

KSRTC Card System

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Abstract: *KSRTC concession with D-Card system using the cards, one can travel in any KSRTC buses across the state during definite time by paying in advance. The card will offer unlimited travel for 12 month and can be renewed at the end of it. The prepaid card will be in the range from Rs.1000 to 5000. At the end of 12 months, travelers can change the card online or at bus station. Through using the cards, one can travel in any KSRTC buses across the state during a definite time by paying in advance. The card will offer unlimited travel for 12 month and can be renewed at the end of it. The prepaid card will be in the range from Rs.1000 to 5000. At the end of 12 months, travelers can change the card online or at bus station. Travelers don't need to carry liquid cash for taking tickets they just need to carry the d-card. This allows for hassle-free travel and provides an opportunity for students and daily passengers to save money while travelling throughout the state.*

Keywords: HTML, CSS, Javascript, KSRTC card system..

I. INTRODUCTION

The KSRTC Concession with D-Card System was devised to streamline and enhance the travel experience of passengers while promoting the use of public transportation. The project's primary objectives included eliminating the need for cash transactions, facilitating hassle-free travel, and providing cost-saving opportunities for regular travellers and students.

The D-Card system offers significant cost savings for travellers. With the option of unlimited travel for 12 months, passengers can avoid the need to purchase tickets for each journey, which can add up to substantial expenses over time. Students, daily commuters, and frequent travellers can now enjoy the convenience of unlimited travel while saving money on transportation costs.

The project also focuses on providing ease of access to the D-Card system. Travelers can purchase the D-Card at designated KSRTC bus stations, making it readily available to a wide range of individuals. Additionally, at the end of the 12-month period, travelers have the option to renew their D-Card online or at a bus station, ensuring uninterrupted and continued access to unlimited travel benefits.

There are mainly five modules:

- Admin
- ATO
- Student
- Institution
- User

In this paper, we have 5 login such as for Admin, ATO, Student, Institution and User. The admin module allows to approve or reject user, add fair point, complaint view etc. The ATO is the other module of the project. The ATO can upload card and concession, view booking details etc. The student is another module of the project. Student can login into the website and search depo details and buy concession card, online payment and renew card are the process of student module. Institution is another module in which institution can pass the student details to ATO and check the status of the student and complaint adding. User is a another module in the project. User can buy the card and renew the card and payment are process of user module. The web application 'KSRTC Card System' support the technical feasibility to great extends. That is this web application can be operated with the minimum technical support. It uses Angular as front end, MYSQL as database. And also it provides accuracy, reliability, ease of access and data security.

II. METHODOLOGY

The methodology employed for the successful implementation of the KSRTC Concession with D-Card System encompassed a systematic approach. The project began with a comprehensive planning phase where objectives were defined, stakeholders identified, and potential risks assessed. Following this, the system design and development phase involved gathering requirements, designing the technical architecture, and developing the backend card management system. Card production and distribution involved personalized D-Card printing and establishment of distribution channels. Implementation encompassed user interface development, bus system integration, and thorough testing. Rollout and training included communication strategies, passenger education, and operator training. Monitoring tools were established for performance tracking and customer support. Continuous evaluation and enhancement based on user feedback ensured system optimization. This methodology facilitated a seamless transition to the D-Card system, streamlining travel, promoting public transportation, and enhancing overall passenger experience.

III. EXISTING AND PROPOSED SYSTEMS

A) Existing Systems

The existing system of the KSRTC Concession with D-Card project involves traditional ticketing methods, where passengers need to purchase tickets for each journey individually. This system poses several challenges and inconveniences for travellers, including long queues, the need for exact change, and the reliance on liquid cash for ticket purchases. Additionally, it does not offer cost-saving options or the convenience of unlimited travel.

