Smart E-Pass

Ms. Vaibhavi Ambadas Kanake[1], Ms. Shrutika Laxmikant Battul[2], Ms. Asmita Dattatraya Musmuse[3], Ms. Kaveri Basavaraj Swami[4], Ms. Shrutika Govind Jadhav[5]

Diploma Students, Department of Information Technology[1,2,3,4]

Lecturer, Department of Information Technology[5]

Shri Siddheshwar Women's Polytechnic, Solapur, India

kanakevaibhavi4@gmail.com, shruthikabattul@gmail.com, asmitamusmuse7020@gmail.com

solapur.swamikaveri860@gmail.com, shrutikajadhav211@gmail.com

Abstract: *In today's word of technology and increasing use of andriod phone in an important part in human beings. Efficient urban transportation systems are crucial for sustainable development in cities worldwide. This abstract presents a novel approach to enhancing urban mobility through a QR Code-Based Smart Bus Pass System. Unlike traditional methods, this system employs QR code technology, enabling passengers to access bus services conveniently through their smartphones. By scanning QR codes displayed at bus stops or within vehicles, passengers can instantly validate their passes, eliminating the need for physical cards or paper tickets. The application provides a user-friendly interface between user, admin and conductor. we are providing QR code instead of the ticket. User can scan the QR code. In this app, there is login and sign-up page after login or sing up your profil has been created.*

Keywords: E-pass

I. INTRODUCTION

In the ever-evolving landscape of urban transportation, the need for efficient, convenient, and sustainable public transit systems has become increasingly apparent. As cities grow and populations swell, the demand for accessible and reliable transportation options continues to rise. Traditional methods of fare collection and ticketing in public buses often involve cumbersome processes, paper tickets, and manual validation, leading to inefficiencies, long queues, and dissatisfaction among passengers.

To address these challenges and usher in a new era of smart mobility, the Smart Bus Pass Project emerges as a beacon of innovation and efficiency in public transportation. By harnessing the power of advanced technology, the project aims to transform the way passengers access and utilize bus services, while also enhancing operational effectiveness for transit authorities.

II. LITERATURE SURVEY

In the paper "Smart Bus pass for public transport "The paper restoration tasks. the paper presents an overview of smart ticketing systems in public transport, focusing on technologies such as NFC, RFID, and QR codes. It discusses the benefits, challenges, and future directions of smart ticketing systems, highlighting their potential to enhance efficiency and user experience.[1].

The paper examines the use of QR codes in public transport systems, discussing their applications, benefits, and challenges. It explores case studies and evaluates the effectiveness of QR code-based ticketing and passenger information systems.[2].

III. PROPOSED APPROACH

There some modules such as
1. Registration module
2. User module
3. Wallet payment module
4. QR Scan module

5. Verification Module

In registration module user can register with there personal details while using this application of with name, email, mobile number, Aadhar card no, address and password once you entered your aadhar card no or mobile number that should be not changed and nobody can enter same Aadhar card number or mobile number then submit your details.

In user login page which user can registration in the application that user can enter email or password which you entered in registration page it well show the your personal details which you entered in registration page.

Once login is finished we will go to the bank payment modula in that it shows the amount details the cash you give the admin panel amount update will be show in a bank payment module page

Adding the cash in the wallet admin panel can be click in a done then user get a QR code when you while travelling in the bus you can simply take screenshot or print of that QR code then conductor will be scan that QR code select the destination which you want to go.

Then the QR code will be generated automatically amount will be cut from user wallet and add in the conductor wallet to the transport corporation office admin panel can be handled the transport corporation.
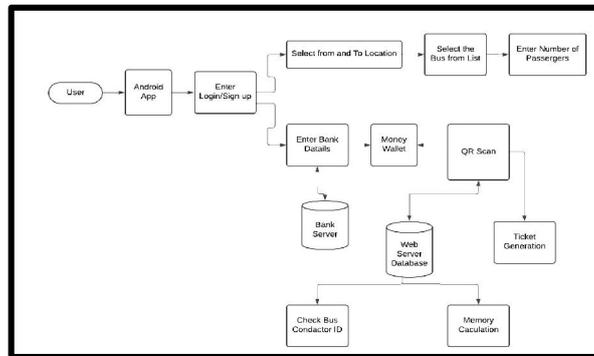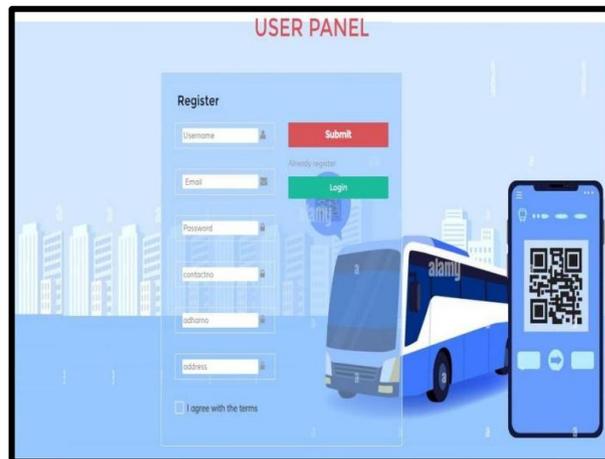

Figure 1 - System Architecture

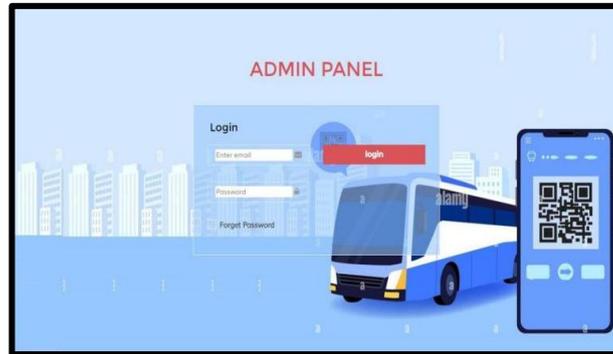**Figure 2**- user Pannel to add Information

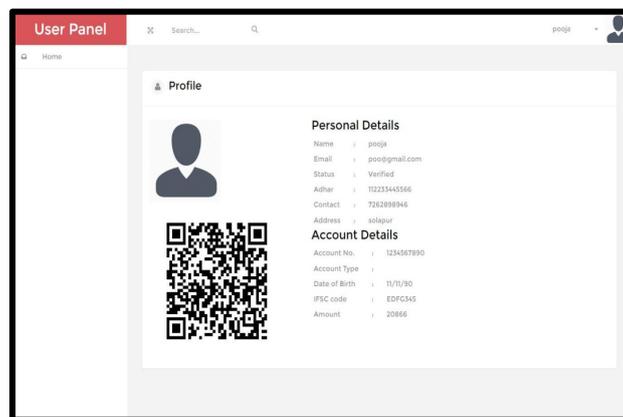**Figure 3**- Admin panel

Figure 4- Conductor panel

IV. CONCLUSION

A smart bus pass offers numerous benefits, including convenience, efficiency, and often cost savings for users and transportation agencies alike. Its integration with digital platforms enables easier management, tracking, and customization of travel preferences. Overall, it's a modern solution that enhances the commuter experience and streamlines public transportation systems.

REFERENCES

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