

"Admission Plus: The Flutter based student Enrolment System"

B. Venkatesh¹, R. Mohnishkumar², B. Vijayaragavan³, R. Mohamed Yousuf⁴, P.B. Venkatesh⁵

Assistant Professor, Department of Information Technology¹

Student, Information Technology, AAMEC, Thiruvavur, India^{2,3,4,5}

Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvavur, India

Abstract: Admission Plus is online student registration system project developed using Flutter framework. It is a mobile application for students and Anna University affiliated colleges that facilitates online application process. It reduces the manpower needed to facilitate an enrolment process. This mobile application can be accessed by student and all the affiliated colleges. Our application has two types of accessing modes, administrator and student. Student application management database is managed by the college administrator. It is the job of the administrator to admit and monitor the whole application process. Student's login facilitates to apply for desired colleges by setting preferences and uploading the needed documents.

Keywords: REST API, JSON, Flutter, Dart, NodeJS, ExpressJS, MongoDB.

I. INTRODUCTION

Welcome to our Admission Plus: A Student Enrolment Mobile Application! We are thrilled to introduce you to a seamless and efficient way to enroll in your desired courses, all from the convenience of your mobile device. Our application is designed to simplify the enrolment process and make it accessible to both students and colleges from anywhere, at any time. With this app, you can browse through a variety of courses, check availability, and enrol with just a few clicks. Our user-friendly interface ensures that the entire process is hassle-free and easy to navigate. Whether you are a new or returning student, the enrolment process can be overwhelming, but our app has been specifically designed to simplify it and make it accessible to everyone. We are committed to providing the best possible experience for students and college, and our mobile application is just one way we are achieving that goal.

II. FLUTTER

Google developed the open-source Flutter framework for building mobile apps. Using a single codebase, it enables developers to create high-performance, aesthetically pleasing applications for both the iOS and Android platforms. Flutter is a great option for creating mobile applications since it leverages the fast and effective Dart programming language. Flutter's "hot reload" feature, which enables developers to make changes to their code and see the effects right away, is one of its key features. As a result, the development process is considerably quicker and more effective. Additionally, Flutter includes a large selection of pre-built widgets that can be combined and customised to produce intricate user interfaces. Due to its flexibility and ease of use, Flutter has become more popular among developers. It provides a variety of features and tools, such as integrated testing tools and a wide range of APIs, that streamline the development process. The developer community for Flutter is also continuously expanding, offering a plethora of resources and assistance to those utilising the framework. Overall, Flutter is a strong and adaptable framework that works well for swiftly and effectively creating high-quality mobile applications.

III. DESIGN ARCHITECTURE

A system or application's structure, behaviour, and interactions are depicted graphically in an architecture diagram. It gives a general overview of the parts, subsystems, and interfaces that make up the system and demonstrates how they interact to produce the functionality of the system. Architecture diagrams can be either high-level, displaying the key elements and their connections, or detailed, giving more particular details about individual elements and their interactions.

Additionally, they can show how information is transferred between parts of the system, how commands are given and received, and how components are physically placed on supporting hardware. Developers, architects, managers, and end users can all benefit from understanding a system's design thanks to architecture diagrams.

