APPLYGO: Flutterflow Creation

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Abstract

ApplyGo is a mobile application designed to assist students in identifying, exploring, and estimating the total cost of studying at international universities. Aimed primarily at Indian students, ApplyGo provides a centralized platform where users can browse universities, view details such as tuition fees, accommodation and food costs, explore available courses, and calculate their total yearly expenses in Indian Rupees (INR). The application simplifies what is otherwise a time-consuming and fragmented research process involving multiple websites and agencies. ApplyGo is built using FlutterFlow, a visual development platform for building Flutter apps, and leverages Firebase as the backend for both authentication and database services. Firebase Firestore serves as the primary data storage solution, enabling real-time retrieval of university data stored in structured documents. Firebase Authentication secures user login and session management. The app features a dynamic UI that connects directly to Firestore via backend queries, allowing users to interact with live data and receive instant calculations.

Keywords: BaaS, machine learning DSS, AI, INR,MVPs.

1. INTRODUCTION

In today's globalized world, studying abroad has become a major aspiration for Indian students[1]. How- ever, the process of identifying suitable universities, comparing courses, and estimating total expenses is of- ten fragmented and time-consuming. Students must browse multiple websites to collect information about tuition fees, accommodation costs, food expenses, and other living costs. This scattered approach often leads to confusion, miscalculations, and poor financial planning.

To address this challenge, **ApplyGo** is devel- oped as a centralized mobile application that simplifies international education planning[3][5]. Built using Flut-terFlow and integrated with Firebase services, ApplyGo allows students to browse universities, view course de-tails, and calculate their total annual study expenses in Indian Rupees (INR). The application ensures real-time data retrieval, secure authentication, and an interactive expense calculator, making the study-abroad planning process more structured and efficient[2][4].

2. OBJECTIVE

The objective of this project is to design and de- velop a user-friendly mobile application that assists stu- dents in exploring international universities and plan- ning their higher education effectively[6][7]. The appli- cation aims to provide accurate and structured infor- mation about tuition fees, accommodation costs, and food expenses, enabling students to clearly understand the financial requirements of studying abroad.

It calculates the total yearly expense in Indian Rupees (INR) to simplify financial planning and deci- sion-making. Additionally, the system centralizes uni- versity details and financial data into a single platform, reducing the need to browse multiple sources. By mini- mizing manual calculations, the application helps pre-

vent financial estimation errors. Furthermore, it ensures secure user login and real-time data updates through Firebase integration, enhancing both reliability and user experience.

3. LITERATURE REVIEW

Recent studies show that [1] mobile applications significantly enhance student decision-making processes in higher education planning. Research indicates that decision support systems (DSS) integrated with mobile platforms improve clarity and reduce complexity in academic planning[2].Educational portals currently provide university listings but lack integrated financial planning tools, and many students rely on spreadsheets and manual cost estimation methods, which are prone to errors [1].Backend-as-a-Service (BaaS) platforms like Firebase have been widely adopted for scalable and real-time application development, with research supporting Firebase for its real-time synchronization, authentication services, and structured NoSQL database system[1].Similarly, low-code platforms such as Flutter-Flow are gaining popularity in educational application development due to rapid prototyping, cross-platform deployment, and backend integration capabilities[3]. Despite these advancements, the literature highlights the absence of an integrated mobile solution that combines university exploration, cost estimation, real-time database connectivity, and secure authentication within a single platform [4, 5, 6, 7].Overall, the literature concludes that there is a strong need for a unified application that streamlines higher education planning, and ApplyGo addresses this gap by combining these features into a single intelligent mobile application.

4. RISK REDUCTION AND DECISION SUPPORT STRATEGY

ApplyGo incorporates a structured risk reduc- tion and decision support strategy to help students make informed financial and academic decisions while plan- ning to study abroad[3][4]. One of the primary risks faced by students is inaccurate financial estimation due to scattered information sources and manual calculations. To reduce this risk, the application centralizes university data, including tuition fees, accommodation costs, and food expenses, into a single reliable platform[5].By providing real-time data retrieval from Firebase Fire-

store, the system ensures that users access updated and consistent information[2].

The built-in expense calculator further minimiz- es financial miscalculations by automatically computing total yearly expenses in INR, thereby reducing human error[4]. Secure authentication through Firebase Authentication lowers the risk of unauthorized access and protects user data[7]. Additionally, the structured presentation of university details improves clarity, enabling students to compare institutions efficiently and make well-informed decisions. By integrating centralized data management, automated cost calculation, real-time synchronization, and secure access control, ApplyGo functions as a reliable decision support system that reduces uncertainty, enhances transparency, and improves confidence in higher education planning.

