

FIREBASE INTEGRATION WITH UNITY

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The Goal:

To integrate firebase with unity which provides the support of realtime databases , in this documentation we will be achieving to update data at the database using unity , which could be built to an android application .

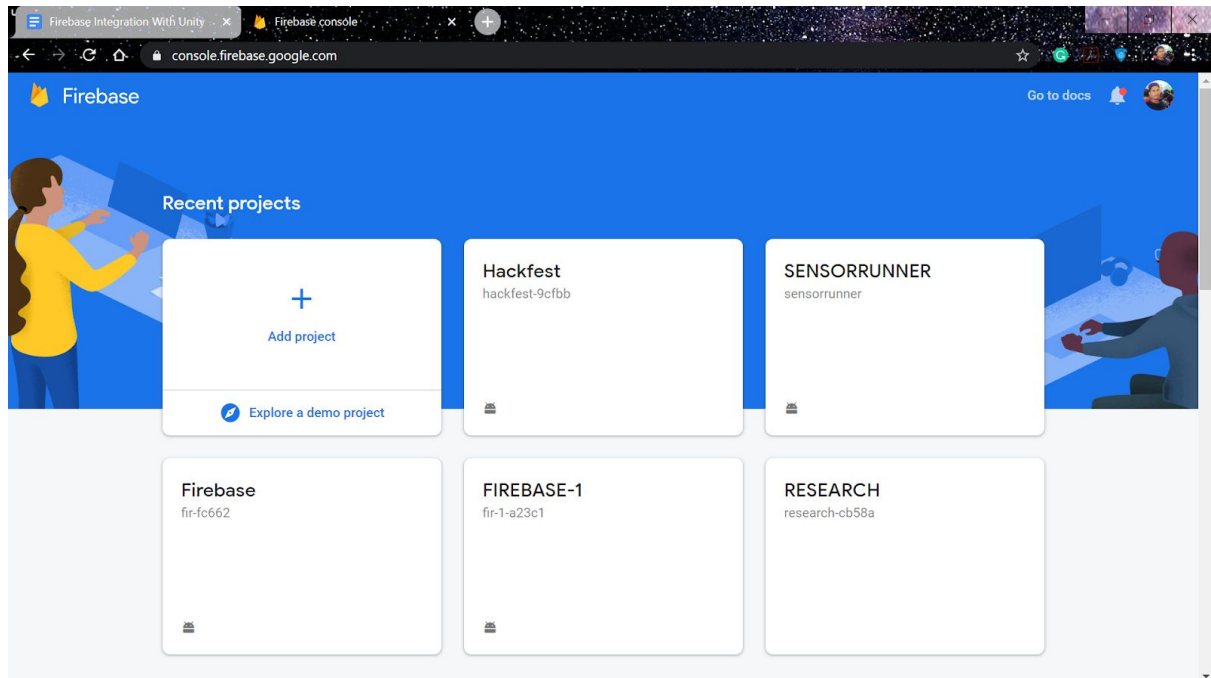
Requirement:

Unity 3d (tried in 2018.4.19f1) .

Brief Knowledge of unity development .

STEP 1:

This step requires that the user must have a google account . Simply do a google search or click [here](#) and reach the site of firebase . On the top right corner users would find a button called **GO TO CONSOLE** . click there and a similar window would appear up.

