Fluttering into Future : Admission App for D. Y. Patil Polytechnic, Kolhapur

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Abstract –

This paper explains how we made a new mobile app for DYP Polytechnic to make the admission process smoother. We talk about how we made the app, how we'll collect data, and what we think the app will do. We also talk about the good things the app could bring and the problems we might face. We'll suggest ways to make the app even better in the future. Remember, this report only focuses on the admission process at DYP Polytechnic. We hope this app will help students, parents and make things easier for the college.

*Key Words***:** Flutter, Firebase, iOS, Android, Admission App

1.INTRODUCTION

In the modern digital environment, mobile applications have become essential tools for improving operational workflows in various sectors, including education. This introduction provides an explanation of the significant change brought about by mobile technology and highlights the importance of creating a customised mobile application to simplify the admission process at DYP Polytechnic. The narrative highlights the inherent inefficiencies of traditional admission management methods and clearly states the main objectives of the proposed application. In addition, this section clearly defines the main goals, outlines the extent, and emphasises the importance of the study, highlighting its ability to improve administrative efficiency and enhance user experiences in the academic system.

2. Methodology

The methodology for developing the Flutter-based mobile application for DYP Polytechnic's admission process involved a systematic and comprehensive approach aimed at achieving the project objectives efficiently and effectively. The development process encompassed various stages, including planning, design, implementation, testing, and deployment, each of which played a crucial role in ensuring the success and functionality of the application.

1. Planning:

The planning phase initiated with a thorough analysis of the goals and requirements of the mobile application. This involved extensive consultations with stakeholders, including faculty members, administrative staff, and prospective students, to gather diverse perspectives and insights. Stakeholder involvement was crucial for identifying the specific needs and preferences of different user groups within the college community.

During the planning phase, the project team conducted a detailed assessment of the existing admission process and identified areas that could be improved or optimized through the implementation of the mobile application. This included identifying pain points, inefficiencies, and bottlenecks in the current process, as well as exploring opportunities for enhancing user experience and administrative efficiency.

2. Design:

The design phase of the methodology focused on creating a user-centric and intuitive interface for the mobile application. This involved conducting user research activities, such as surveys, interviews, and usability testing, to gain insights into user behaviors, preferences, and expectations.

Based on the findings from user research, the project team created personas and user journeys to represent typical users and their interactions with the application. This helped in empathizing with the needs and preferences of different user groups and designing solutions that addressed their specific requirements.

Visual design and branding were also important aspects of the design phase, helping to establish a cohesive and visually appealing look and feel for the application. This involved creating a comprehensive set of branding guidelines that encapsulated the college's identity, values, and visual identity, and applying these guidelines to the design elements of the application.

3. Development:

The development phase involved implementing the design specifications and building the functionality of the mobile application. This included frontend development using the Flutter framework and backend integration using the Firebase platform.

Flutter was chosen as the frontend framework for its ability to create natively compiled applications for mobile, web, and desktop platforms from a single codebase. It provided a rich set of pre-designed widgets that made it easy to create beautiful, fast, and responsive user interfaces.
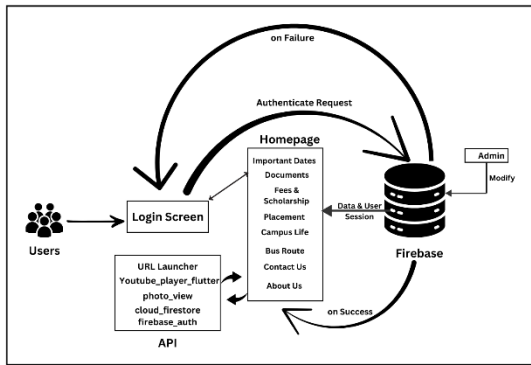
Fig 1. Application Architecture

During the development phase, the project team followed best practices for coding, documentation, and version control to ensure the quality and maintainability of the codebase. Regular testing and debugging were conducted to identify and address any issues or bugs in the application.

4. Testing:

The testing phase involved conducting various types of testing to validate the functionality, performance, and usability of the mobile application. This included functional testing to ensure that all features and functionalities were working as intended, compatibility testing to verify that the application was compatible with different devices and operating systems, and usability testing to assess the user experience and identify any usability issues or areas for improvement.

In addition to automated testing, the project team also conducted manual testing and user acceptance testing to gather feedback from stakeholders and end-users. This helped to identify any remaining issues or bugs in the application and ensure that it met the expectations and requirements of its intended users.