5. SYSTEM ARCHITECTURE AND COMPONENTS

To guarantee accuracy, scalability, and efficien- cy, the suggested system architecture for ApplyGo fol- lows a modular and structured design in which the user interacts with a FlutterFlow-based mobile interface to explore international universities and view financial details[6].

The authentication component, powered by Firebase Authentication, securely verifies user credentials and manages sessions, ensuring protected access to the system. Once authenticated, the application connects to Firebase Firestore, which serves as the primary NoSQL database storing structured university data such as tuition fees, accommodation costs, food expenses, and course information. Firestore enables real-time data retrieval and synchronization, allowing users to access updated information instantly. The business logic and calculation module processes the retrieved data to compute the total yearly expense in Indian Rupees (INR) by combining all relevant cost components. User data and calculation results are securely maintained within Firebase's cloud infrastructure, ensuring reliability and scalability. Finally, the output module clearly presents university information and expense results through a dynamic and responsive interface, creating a centralized, automated, and dependable framework for higher education planning and financial decision-making.

6.   METHODOLOGIES

6.1 Requirement Analysis

The development process begins with identify- ing the needs of students planning to study abroad. Key requirements such as university exploration, tuition fee comparison, accommodation and food cost estimation, and total yearly expense calculation in INR are analyzed. Functional and non-functional requirements are defined to ensure usability, security, scalability, and real-time data access.

6.2 System Design

The system architecture is designed using Flut- terFlow for front-end development and Firebase for backend services. Database structure is planned in Fire- base Firestore with organized collections such as users, universities, courses, and expense details. The user inter- face is designed to provide smooth navigation and clear presentation of financial information.

6.3 Database Development

Firebase firestore is configured as the primary NoSQL database. Structured documents are created to store university information, including tuition fees, ac- commodation costs, food expenses, and other relevant data. Security rules are implemented to protect stored information and ensure controlled access.

6.4 Authentication Integration

Firebase Authentication is integrated to manage secure user registration and login processes. This mod- ule ensures user identity verification, session manage- ment, and protection against unauthorized access.

6.5 Business Logic and Expense Calculation

The application retrieves financial data from Firestore and processes it using a calculation module. Tuition fees, accommodation costs, food expenses, and

other charges are combined to compute the total yearly expense, which is displayed in Indian Rupees (INR). This automation reduces manual errors and improves financial planning accuracy.

6.6 Application Development and Integration

The front-end interface developed in Flutter- Flow is connected to Firebase services through backend queries. Real-time synchronization ensures that updated university data is instantly reflected within the applica- tion. CRUD operations are implemented for efficient data management.

6.7 Testing and Validation

Comprehensive testing is conducted to verify functionality, database connectivity, authentication secu- rity, real-time synchronization, and calculation accuracy. Performance testing ensures smooth operation across supported devices, providing a reliable and efficient mobile application for international education planning.

7.   IMPLEMENTATION

ApplyGo is developed using FlutterFlow for the frontend user interface and Firebase for backend ser- vices, with Firebase Firestore as the real-time database and Firebase Authentication for secure user manage- ment. The implementation begins with a splash screen that displays the application branding, followed by login and signup functionality integrated through Firebase Authentication. After successful login, users are directed to the Colleges page, where university data is dynami- cally fetched from Firestore. Selecting a college opens the College Details page, which presents structured in- formation such as tuition fees, accommodation, and food expenses. The Expense Calculator module then com- putes the total yearly cost automatically, and real-time synchronization ensures that updated data is instantly reflected across all user devices, providing a smooth and reliable experience.

7.1 Splash Screen

When the application is launched, the Splash Screen displays the ApplyGo logo and branding. This screen initializes Firebase services and prepares the app environment before redirecting users to the login page.

7.2 Login Module

The Login screen allows users to enter their email and password. Firebase Authentication verifies the credentials securely. Upon successful login, users are redirected to the Home page. If authentication fails, appropriate error messages are displayed.

7.3 Home Page

The Home page acts as the central navigation hub. It provides options such as About, Contact, Univer- sity Listings, and Expense Calculator. Users can navi- gate to different modules through clearly structured but- tons.

7.4 University Listings Page

This page fetches university data dynamically from Firebase Firestore. The data includes university names and brief details. The list is displayed in a struc- tured format, allowing users to select a university of in- terest. Real-time synchronization ensures updated in- formation is always displayed.

7.5 University Details Page

When a university is selected, detailed struc- tured information is displayed, including tuition fees and other relevant cost components. The data is retrieved directly from Firestore documents and presented clearly to the user.

7.6 Expense Calculator Module

The Expense Calculator allows users to input or select tuition and living expenses. The system computes the total yearly expense automatically and displays the result. This reduces manual calculation errors and sim- plifies financial planning.

