

Digital Bus Pass System

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Abstract

The Project is aimed to develop an Application for social use named Digital bus pass system. This project brings the improvement to the user convenience and access to public transport through digital platform. The passengers could apply, save, and manage their bus passes using this software to achieve no paper tickets and reduced time at stations. The application also promises a secure payment mechanism, route information, thereby providing advanced over all experience. I also offer segmented discounts and concession schemes to various classes of users, such as pensioners, students, and workers. Nowadays to apply the bus pass it consumes more time, but this application will be helpful to apply the bus pass digitally which save the time of passengers.

Keywords: Digital Ticketing, Time consuming, Digital Platform

INTRODUCTION

The project digital passes can also be regarded as an innovative approach in the current context. Not just that, they provide such a basic facility which most people who are on the move are able to use with ease. Most essential feature of the Digital Bus Pass System is that it offers a variety of pass options tailored to different demographics. The system can also be made able to issue passes which are cheaper to accommodate the youths since most of the mare students and may not be able to afford the ordinary transportation fees accessible in the bus services. Elder leaders and workers on the other hand can also be helped by the facilities by reducing those fares or giving them special passes for their purpose.

The absence of an digital buss pass system is very time consuming as the passengers has to wait in long to apply the bus pass , so digital bus pass system plays an important role for time saving, or efficient for all individuals.

LITERATURE REVIEW

- **Digital Ticketing:** In Maharashtra (MSRTC) we can apply for digital ticketing but there is no any facilities to apply digital bus pass. So passenger face challenges to apply bus pass manually.
- **Time Consuming:** Entire process of applying the bus pass is time consuming because the time taken to collect documents like ID proof and photographs and standing in the long queue is very hectic process
- **Admin Involvement:** Even though we can generate the bus pass through digitally but user has to go to depot to generate the pass thus only there is involvement of admin.
- **Manual Document Creation:** In the process of applying the bus pass requires the manually verification of documents thus it consumes a lot of time.
- **No Feature of Notification and Alters:** If the bus pass is going to expire then there is no facility to inform the passengers so the digital bus pass system will help to inform the passenger.

PROPOSED SYSTEM

The current process of generating bus pass is very time consuming and become inefficient. Students, Senior citizens and regular commuters often face long queues and delays in receiving their bus passes. Therefore there is a need for digitalizing this process that provides immediate access to essential information and improved document management and enhance user experience additionally bus pass renewals and verification adds administrative burden also the administrative officers will not be available for 24/7 hours thus these manual process for applying the pass is very time consuming.

ADVANTAGES

- Less Time consuming
- Provide fast and easy access
- Cost Effective
- Online Payment

- User Friendly interface

PROJECT SCOPE

The system will focus on improving the overall user experience by providing an interface that simplifies the bus pass generation and renewal processes. The solution will include renewal of pass, online payment method, 24/7 availability, online document submission. Transport authorities will be able to easily verify application, track passes and ensure payments are done. This system will send users the notifications regarding their passes accordingly. By offering a user-friendly platform for pass generation, this system can significantly reduce the time and effort required for creating pass, thereby enhancing efficiency and minimizing errors.

OBJECTIVES OF PROPOSED SYSTEM

- **Convenience and Accessibility:** Provide users with a digital platform to easily purchase and access bus passes via mobile application. Ensure the system is user-friendly for people of all age groups.
- **Efficiency:** Streamline the process of pass purchase, renewal, and validation, reducing the need for physical passes. Minimize time spent on boarding and transactions, improving overall bus pass service.
- **Security:** Implement secure payment methods and data encryption to protect user information.
- **Real-Time Updates:** Provide real-time information of pass validity, Pass status.
- **Accessibility:** Ensuring that the system is accessible to all users which will be accessible for, including those with disabilities, and offering multiple payment options.
- **Providing a Variety of Services:** A digital bus pass system can provide services such as route and price information, pass renewal, cancellation, and updating.

PROPOSED METHODOLOGY

The designing of a digital bus pass system will come through various stages of requirement analysis based on the specified process. Then from the system design, outlining what architecture and select proper technologies and paying most attention on user interface and user experience. While in development, it has to keep in mind the frontend and back-end aspect and needs to seamlessly go along with those existing transit systems and payment gateways. Training and support must be provided to guide the users in using the system, and at the same time, technical support should always be available for resolution.

