



Developer Student Clubs

Bharati Vidyapeeth Deemed University College of Engineering Pune

# Flutter with Firebase



Let's get started!



Developer Student Clubs

Bharati Vidyapeeth Deemed University College of Engineering Pune

# What is Firebase ?





Firestore can not only be used as a dummy backend API but **it is a fully managed backend service** that provides the services which includes real time database , file storage , authentication , push notifications , analytics , on demand server side code (cloud functions), etc.







# Firebase ML Kit



Firebase ML Kit provides users the features of Machine Learning such as Face Recognizance, Language Translator, etc. In short ML kit provides the mobile SDK(Software Development Kit) that can be easily integrated with Android as well as iOS Apps. ML Kit brings Google's machine learning expertise to Android and iOS apps in a powerful yet **easy-to-use package**.



# Cloud Functions



Cloud Functions for Firebase is a **serverless framework** that lets you automatically run backend code in response to events triggered by Firebase features and HTTPS requests. Your JavaScript or TypeScript code is stored in Google's cloud and runs in a managed environment. There's no need to manage and scale your own servers.





# Cloud Firestore

Cloud Firestore is a **massively scalable, cloud-hosted, NoSQL, realtime database**. Cloud Firestore has SDKs for mobile apps and server components, but the underlying database product is the same. If you're a Google Cloud developer using Firestore as part of your backend architecture, or you're a Firebase developer whose users access it directly from your client app, Cloud Firestore stores data and scales in exactly the same way.





# Hosting

Firebase Hosting allows **fast and secure hosting** for our web application, static and dynamic content, and microservices. It is production-grade web content hosting for the developers. We can easily and quickly deploy web apps and serve both static and dynamic content to a global content delivery network with only a single command. We can pair Firebase Hosting with Cloud Function or Cloud Run for building and hosting microservices on Firebase.







# Real time Database

The Firebase Realtime Database is a **cloud-hosted database**. Data is stored as JSON and synchronized in realtime to every connected client. When you build cross-platform apps with our iOS, Android, and JavaScript SDKs, all of your clients share one Realtime Database instance and automatically receive updates with the newest data.







# Cloud Storage

A developer might want to enable users to store images and videos captured on their devices, then let the users view the files on other devices or share them with friends. Firebase provides SDKs (Android, iOS, web, Unity, C++) for **uploading and downloading objects in storage**, directly from the app, bypassing the need for any other backend components.





# Authentication

Firebase Authentication provides backend services, easy-to-use SDKs, and ready-made UI libraries to authenticate users to your app. It supports authentication using passwords, phone numbers, popular federated identity providers like Google, Facebook and Twitter, and more.







We will form a ChatApp to learn about the Firebase Integration. This is the basic structure.



Building a ChatApp from Scratch



Using the Firebase Flutter Packages  
for Auth and Database



Working with Real time data



Image Upload