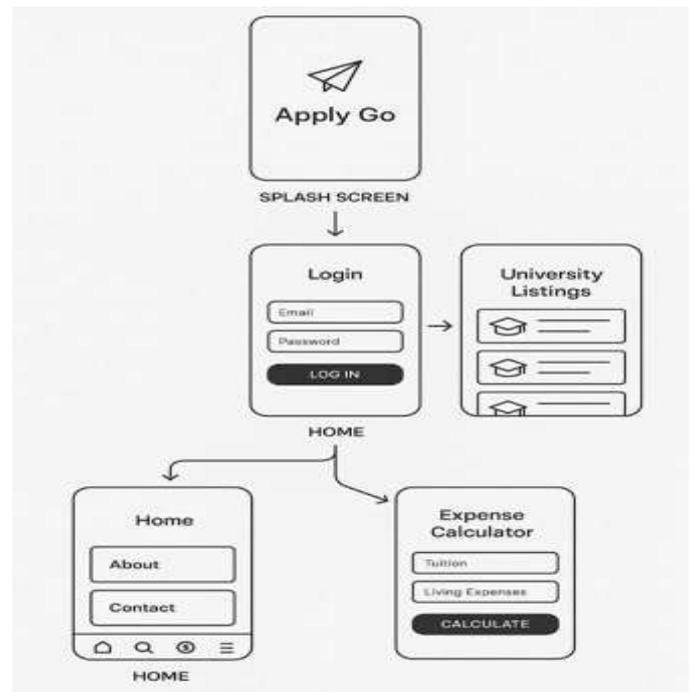### 7.7 Real-Time Data Synchronization

All modules are connected to Firebase Firestore, ensuring that any updates in university data are instantly reflected across devices. This guarantees accuracy,
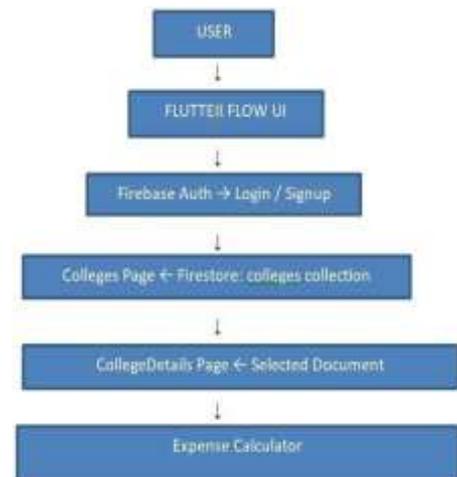
scalability, and a seamless user experience throughout the application.

8. BLOCK DIAGRAM

9. RESULT AND FEATURES

The suggested ApplyGo system provides an in- telligent and centralized solution for international uni- versity exploration and expense estimation. Through an easy-to-use mobile interface, users can securely log in and access structured university information stored in a real-time cloud database. The system dynamically re-

trieves tuition fees, accommodation costs, food expenses, and course details from Firebase Firestore, ensuring updated and reliable data.

The application automatically processes and combines different financial components to calculate the total yearly study expense in Indian Rupees (INR). Se- cure authentication is supported through Firebase Authentication, ensuring protected access and personalized user sessions. Real-time synchronization enables instant updates across devices, improving consistency and reliability.

The implemented system successfully simplifies financial planning, reduces manual calculation errors, and minimizes the complexity of searching across multiple platforms. Compared to traditional manual research methods, ApplyGo enhances accuracy, efficiency, and user convenience. Overall, the results and features demonstrate that ApplyGo is a practical, scalable, and effective decision-support mobile application for students planning to study abroad.

10. CONCLUSION

The "Apply Go" app serves as a user-friendly and reliable platform for students aspiring to study abroad. It brings together essential features such as uni- versity exploration, course selection, tuition and living expense calculation, document uploads, and application tracking—making the entire process more organized and efficient. Developed using FlutterFlow and integrated with Firebase services, the app ensures secure data handling, real-time synchronization, and cross-platform accessibility. With modules like collaboration and communication, document management, and notification systems, "Apply Go" empowers students to manage their study-abroad journey from a single, centralized application. The app successfully meets its objective of simplifying a complex process while maintaining a clean and interactive user interface.

11. USES

The ApplyGo project is designed to help stu- dents who are planning to study abroad by providing complete and organized information about universities, courses, and overall expenses in one platform. The app

allows users to view different universities, explore the

courses they offer, and calculate the total estimated yearly cost including tuition fees, accommodation, and food expenses. This helps students and parents financially plan before applying. By integrating Firebase for data storage and user authentication, the app ensures secure login and real-time data management. Overall, Apply Go simplifies the decision-making process and reduces confusion by giving students a clear financial overview before pursuing higher education abroad.

12. ACKNOWLEDGEMENT

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