B) Limitations of Existing Systems

- **Ticket Purchase:** Passengers are required to wait in queues at the KSRTC bus stations to purchase tickets for their intended journey. This process can be time consuming, particularly during peak hours or busy travel seasons.
- **Cash Transactions:** Passengers need to carry sufficient cash and exact change to buy their tickets. This often leads to inconvenience when change is unavailable or when passengers need to search for the correct denominations.
- **Ticket Validity:** Tickets purchased under the existing system are generally valid for a single journey or a specific period, depending on the ticket type. Passengers need to repurchase tickets for subsequent journeys.

C) Proposed System: KSRTC card system

The proposed system, the KSRTC Concession with D-Card System, aims to provide a convenient and efficient mode of travel for passengers on KSRTC buses across the state of Kerala. The system introduces prepaid D-Cards that offer unlimited travel benefits for a specified period, eliminating the need for passengers to carry liquid cash or purchase tickets for each journey. Here are the key features and functionalities of the proposed system:

D) Advantages of KSRTC card system

The proposed system, the KSRTC Concession with D-Card System, aims to provide a convenient and efficient mode of travel for passengers on KSRTC buses across the state of Kerala. The system introduces prepaid D-Cards that offer unlimited travel benefits for a specified period, eliminating the need for passengers to carry liquid cash or purchase tickets for each journey. Here are the key features and functionalities of the proposed system:

- Smart card implementation
- Web based concession system is implemented
- Properly avoid time consuming procedure
- Anywhere accessible system
- Online payment procedure for both concessions card and D-Card system
- Proper complaint management system.

IV. BACKGROUND

Angular is a JavaScript-based open-source front-end web framework mainly maintained by Google and by a community of individuals and corporations to address many of the challenges encountered in developing single-page applications. HTML is a very easy and simple language. HTML can be easily understood and modified. It is very easy to make an effective presentation with HTML. It is a markup language, so it provides a flexible way to design web pages along with the text. CodeIgniter is an open-source software rapid development web framework, for use in building dynamic web sites with PHP. MySQL is an open source, SQL Relational Database Management System (RDBMS) that is free for many uses.

V. FUTURE ENHANCEMENT

In envisioning the future enhancement of the KSRTC Concession with D-Card System, the integration of advanced technologies emerges as a promising avenue. Leveraging the potential of Internet of Things (IoT) and data analytics, the system could evolve to offer real-time insights into bus occupancy, route optimization, and predictive maintenance. By equipping buses with IoT sensors and collecting data on passenger boarding, alighting, and journey patterns, the system could dynamically adjust bus schedules and routes to efficiently cater to demand. Additionally, predictive maintenance powered by data analytics could enable proactive identification of maintenance needs, reducing downtime and ensuring a seamless travel experience. Furthermore, embracing Artificial Intelligence (AI) could empower the D-Card system to provide personalized travel recommendations based on passenger preferences and historical travel data, enhancing user satisfaction and engagement. As the system evolves, the integration of smart city initiatives and seamless interconnectivity with other public services could transform the D-Card into a versatile tool, enabling not only transportation but also access to a range of urban amenities. This future enhancement represents a convergence of technological innovation and public service, poised to elevate the travel experience for passengers while contributing to the vision of a smart and sustainable urban landscape.

VI. RESULTS AND DISCUSSIONS

The implementation of the KSRTC Concession with D-Card System has yielded remarkable results, significantly transforming the landscape of public transportation in Kerala. The system's introduction has led to a marked increase in passenger convenience and affordability. With the elimination of cash transactions and the introduction of prepaid D-Cards, passengers have experienced a streamlined and hassle-free boarding process. The system's flexibility, offering unlimited travel within the validity period, has garnered substantial positive feedback from both regular commuters and occasional travellers. This newfound convenience has translated into tangible benefits, with a noticeable rise in ridership across KSRTC buses.

In conclusion, the KSRTC Concession with D-Card System has yielded positive and tangible outcomes, streamlining travel, enhancing affordability, and boosting ridership. As the system evolves, a continuous focus on user engagement, technological upgrades, and data-driven enhancements will be pivotal in realizing its full potential and contributing to the ongoing advancement of sustainable and efficient public transportation.