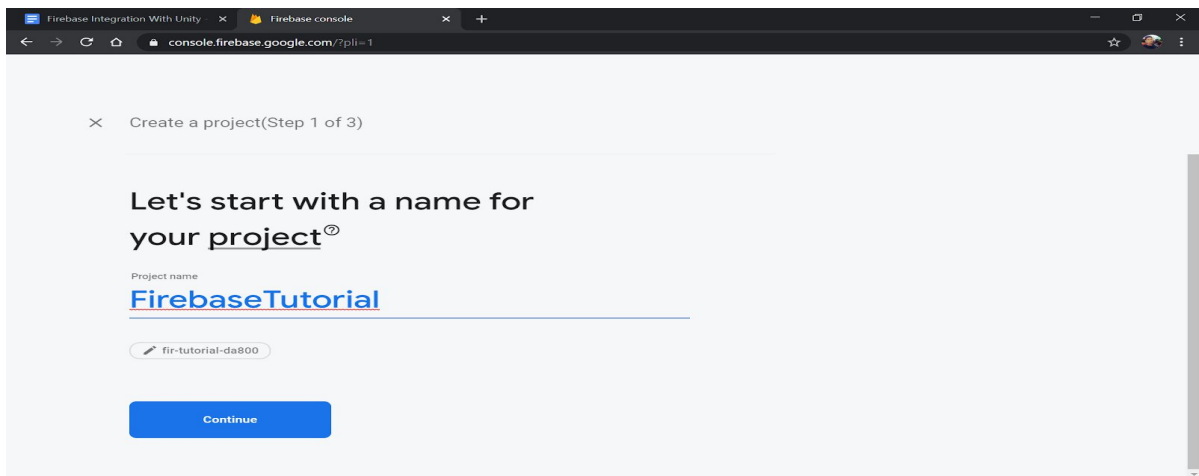


(Mine has some previous projects , for a new user it might contain only first module named Add a project)

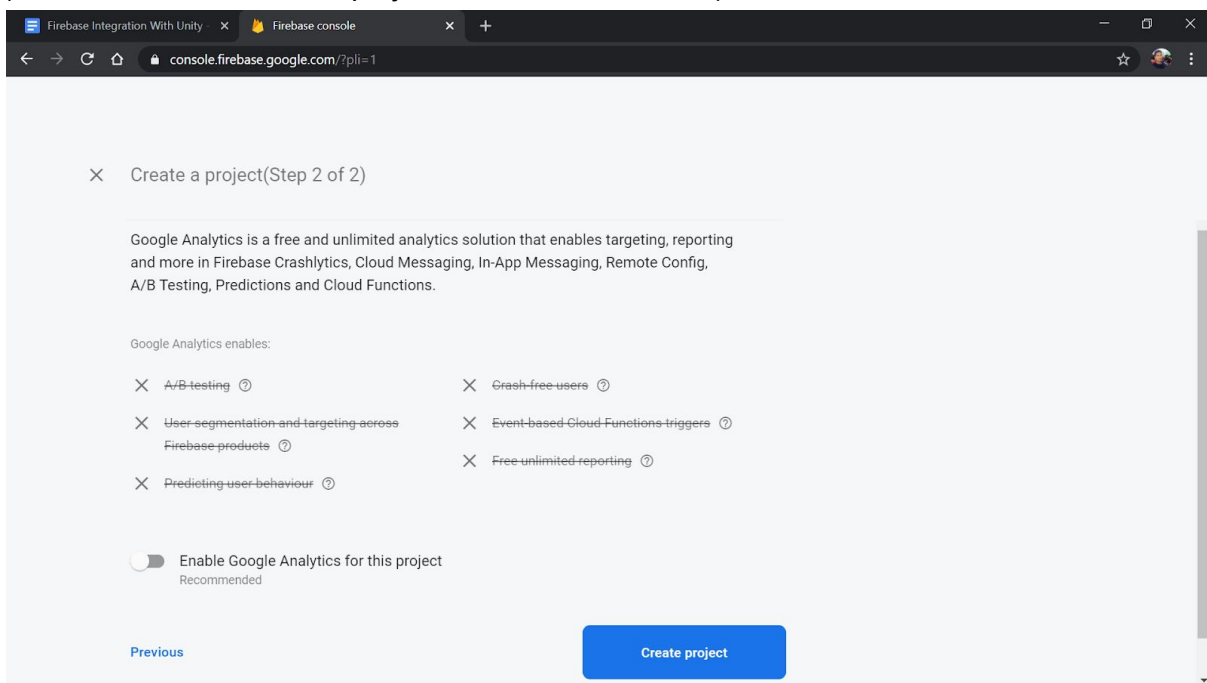
STEP 2:

