**Firebase**

Firebase is a Backend-as-a-Service (Baas). It provides developers with a variety of tools and services to help them develop quality apps, grow their user base, and earn profit. It is built on Google's infrastructure. Firebase is categorized as a NoSQL database program, which stores data in JSON-like documents.

**Firebase Realtime Database**

The Firebase Realtime Database is a cloud-hosted database. Data is stored as JSON and synchronized in real-time to every connected client. When you build cross-platform apps with iOS, Android, and JavaScript SDKs, all clients share one Realtime Database instance and automatically receive updates with the newest data. Firebase’s real time data base store and sync data with our NoSQL cloud database. Data is synced across all clients in real time and remains available when the app goes offline.

To use firebase with unity, we should add firebase to our unity project.

**Steps:**

1.Create a Firebase project.

2.Register your app with Firebase.

a. Select the project that you have added to display the platform option.

b. Select which build target of your Unity project that you’d like to register, or you can even select to register both targets now at the same time.

c. Enter the android package name and iOS bundle ID.

d. Register

3. Add Firebase configuration files

a. Obtain platform specific firebase config files in the Firebase console.

* **For iOS** — Click **Download GoogleService-Info.plist**.
* **For Android** — Click **Download google-services.json**.

b. Open the project in unity and add the files to the assets folder.

c. In the firebase console, click next.

4. Add the Firebase Unity SDKs to the unity project.

a. In the firebase console, click DOWNLOAD Firebase Unity SDK and unzip.

b. In the unity project, navigate to Assets, Import Package, Custom Package.

c. From the unzipped SDK, select the [supported Firebase products](https://firebase.google.com/docs/unity/setup#available-libraries) that you want to use in your app.

d. In the Import Unity Package window, click **Import**.

e. Back in the Firebase console, in the setup workflow, click **Next**.

Graphical user interface, application

Description automatically generated

5. Confirm Google Play services version requirements.

The Firebase Unity SDK for Android requires [Google Play services](https://developers.google.com/android/guides/overview), which must be up-to-date before the SDK can be used.

Add the following code at the start of your application. You can check for and optionally update Google Play services to the version that is required by the Firebase Unity SDK before calling any other methods in the SDK.

Firebase.FirebaseApp.CheckAndFixDependenciesAsync().ContinueWith(task => {  
  var dependencyStatus = task.Result;  
  if (dependencyStatus == Firebase.DependencyStatus.Available) {  
    // Create and hold a reference to your FirebaseApp,  
    // where app is a Firebase.FirebaseApp property of your application class.  
       app = Firebase.FirebaseApp.DefaultInstance;  
  
    // Set a flag here to indicate whether Firebase is ready to use by your app.  
  } else {  
    UnityEngine.Debug.LogError(System.String.Format(  
      "Could not resolve all Firebase dependencies: {0}", dependencyStatus));  
    // Firebase Unity SDK is not safe to use here.  
  }  
});

The unity project is registered and configured to use with firebase.