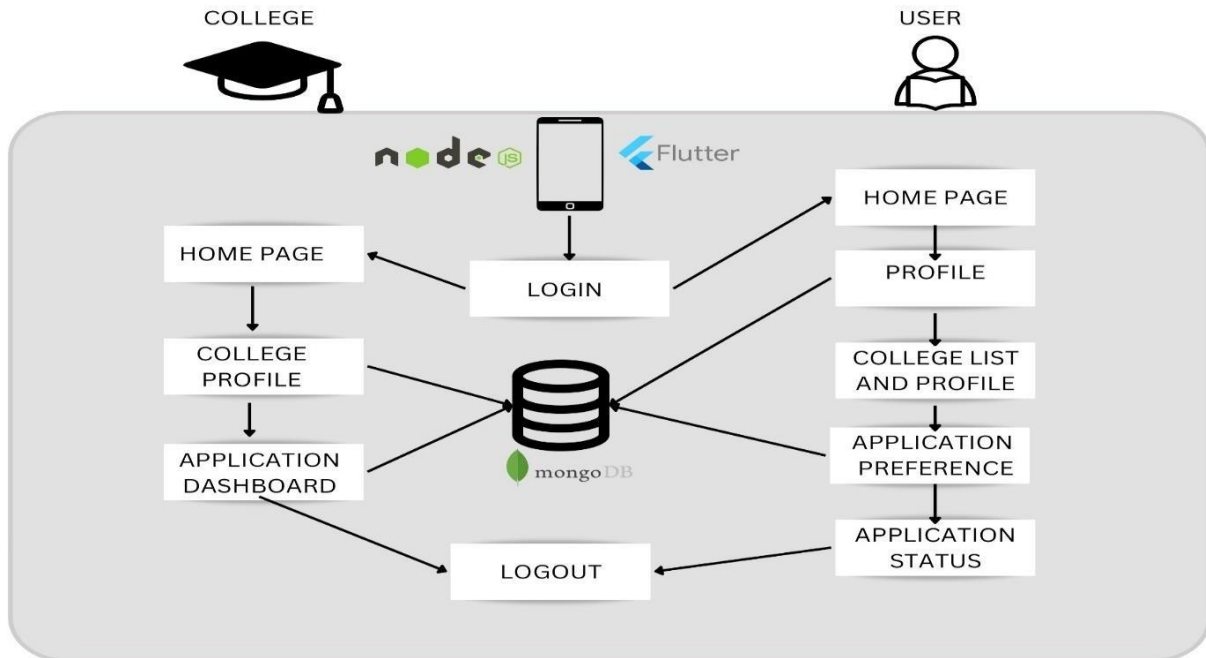


Fig:1 Architecture Diagram

IV. MODULES

Login

Login module is segregated into two, Student Login and University Login. In Student Login, the student can log in using username and the password individually. In University Login, university or college's administrator will have the access to log in to this section using username and password.

Student profile

Student Profile module consists of the personal details of the student, that is to be used for the university enrolment process like name, address, contact info, SSC certificate, HSC certificate, etc

College List

College List module consists of the list of affiliated colleges, where the students can surf and select their preferred one.

College profile

College Profile module consists of brief information about the particular college like, description, departments, faculty, area, amenities, etc.

Department Preference

College Application Preference module facilitates the user with selecting the preferred college by setting up preference order and proceeding with the application submission.

Application Status

Application Status module facilitates the user to get up-to-date with the application status after submission

