

Firestore Beginner's Guide

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1. Introduction to Firebase

Firebase is a platform made by Google that helps developers build mobile and web applications easily. Instead of worrying about servers and backend infrastructure, Firebase offers ready to use tools and services like databases, authentication, hosting, and cloud functions. This means developers can focus more on creating great user experiences without handling complex server setups.

Advantages

- Developers don't have to set up or manage servers.
- Works for Android, iOS, and web apps.
- Firebase updates data instantly across all devices great for chat apps or live collaboration.
- Hosts app with global speed and security
- It grows with app no matter how many users.
- Authentication and security rules protect user data.

Who Created Firebase

Firebase was created by James Tamplin and Andrew Lee in 2011. It started as a tool to add real time chat features to websites but they realized it could be used more broadly to sync any kind of data in real time.

Why Created Firebase

Firebase was originally launched as an online chat service provider under the name Envolv. They launched Firebase in 2012 focusing on real-time databases. Google acquired Firebase in 2014 and expanded it into a full app development platform.

2. Firebase core services

Fire store Database

Fire store is a cloud based NoSQL database from Firebase. It stores data in documents organized into collections. It supports real-time syncing and offline use so app works smoothly even without internet. It is designed to scale and works across mobile, web, and server development. It can also run complex queries to find exactly the data need.

Realtime Database

A cloud-hosted NoSQL database that stores data as JSON and updates it instantly across all connected devices. It's ideal for apps that need simple, quick syncing of live data like messaging apps or live feeds.

Firebase Hosting

Firebase Hosting lets deploy web app quickly and securely with a single command. It uses a global content delivery network to make app load fast anywhere in the world. It supports static websites, single page apps, and can work with Cloud Functions to serve dynamic content. SSL certificates are automatically provided for security.

Cloud Functions

Cloud Functions for Firebase let run backend code automatically in response to events, like user authentication or file uploads. write small pieces of code that run in Googles cloud without managing servers. This keeps apps logic secure and privately handled on the server side

Firebase Storage

A secure and scalable service to store user generated files like pictures, videos, or documents. It can handle large files and offers flexible rules for file access and delivery.

3. Setup Guide & Installation

Step 1: Create a Firebase Project

Go to the Firebase website and sign in with Google account. Then create a new project for app.

Step 2: Add Your App

Choose the platform and register app by providing basic info like app name and package ID.

Step 3: Install Firebase SDK

web apps, add Firebase via npm or use the CDN script in HTML.

Step 4: Initialize Firebase in App

Use the configuration info from your Firebase project to initialize Firebase in app code with code snippets provided by Firebase Console.

