



## College Counsellor Application

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### ABSTRACT

The goal of the College Counsellor Application is to address the rising issues with mental health that young people are facing, especially as they move from high school to college. The app offers individualized mental health support, counselling, and access to a carefully curated collection of mental health materials. It is developed cross-platform using Flutter. The present state of mobile counselling apps, the benefits of communication, and Flutter's role in providing a scalable solution to student mental health issues are all covered in this review. Adolescents frequently deal with serious psychological and personal issues, such as stress, anxiety, and depression, which are made worse by social dynamics and academic demands. Because of factors including high counsellor-to-student ratios, geographic limitations, and the stigma attached to requesting help, traditional counselling services are frequently insufficient. This software seeks to close the gap in mental health services by providing consistent, dependable help that is available whenever and wherever, supporting young people's academic achievement and general well-being. This app aims to bridge the gap in mental health services, offering continuous and reliable support accessible anytime and anywhere, thereby promoting the overall well-being and academic success of young people.

**Keywords:** Flutter, Student Mental Health, Healthcare, Firebase.

### 1. Introduction

Many psychological and emotional issues confront today's adolescents. Academic demands, social pressures, and the transfer from high school to college can sometimes make these problems worse. Too many young people are left without the care they need because typical counselling services are insufficient in many cases. This gap is intended to be filled by the College Counsellor Application, which provides students looking for individualized mental health support with a scalable and easily navigable. Stress, anxiety, sadness, and identity issues are just a few of the psychological and personal issues that many young people contend with during this period. These challenges are sometimes exacerbated by social dynamics, academic expectations, and the transition from high school to college. Despite the prevalence of these issues, teens frequently face barriers to receiving mental health support due to a variety of factors, such as high counsellor-to-student ratios, geographic restrictions, and the shame associated with seeking help. With this smartphone application, teens will have access to a scalable, easily navigable, and user-friendly platform for individualized mental health coaching. Features of the app will include counsellor chat, profile management, and a home screen with a carefully chosen collection of information for mental wellness. Through utilizing contemporary technology.

By offering ongoing and comprehensive mental health services, the app aims to close the gap in the field. Trustworthy assistance available anywhere, at any time.

### 2. Literature Review

A major problem for students is managing their time well. Research suggests that many students struggle with time management in the absence of proper resources or assistance, which can result in increased procrastination, heavier workloads, missed deadlines, and worse academic results. Although there are mobile time management apps available, they frequently have high learning curves and require substantial time commitments in order to be useful [1].

The world of mobile app development presents developers with a wide range of tools and techniques. They can select frameworks that allow cross-platform capabilities or programming languages for native platforms. As case studies, Jetpack Compose and Flutter highlight the advantages and disadvantages of each in developing scalable apps. Google offers a state-of-the-art framework for Android developers called Jetpack Compose. By leveraging Kotlin's features and eliminating the need for XML layout files, native user interfaces (UIs) can be created using a declarative approach. Flutter, another cross-platform framework by Google, uses the Dart programming language to build desktop, web, and mobile apps from one codebase, allowing for native compilation on all platforms [2].

As academic and administrative tasks in educational institutions grow more complicated, there is a need for a streamlined and efficient workflow management system. This project focuses on developing a modern Workflow Management System (WMS) specifically created for the Department of

Mathematical and Computer Sciences. The system is constructed using Flutter, a well-known cross-platform framework, and Firebase, a cloud-based backend service that offers scalability [3].

The mobile application and its functionality are developed using the Visual Studio Code with Flutter plugin. Firebase serves as the application's backend functionality and is used to obtain the database needed to store all of the data. The completed system was tested in accordance with its functionality, which included a list of all the functions that were available. In order to generate customized recommendations, the system takes into account the academic standing and educational background of each student [4].

### 3. Methodology

#### 3.1 Flutter:

Google developed the free Flutter UI framework, which enables programmers to construct desktop, web, and mobile apps using a single piece of code. With its many built-in widgets and Dart programming language, it makes it easy to construct visually appealing and responsive designs. One of its primary functions is "hot reload," which enables developers to view modifications immediately without having to restart the application. This makes Flutter great for creating apps that work well on both Android and iOS, offering a seamless user experience across different platforms.

#### 3.2 Firebase Authentication:

For implementing user authentication in this project, Firebase Authentication is a popular choice, as it integrates seamlessly with Flutter. Google offers a backend service called Firebase Authentication that supports a number of authentication methods, such as phone numbers, email addresses, and social media logins like Google, Facebook, and Apple. It simplifies the process of managing user accounts, handling tasks like password resets, and secure token-based authentication. By leveraging Firebase's pre-built SDKs, developers can easily implement secure login and registration processes, synchronize user data, and ensure that only authorized users have access to the app's core features. Combining Flutter's versatile UI capabilities with Firebase's reliable backend authentication makes this project robust, user-friendly, and secure.

#### 3.3 Dart:

Dart is a programming language developed by Google, designed for building fast and scalable applications across various platforms like mobile, web, desktop, and server. It is the foundational language for the Flutter framework, which means that understanding Dart is essential for Flutter development. With a syntax related to other well-known languages like JavaScript, Dart is an object-oriented, class-based language that is quite simple for developers to learn if they have prior expertise with other C-style languages.