As the picture might have suggested it is time to create a new project . As the user will click the **Add Project** button a following window would appear . A three step create your project

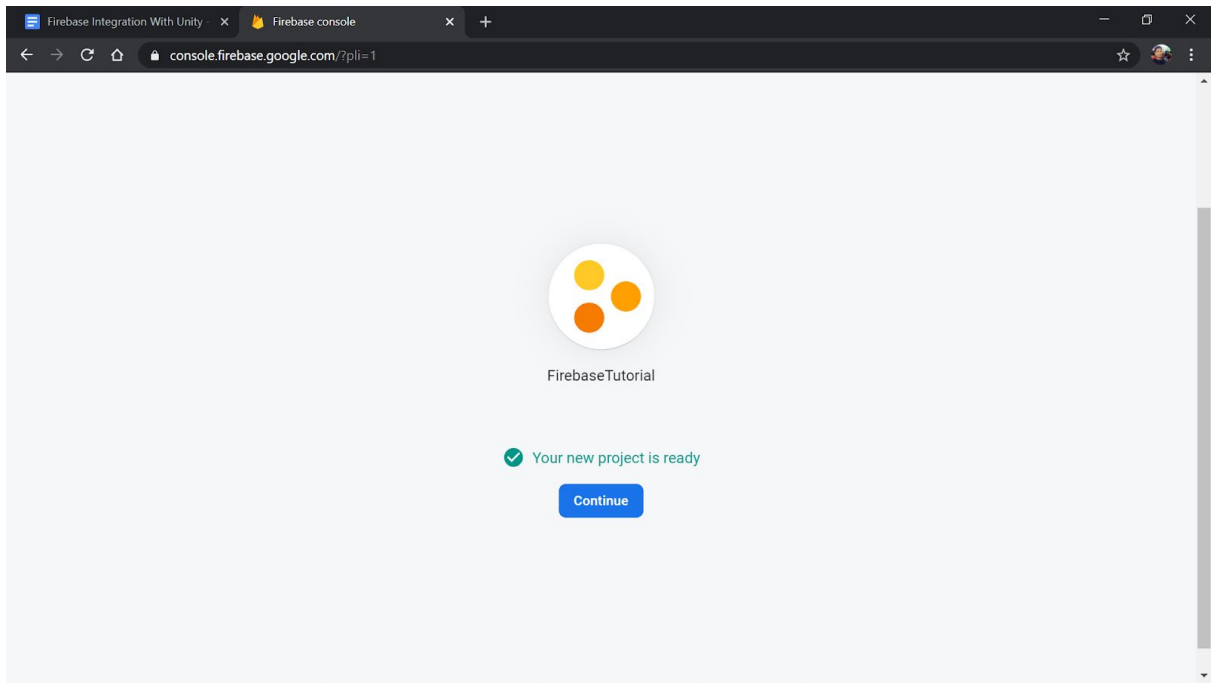
would appear which would be familiar below .



(The user would name the project with a suitable name)