TECHNICAL SPECIFICATION

Frontend

- HTML
- CSS
- JS

Backend

- Nodejs
- MYSQL

Software Requirement

- Windows Xp, Windows10c (ultimate, enterprise)
- Sql2012
- Node js
- Payment Gateway

Hardware with Specification

- Processor: Intel core i5 or higher
- Hard Disk: Min 256GB or more
- RAM: 1gbddr 2 ram
- Motherboard: intel915gvsr chipset board

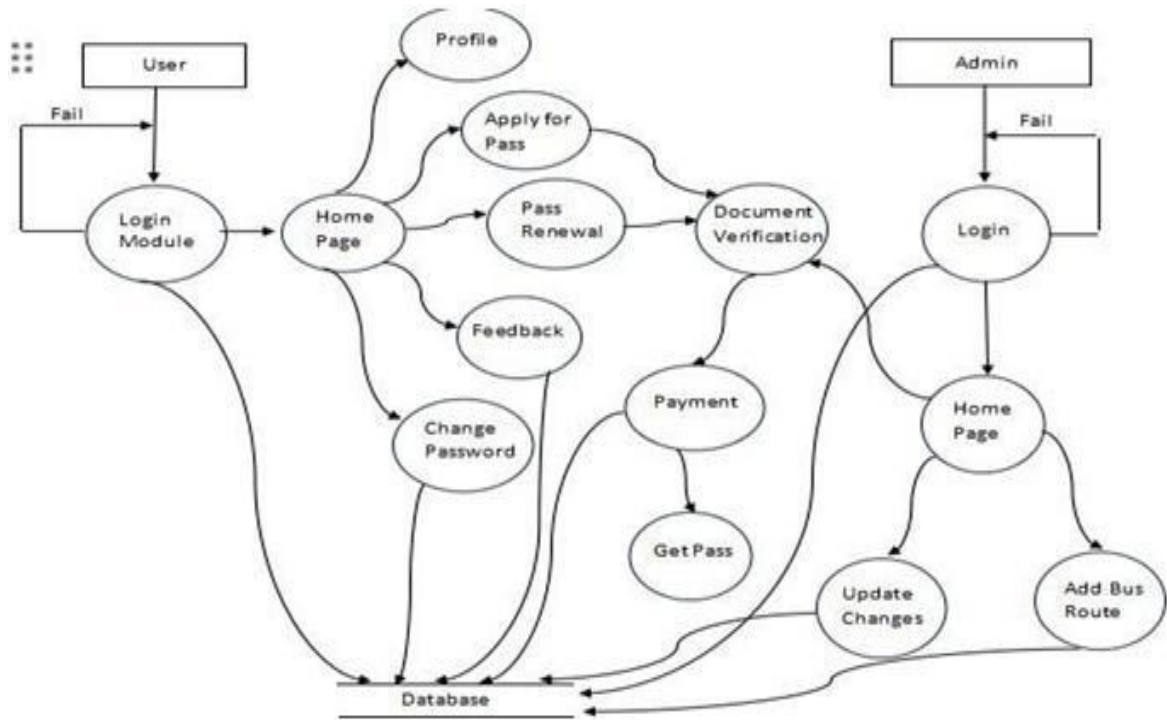


Figure no.1: Flow Diagram

System Diagram

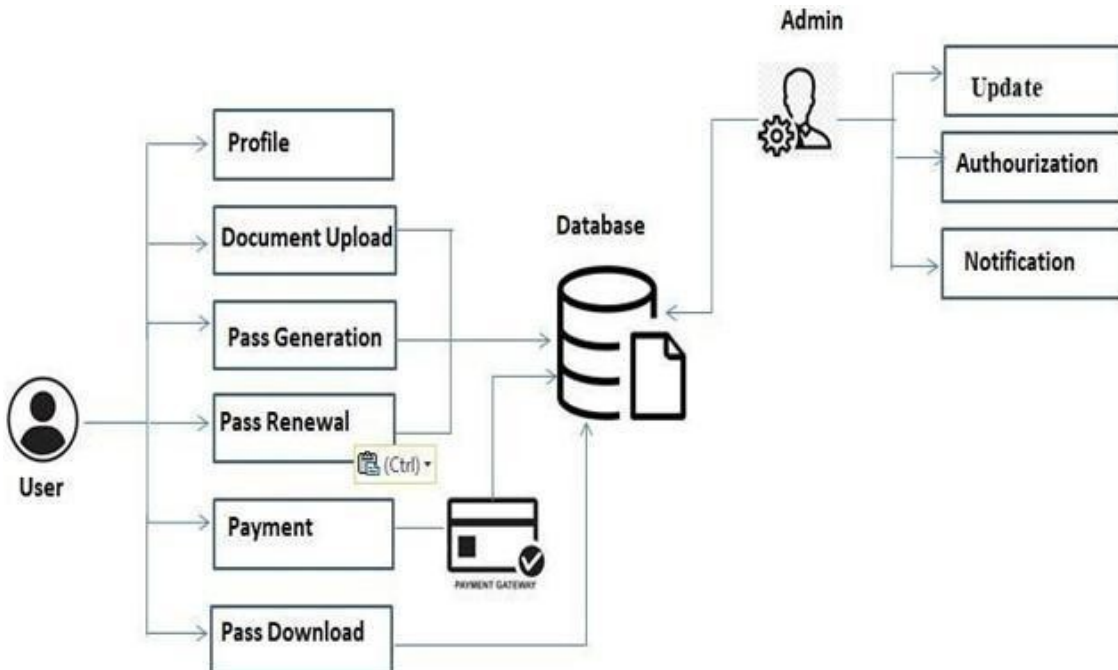


Figure no.2: System Diagram

SNAPSHOTS OF THE PROJECT

Home Page