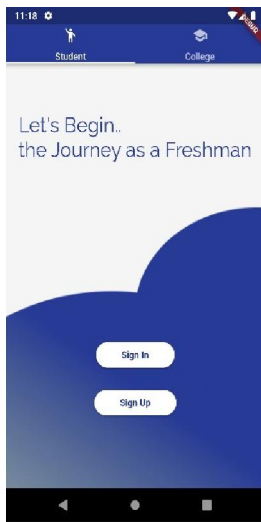


Fig:2 Initial Screen

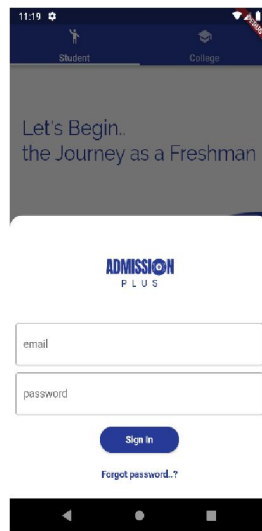


Fig:3 Login Screen

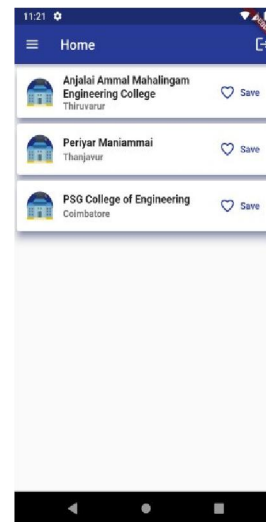


Fig:4 College List Screen

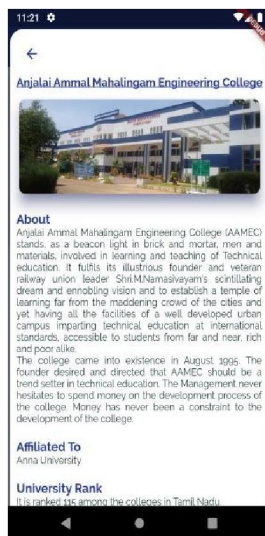


Fig:5 College Profile



Fig:6 Apply Screen

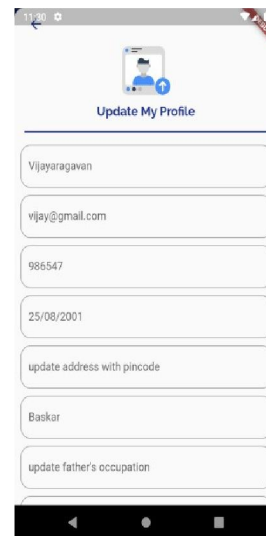


Fig:7 Update Profile Screen

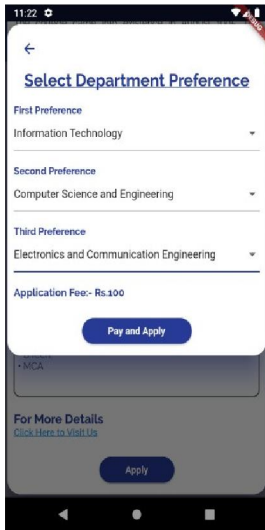


Fig:8 Department Preference



Fig:9 Student Profile Screen

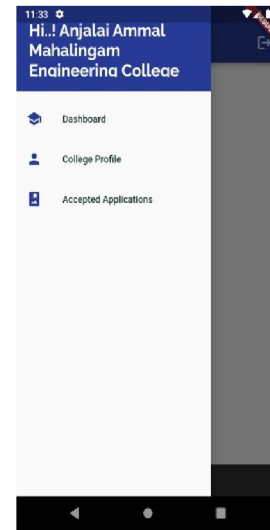


Fig:10 College Menu Bar Screen

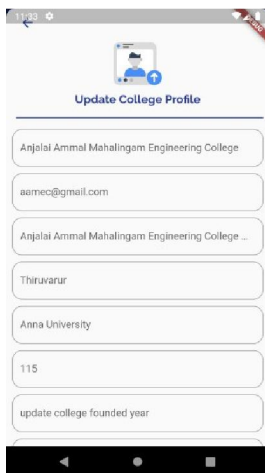


Fig:11 Update College Profile

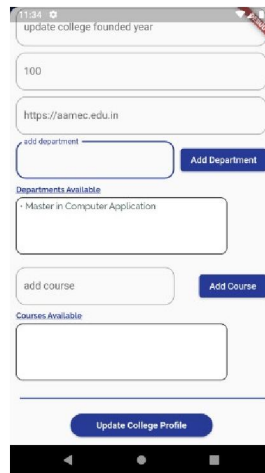


Fig:12 Add Courses Screen

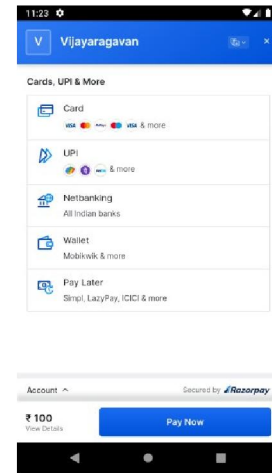


Fig:13 Payment Screen

V. CONCLUSION

In conclusion, Admission Plus is a robust and user-friendly mobile application developed using Flutter, which provides a comprehensive solution for student enrolment processes. The app's intuitive interface and feature-rich functionalities, such as online registration, payment gateway integration, and document management system, streamline the enrolment process for students and administrative staff alike. The use of Flutter framework ensures that the app is highly performant and scalable, making it an ideal solution for educational institutions of any size. Overall, Admission Plus is a valuable tool for any institution looking to simplify and modernize their student enrolment process, and its successful development using Flutter demonstrates the versatility and capabilities of this cutting-edge framework

VI. FUTURE ENHANCEMENT

Chatbot Assistance: Integrating a chatbot to the app to handle inquiries and frequently asked questions from students would be a great enhancement. This would reduce the workload on human support staff and enable students to receive quick and accurate responses to their questions. **Integration with Learning Management Systems:** Integrating the app with popular Learning Management Systems like Blackboard, Canvas, or Moodle would be a valuable enhancement, allowing students to access course materials and assignments directly from the app. **Improved User Interface:** Improving the user

interface of the app would make it more user-friendly and easier to navigate. Adding animations, transitions, and visual effects would make the app more engaging and pleasant to use. QR Code Scanning: Adding the ability to scan QR codes to the app would enable students to quickly access important information such as course schedules, grades, and other important details. Augmented Reality: Incorporating augmented reality (AR) technology into the app would be an innovative way to engage students in the learning process. This would allow students to visualize complex concepts and gain a better understanding of the subject matter.

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BIOGRAPHY



Mr .B. Venkatesh M.E. Department of Information Technology (IT) with 15 years of experience at Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvarur – 614 413.



Mr. R. Mohnishkumar B. Tech – Information Technology (IT) Final Year in Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvarur – 614 413.



Mr. B. Vijayaragavan B. Tech – Information Technology (IT) Final Year in Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvarur – 614 413.



Mr. R. Mohamed Yousuf B. Tech – Information Technology (IT) Final Year in Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvarur – 614 413.



Mr. P. B. Venkatesh B. Tech – Information Technology (IT) Final Year in Anjalai Ammal Mahalingam Engineering College, Kovilvendi, Thiruvavur – 614 413.