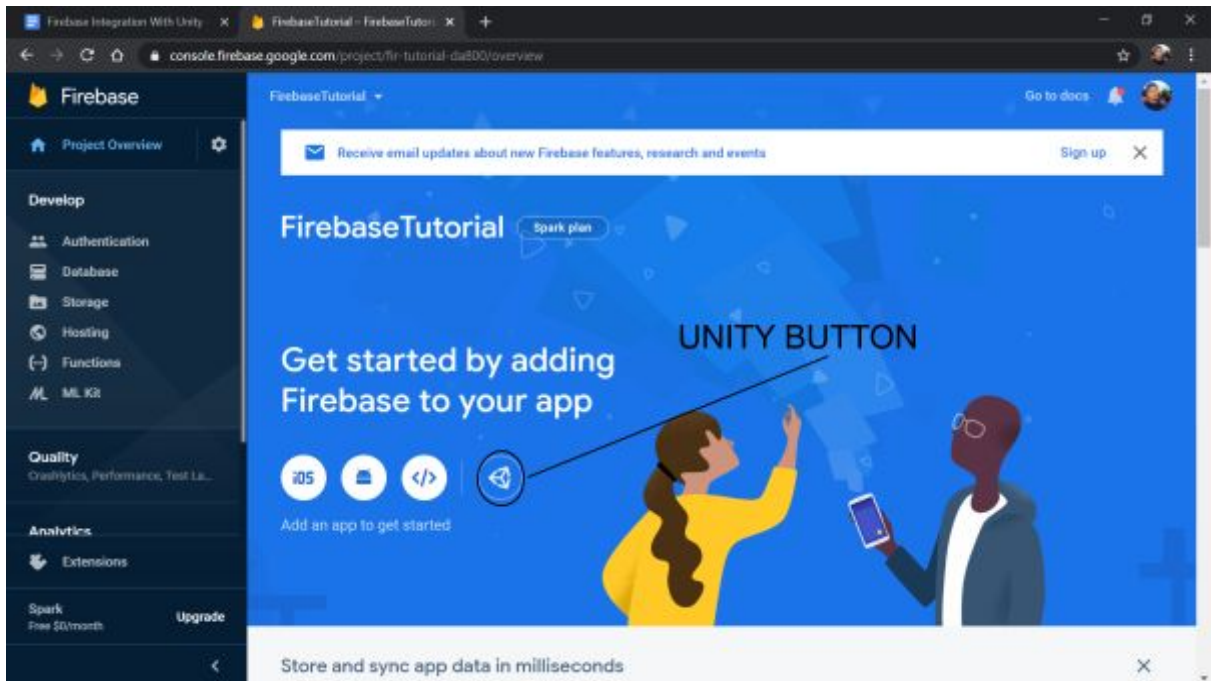


(Since in this documentation we would be dealing with the basics of firebase and unity we would switch off the google analytics)