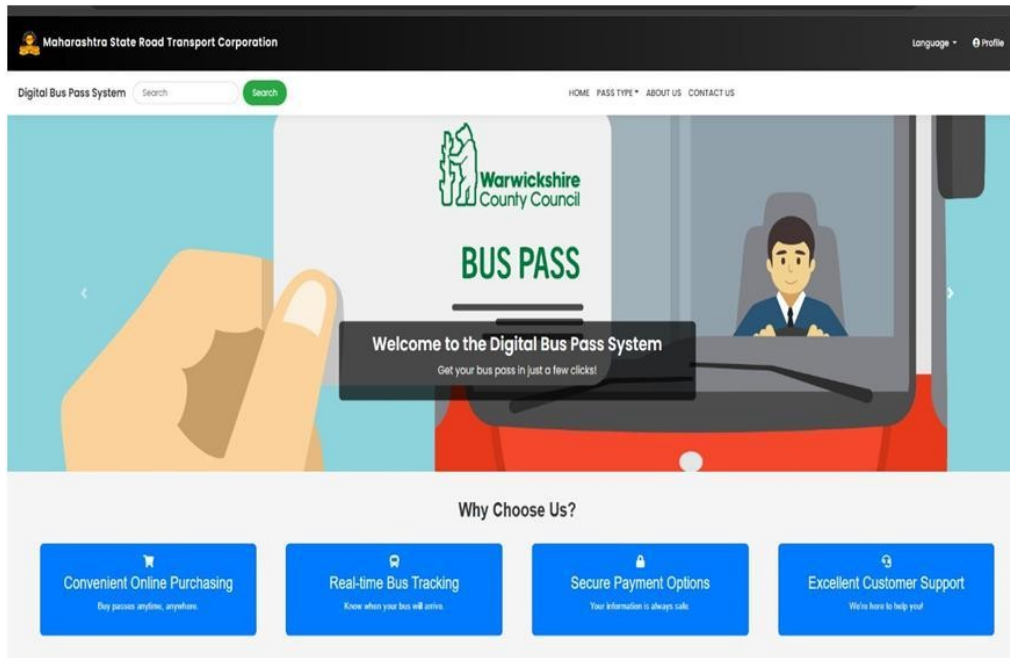


Figure no.: 3

Student Pass Form

The image shows a screenshot of the Student Bus Pass Application form. The form is titled 'Student Bus Pass Application' and is part of the Maharashtra State Road Transport Corporation system. It contains the following fields: Full Name (RUSHIKESH POTDAR), Phone Number (9156004155), Home Address (Kolhapur), Date of Birth (02-05-2006), Gender (Male), Email Address (rushpotdar05@gmail.com), College Name (Sanjay Ghodasal Institute), From (Kolhapur), and To (Sanjay Ghodasal Institute).

