Firebase: Realtime Database

- The Firebase Realtime Database is a cloud-hosted database in which data is stored as JSON. The data is synchronized in real-time to every connected client.
- The Firebase Realtime Database is a NoSQL database from which we can store and sync the data between our users in real-time.
- It is a big JSON object which the developers can manage in real-time.
- > By using a single API, the Firebase database provides the application with the current value of the data and updates to that data.
- Real-time syncing makes it easy for our users to access their data from any device, be it web or mobile.
- Firebase is categorized as a NoSQL database program, which stores data in JSON-like documents.
- In Firebase, a document is a set of key-value pairs defined by a schema. A group of documents makes up a collection.

Key Features

1. Authentication

It supports authentication using passwords, phone numbers, Google, Facebook, Twitter, and more. The Firebase Authentication (SDK) can be used to manually integrate one or more sign-in methods into an app.

2. Realtime database

Data is synced across all clients in real time and remains available even when an app goes offline.

3. Hosting

Firebase Hosting provides fast hosting for a web app; content is cached into content delivery networks worldwide.

4. Test lab

The application is tested on virtual and physical devices located in Google's data centers.

5. Notifications

Notifications can be sent with firebase with no additional coding.

→ Steps to connect to firebase

- Step 1: Go to firebase.google.com, and login using google account.
- Step 2: Click on "Get started".
- Step 3: Click on "Create a project", enter the project name and click on continue.
- Step 4: You will be asked to add Google Analytics for your Firebase project. (you can disable the option) and click on Create project.
- Step 6: Your new project is ready, click on Continue.
- Step 7: You will be asked to "Get started by adding Firebase to your app".
- Step 8: Select option as web and register app by giving a nickname and click on Register app.
- Step 9: Add Firebase SDK (Copy and paste the scripts into the bottom of your <body> tag).
- Step 10 : Click on go to console and choose **Realtime Database** under *Build* menu.
- Step 11: Click on Create Database, you need to select the Realtime Database location (United States) and click on Next.
- Step 12: Once you have defined your data structure, you will have to write rules to secure your data. Select "start in test mode".
- Step 13: under Script tag, change the src from firebase-app.js to firebase.js.