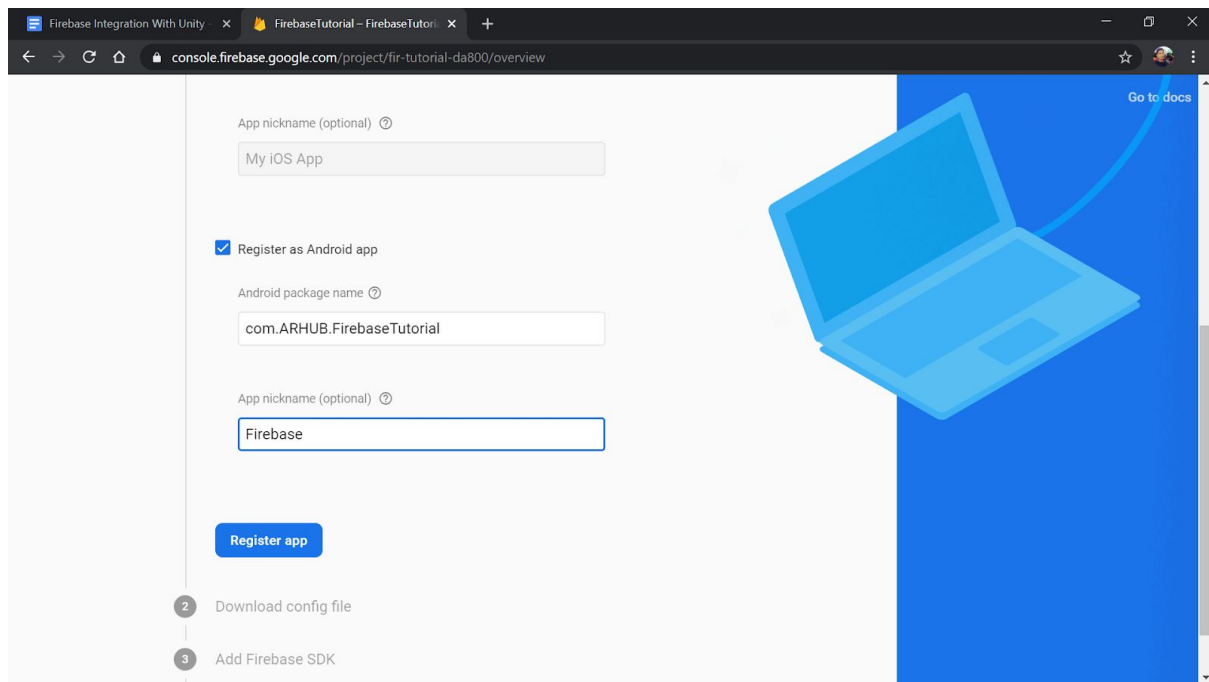


(Once project created a similar window would appear)
Hit the **Continue** button .

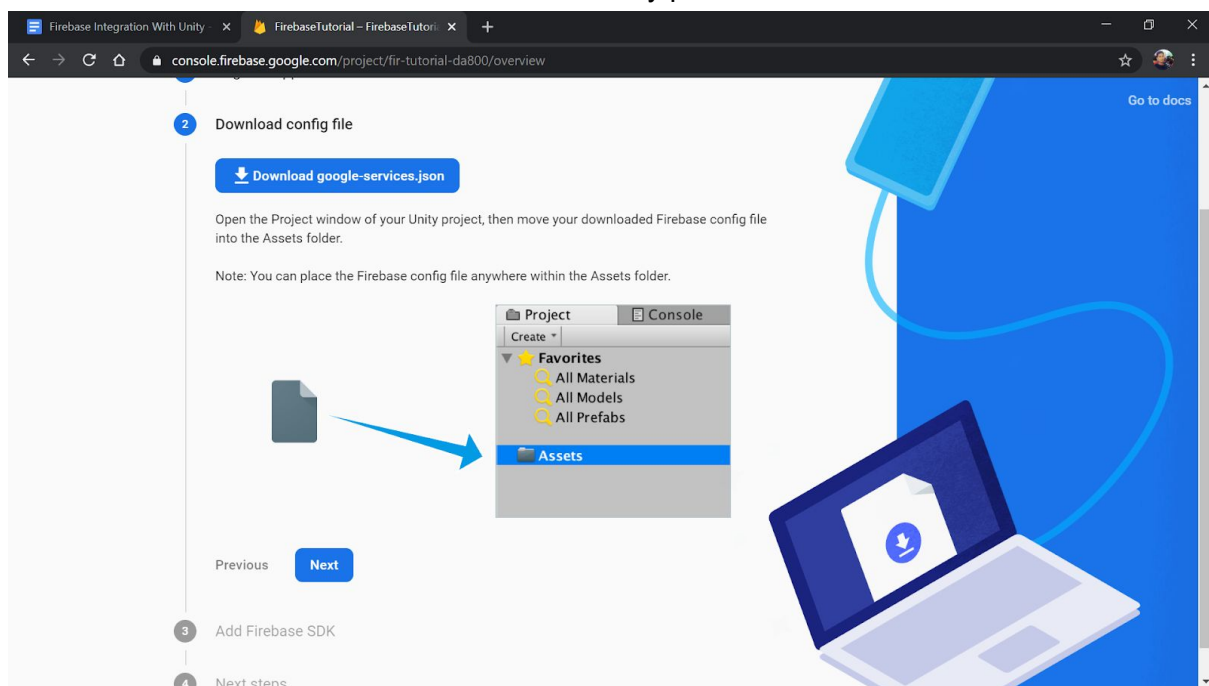
Once the user hits the continue button a similar window would appear up and press the unity window which will take us to the next step of this documentation which is registering your unity project .