Figure no.: 4



Figure no.: 5

Pass Payment

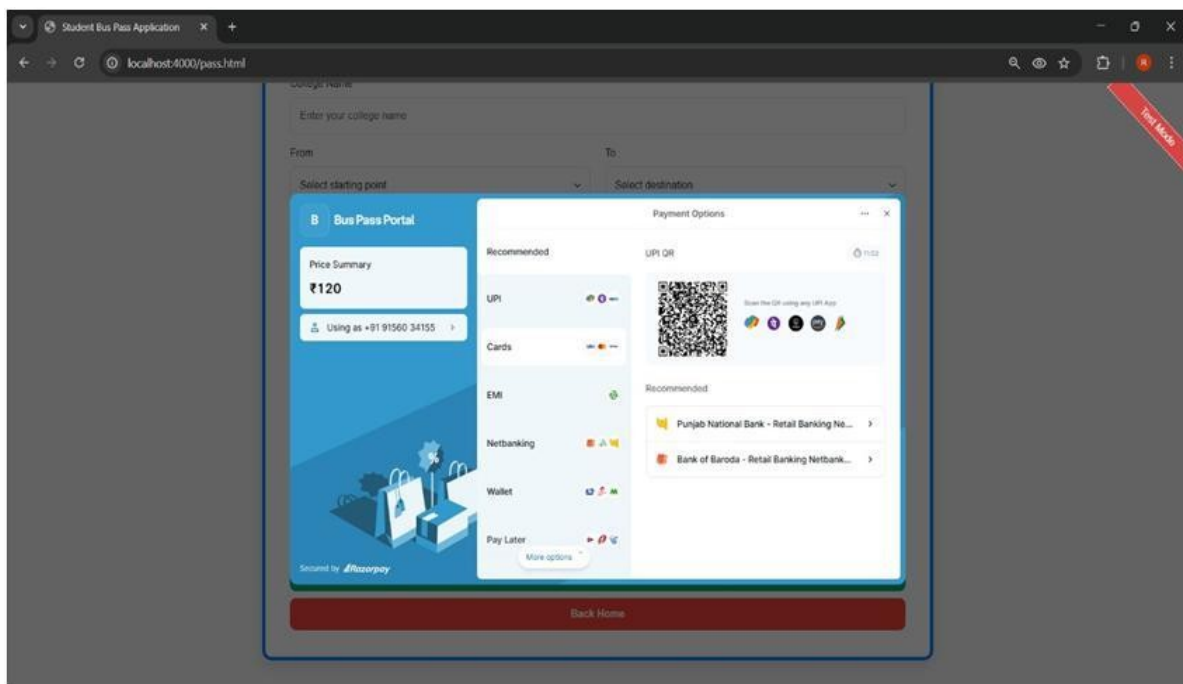


Figure no.: 6

Admin Module

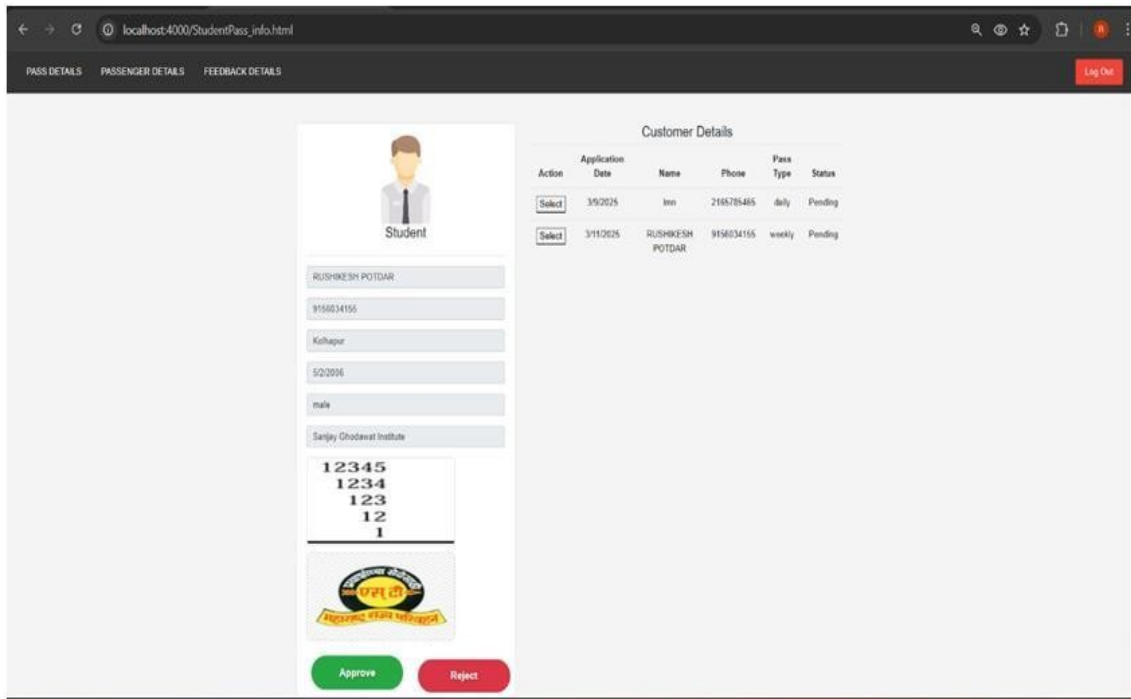


Figure no.: 7

CONCLUSION AND FUTURE ENHANCEMENT

The digital bus pass system represents a significant advancement in public transportation management, providing enhanced convenience for users, increased digital knowledge. It will also provide the notifications accordingly. By digitalizing the traditional bus pass system, this system not only saves time but also provide better understanding of required specific documents. Additionally, updates facilitate better route planning and service reliability, ultimately contributing to a more sustainable public transport ecosystem.

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