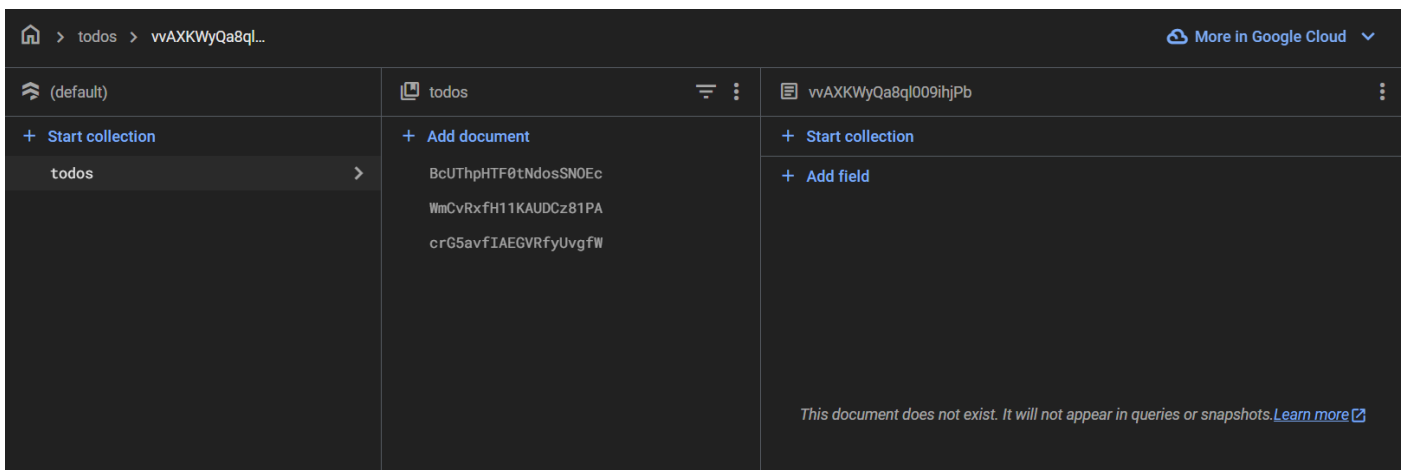
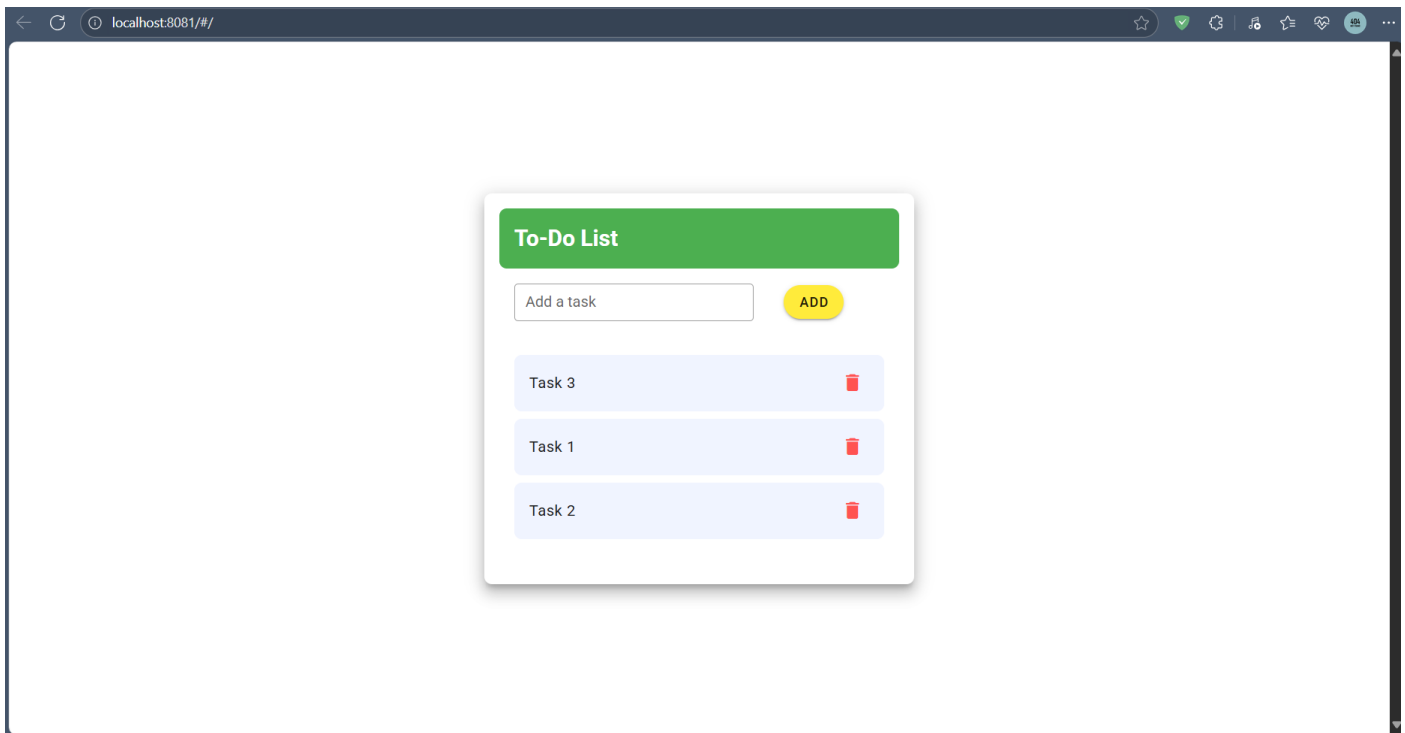
Step 5: Run App









Deploy site using Firebase Hosting with commands like “ firebase deploy “ after installing Firebase CLI.

```
npm install -g firebase-tools  
firebase login  
firebase init  
firebase deploy
```

4. Hands on example

GitHub repo: [osanda-r/Vue-To-Do-List](https://github.com/osanda-r/Vue-To-Do-List)



 > todos > BcUThpHTF0tN... More in Google Cloud		
 (default)	 todos  	 BcUThpHTF0tNdosSNOEc 
+ Start collection	+ Add document	+ Start collection
todos >	 BcUThpHTF0tNdosSNOEc >	+ Add field
	WmCvRxfH11KAUDCz81PA crG5avfIAEGVRfyUvgfW	text: "Task 3"