Bibliophilic

By

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Project Submitted to

Marwadi University in Partial Fulfillment of the Requirements for the subject Capstrone Project

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Technical Report:-

Providing technical summary of project

System Design and Architecture:-

My system is divided main into two parts Front-End(Flutter) and Back-End(FireBase):

Front-End:-

UI Layer:-
In the UI layer there are individual screens like Signup, Signin, DashBoard, my content page, profile page etc.

Service Layer:-
In the service folder we have (auth.dart, database.dart, storage.dart). This service layer does all the real thing it manages all the logic like how does a log user saves a post etc.. The UI layer talks to the service layer to get things done.

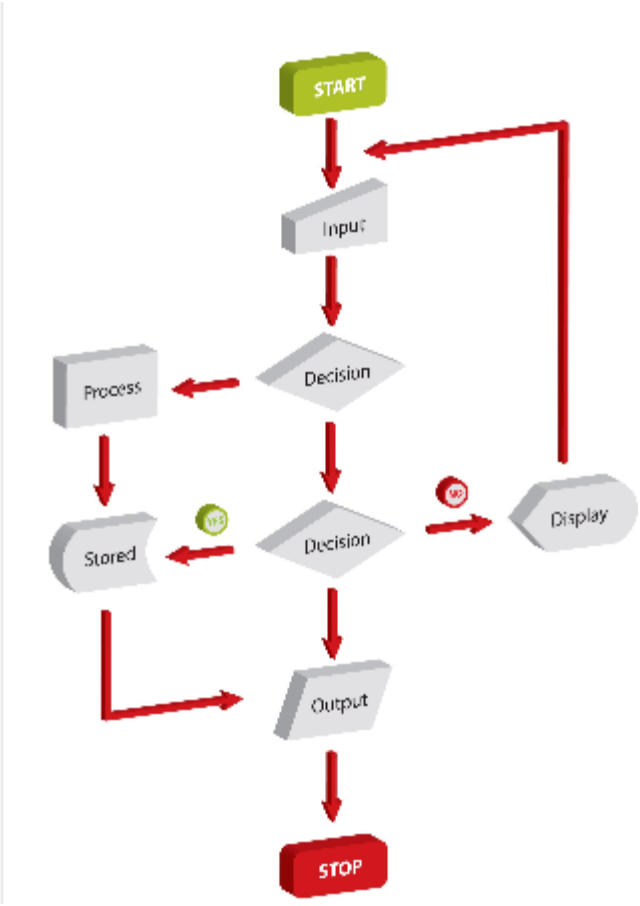
Back-End:-

Firebase Authentication:-
It manages the operation of signup and signin

FireStore Database:-
It keeps and organises all the files, user profiles, roles and credentials.

Firebase Storage:-
It stores bulk data like images.

System Architecture: Data Flow Diagram



- Author Interacts with the UI layer(announcement.dart)
- UI calls function in services layer to upload the image to firebase

Implementation Highlights and Key Outcomes:-

- Cross- platform app: flutter can run single handedly on both android as well as IOS.
- Role based authentication(for author and reader)
- Real time content system

User_Manual:-

Creation Hub: After you have logged in, you will land on your Author Dashboard. At the bottom of the screen, you will see a navigation bar. Tap the large **"+" icon** in the center labeled "Create."

Choose Content Type: You will be taken to the "Create New Content" screen. From the list of options, tap on **"Publish Book Post."**(you can choose any option)

Fill in asked detailes:

A form will appear. Fill in all the required information about your book:

- Name of Book
- Description of Book
- Publisher House
- Genre of Book
- Publication Date (tap to open a calendar)

(This is for publishing book posts and there will be different sets of questions that you will have to fill.)

Publish or Save your draft:-

- If you publish any post it will be reflected in my content page as well as to the readers as well.
- But if you choose the draft option over there, it will be on my content page but on the user side.
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Code Documentations:-

Project Dependencies

The pubspec.yaml file lists all the external packages the project relies on. The key dependencies are:

- **firebase_core**: The essential package for connecting the Flutter app to the Firebase project.
- **firebase_auth**: Provides all the tools for user authentication.
- **cloud_firestore**: Provides all the tools for interacting with the Firestore Database.
- **firebase_storage**: Provides all the tools for uploading and managing files in Firebase Storage.
- **google_sign_in**: Required for the "Log in with Google" feature.
- **image_picker**: A simple package for allowing users to select an image from their phone

lib/: This is the main folder for all our Dart code.

- **main.dart**: The entry point of our application. It initializes Firebase and decides which screen to show first (the Login Page).
- **UI** Pages (signup.dart, **login.dart, author_dashboard.dart, etc.)**: Each file is a separate screen in the app. This makes it easy to find and edit the UI for a specific feature.
- **lib/services/**: This is our dedicated "brains" folder. It keeps all the complex logic separate from the UI.
    - **auth.dart**: Contains all the functions for user authentication (signing up, logging in, signing out).
    - **database.dart**: Contains all the functions for reading and writing data to the Firestore Database.
    - **storage.dart**: Contains all the functions for uploading files (like images) to Firebase Storage.