Results:
Anticipated data collection methods include feedback forms, user interviews, and app store analytics. Projected metrics include expected downloads, active users, session duration, user satisfaction levels, and administrative efficiency gains. Expected analysis of admission trends covers application submission rates, document completion rates, and admission conversion rates.
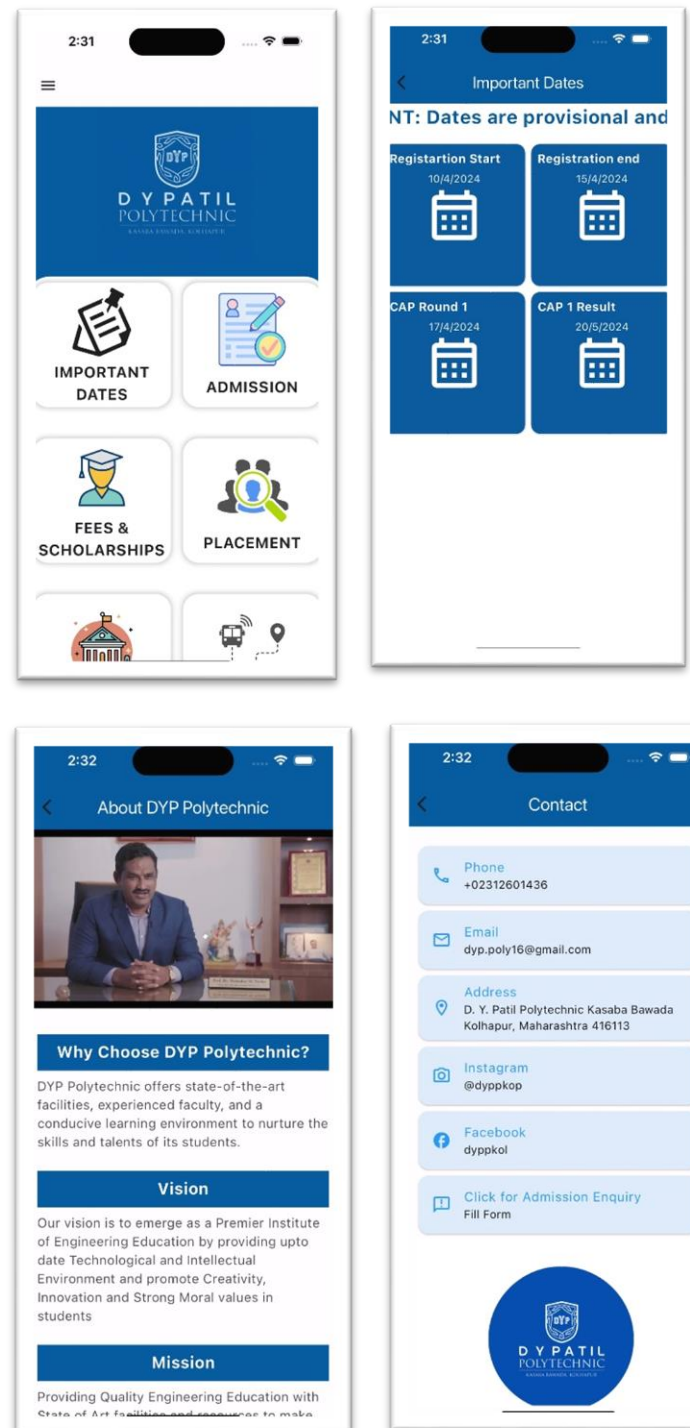

Fig 3. Data Flow Diagram

Fig 2. Outputs

CONCLUSIONS:

The prospective assessment of the Flutter-based mobile application for DYP Polytechnic's admission process reveals promising insights into its potential impact. Anticipated metrics suggest significant user interest, positive feedback, gains in administrative efficiency, and positive outcomes in admission metrics. Further monitoring and refinement post-launch will be crucial to validate these projections and ensure continued effectiveness in meeting user needs and institutional goals.
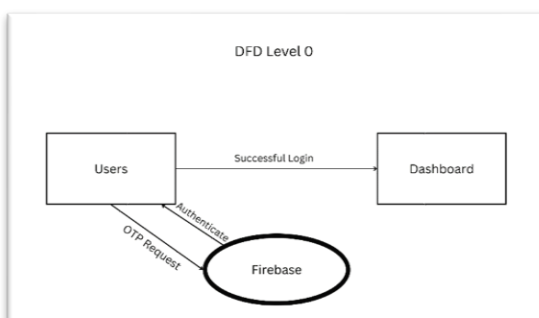
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