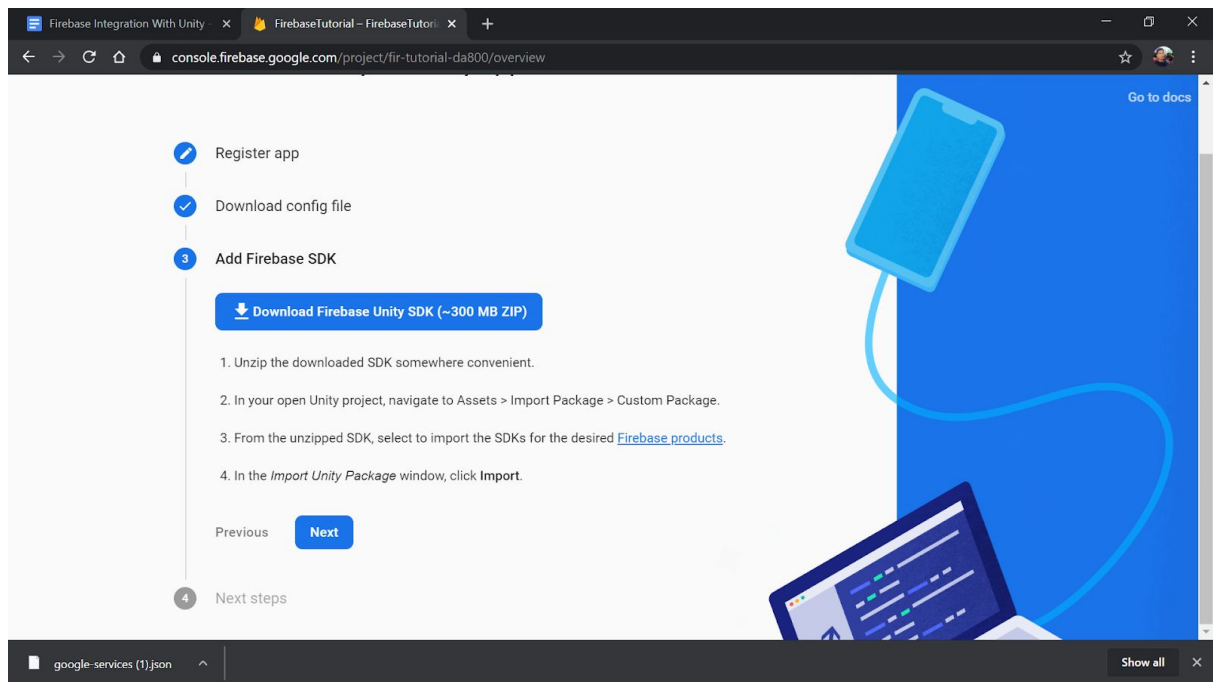
STEP 3:
Register your android app by entering the same package name as entered for the unity project.



After that it will ask you to download a google-services.json file whose use you can see in the window itself and we would cover it in our unity part .



After that the user will be asked to download the modules of unity for firebase , which would be in zip format . After extracting them into a specified folder we would use a particular file for it . If the user wants the exact file it can be downloaded from [here](#) .

