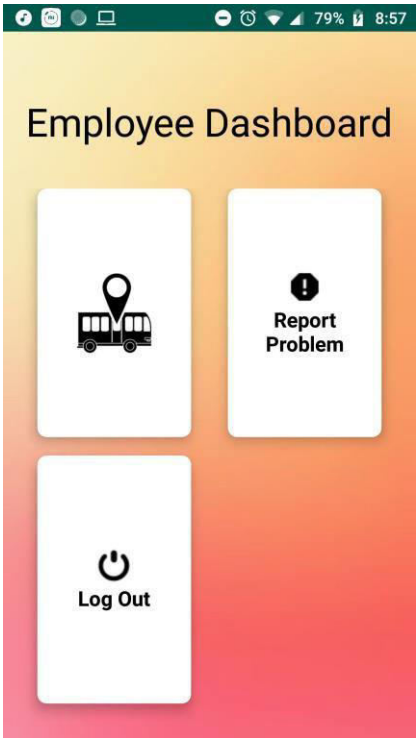
4.Admin Dashboard



5. Customer Dashboard



6.Employee Dashboard



9. Conclusion and Future scope

The aim of our group was to find a technological solution for a day to day problem faced by the daily commuters of PMPML Bus transport services. We surveyed people and the existing ticketing system and came to know about various issues in the current Offline traditional system.

Hence, our project is not just a mini project but also an initiative to make customers and conductors go cashless as well as paperless. We feel that going ahead into the digital era, automation and visualization will be the key aspects to drive not just an individual, but a nation forward. Our focus is to educate people about technology as well as reducing the use of paper moving ahead. We will try to update the app as per user requirements. In the future, through this app, we plan to include live bus tracking service for the PMPML buses and also you will be able to book your ticket from the location you want start the journey without even getting into the bus. Also this app will generate various reports through its analysis and give information about which route has the maximum flow of passengers and during which time of the day, also how much the revenue is generated on which route. Depending on this statistics the PMPML department can take various decisions as to on which route more buses are needed and during which time of the day. Also the passengers will be able to generate complaints directly to the admin about various issues through the application, just like IRCTC has various helpline numbers to report about the condition of the coaches. Passengers can complain to the admin about any breakdown or the bus conditions and necessary actions can be taken.

10. References

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