#### 3.4 System Design flow diagram:

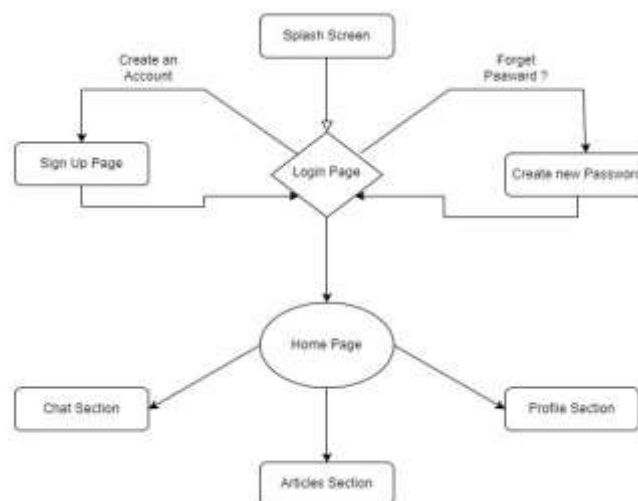


Fig.1.System Design Flow Diagram

The flowchart illustrates the structure and navigation flow for an application, detailing how users interact with different parts of the interface. It begins with the Splash Screen, which is the initial screen displayed when the app is launched, showcasing the app's branding before transitioning to the login process. The Login Page serves as the entry point for users to access their accounts by entering their credentials. From this page, users have the option to either create a new account through the Sign-Up Page where they can register by providing necessary information like email and password or reset a forgotten password through the Create New Password page, which guides them through the recovery process. The Chat Section enables users to

communicate with others within the app, offering features like direct messaging or group chats. The Profile Section allows users to view and edit their personal information and manage account settings. Lastly, the Articles Section offers content such as news articles, blog posts, or other informational materials for users to read and engage with. This structured flow ensures a smooth user experience, guiding them seamlessly from account setup to accessing the app's core functionalities.

### 3.5 UI/UX:

UI/UX design using Figma is a popular approach for creating interactive, user-friendly interfaces and seamless user experiences. Figma is a web-based design tool known for its collaborative features, making it ideal for designing user interfaces (UI) and crafting user experiences (UX) for mobile apps, websites, and other digital platforms. It allows designers to create high-fidelity designs, wireframes, prototypes, and design systems all in one place, streamlining the design process.

Figma's Features for UI/UX Design include a vector-based design system, allowing designers to create scalable graphics and responsive layouts. Its components system enables the reuse of elements like buttons, icons, and other UI components, ensuring design consistency across the entire project. Figma's auto-layout feature allows designers to build adaptive layouts that adjust automatically based on the screen size, which is crucial for designing responsive interfaces. Additionally, its prototyping capabilities allow designers to create interactive prototypes with animated transitions, simulating the actual user flow and experience within an app or website.

Figma is well-known for its real-time collaboration, enabling designers, developers, and stakeholders to work together smoothly. Team members can leave comments directly on design files, making it easier to collect feedback and quickly refine designs. This feature makes Figma especially useful for remote teams or projects that need frequent communication and updates.

#### a. Splash Screen:

- This is the initial screen that users see upon opening the app. It usually displays the app's logo or branding and serves as a transition point to the login page.



Fig.2. Splash Screen

#### b. Login Page:

- This page prompts users to enter their credentials (username and password) to access their accounts. It serves as the gateway to the app's main features. It offers links to create a new account or recover a forgotten password.



Fig.3.Login Page

#### c. Sign Up Page:

- New users can create an account by entering essential information such as their email, password, and other required details. This process allows them to register and gain access to the system. It is accessible from the login page when users choose to create a new account.


 A screenshot of a sign-up page with a light blue background. At the top center is a circular icon containing a person silhouette. Below it are several input fields: 'Full Name', 'Phone No.', 'Email Address', 'Address', 'Password', and 'Confirm Password'. A blue 'SUBMIT' button is located at the bottom of the form.

Fig.4.Sign Up Page

## d. Home Page:

- The central hub of the app where users are directed after successfully logging in. It provides access to various sections like Chat, Profile, and Articles, enabling users to navigate to different functionalities of the app.



Fig.5.Home Page

## e. Chat Section:

- This section allows users to communicate with others within the app. It may include direct messaging, group chats, and other communication features.

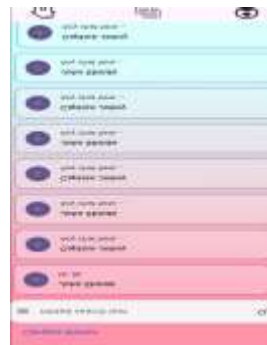


Fig.6.Chat Section

## f. Articles Section:

- A section dedicated to providing content such as news articles, blog posts, or any informational material that the app offers. Users can read and possibly interact with the articles here.



Fig.7.Articles Section

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## 6. Conclusion

The College Counselor Application represents an innovative approach to addressing the mental health needs of adolescents. By offering chat interface for counseling and access to valuable resources, the app bridges the gap in traditional mental health services. With the scalability of Flutter, the platform can be expanded to meet growing demands and ensure a reliable user experience.

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