VII. SCREENSHOTS

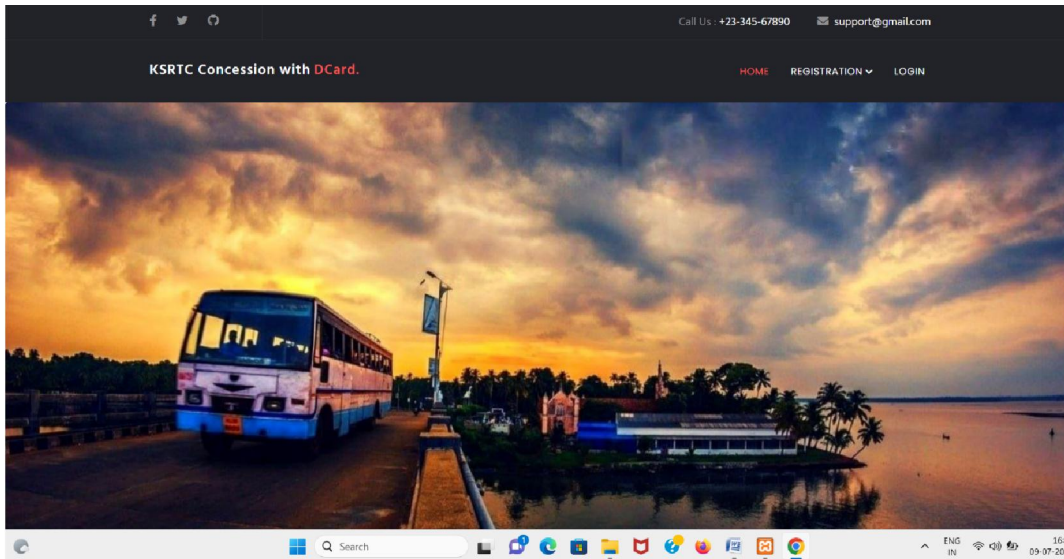


Figure 1: Home Page

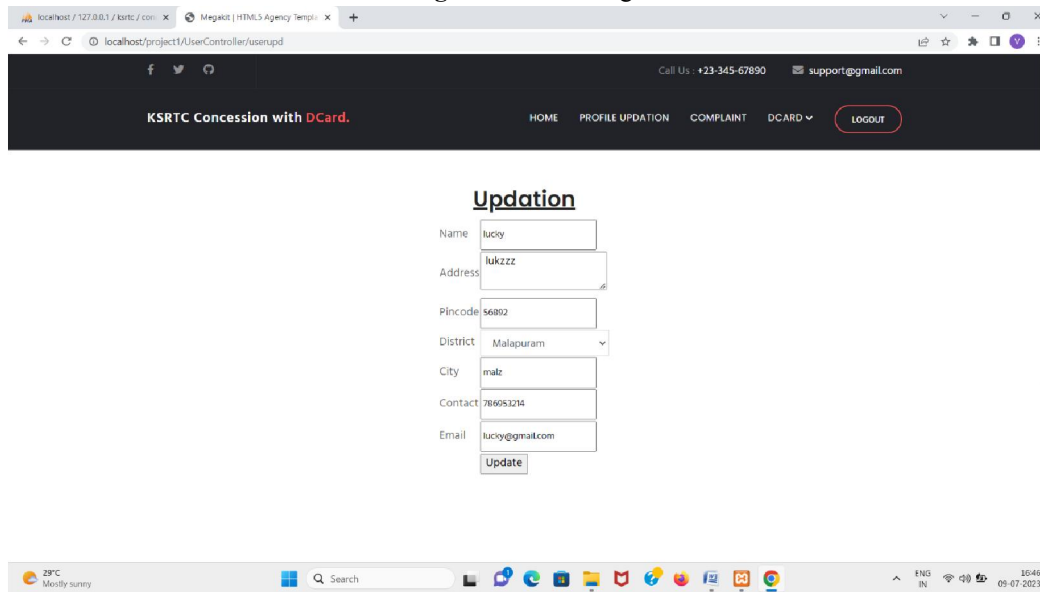


Figure 2: Registration Page

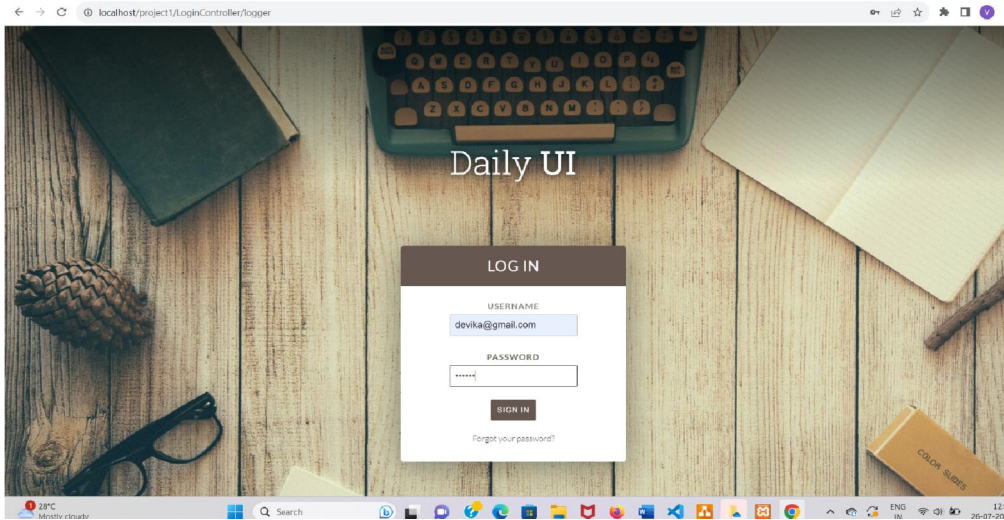


Figure 3: Login Page

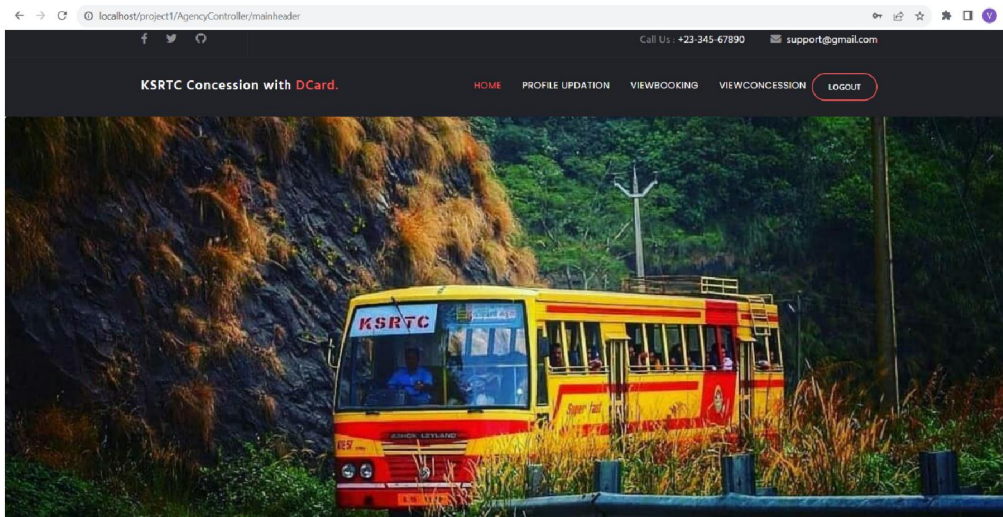


Figure 4: ATO Page

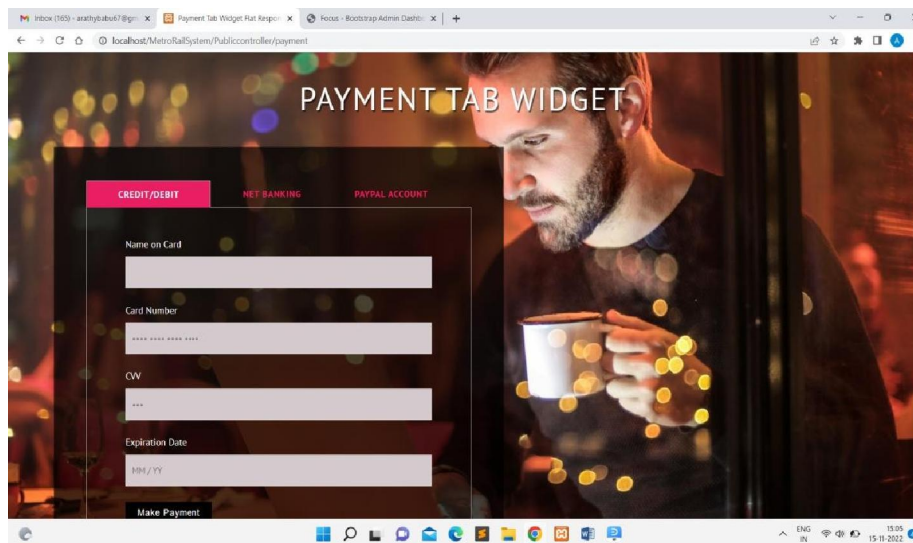


Figure 5: Payment Page

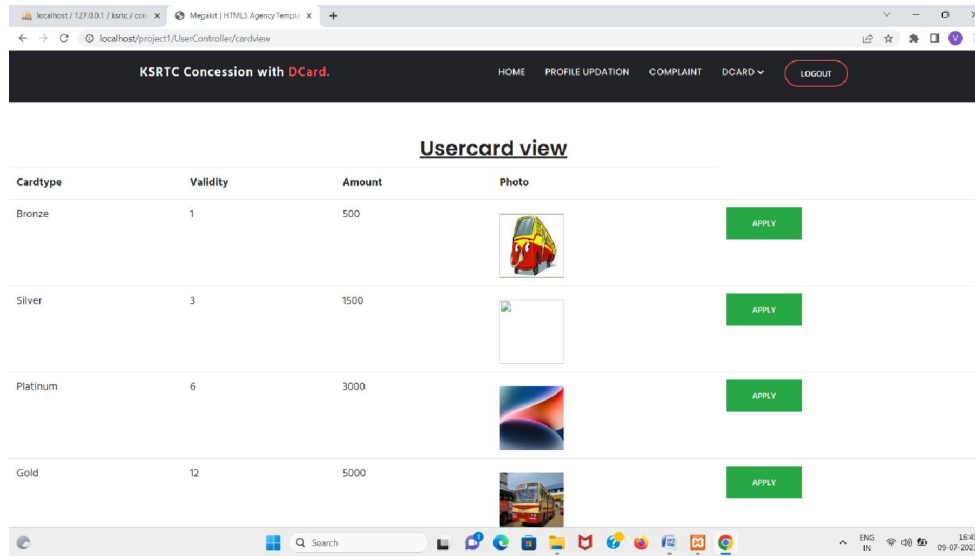


Figure 6: Card Page

VIII. CONCLUSION

The KSRTC concession system for students and daily passengers offers a cost-effective and convenient travel option for people across the state of Kerala. Through prepaid cards, passengers can enjoy unlimited travel for three months at a discounted rate, and the system offers flexibility and affordability to passengers. A literature survey can help understand the impact of such concession systems on public transport usage, travel behavior, and sustainability. Additionally, a methodology for evaluating the KSRTC concession system can involve data collection, analysis, cost-benefit analysis, user satisfaction analysis, and recommendations for improvement. The implementation of the recommended changes can improve the overall effectiveness and user satisfaction of the KSRTC concession system. The concession system promotes public transport usage, reduces travel expenses for students and daily passengers, and contributes to sustainability goals such as reducing carbon emissions and promoting sustainable mobility. Overall, the KSRTC concession system is an essential initiative by KSRTC in making public transport more accessible and affordable for everyone, promoting sustainable mobility, and reducing traffic congestion.

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