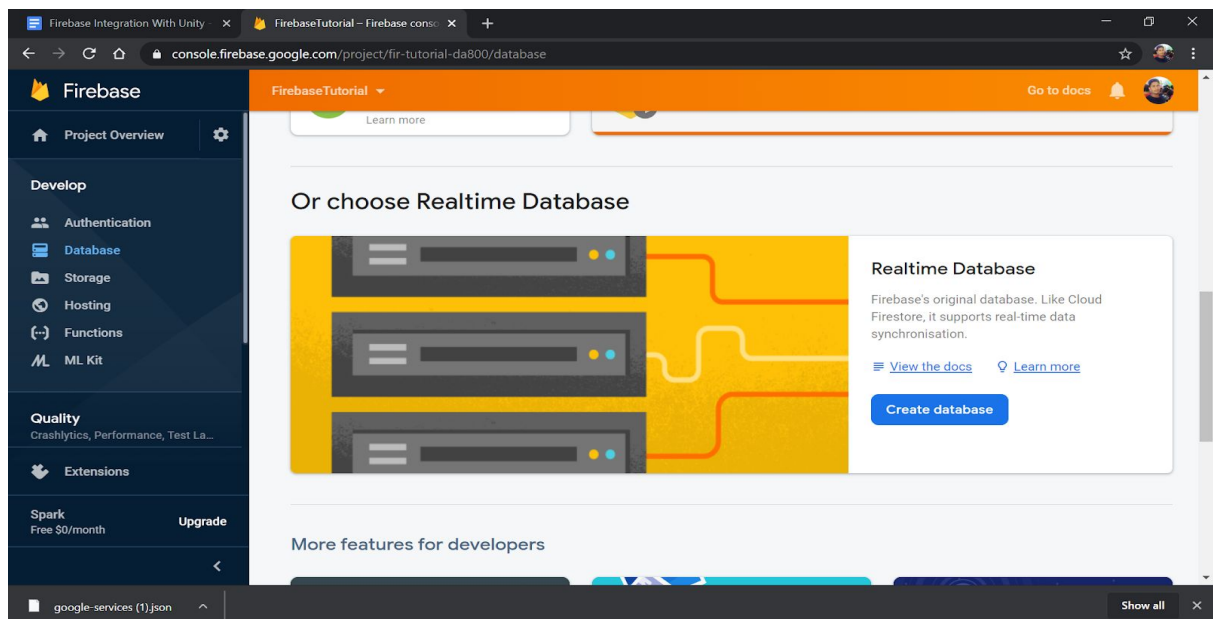


End this process by clicking on the continue to console , button .

STEP 4:

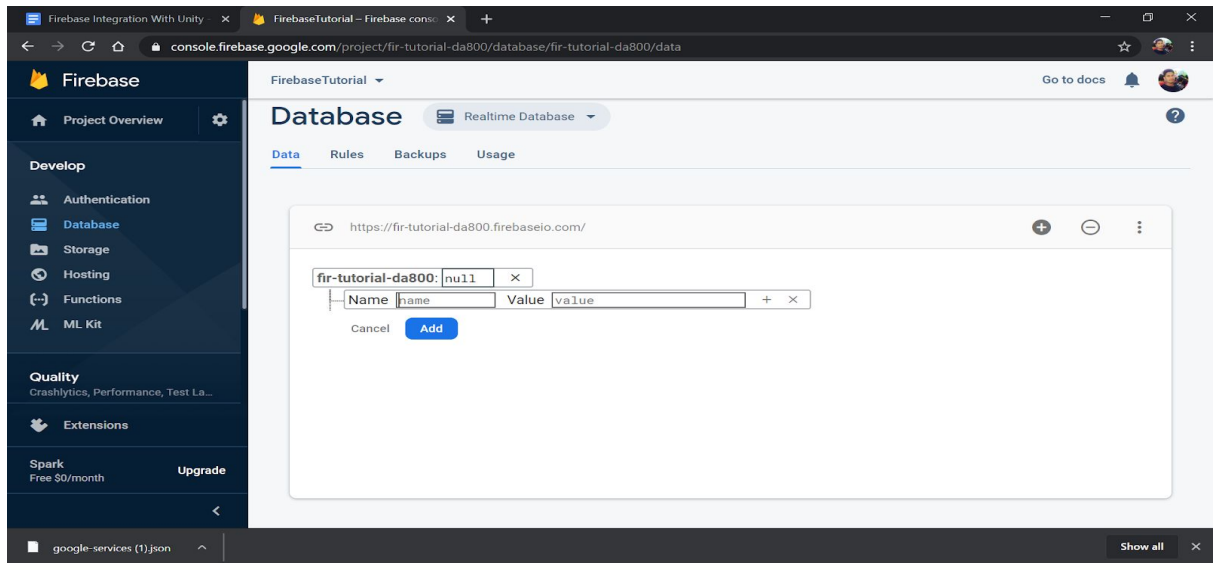
Now this step explains how to create a real time database for your project .

In the left side of the window click on the database tab and after opening the database window scroll down to find the **Real Time Database** and click **Create Database** .

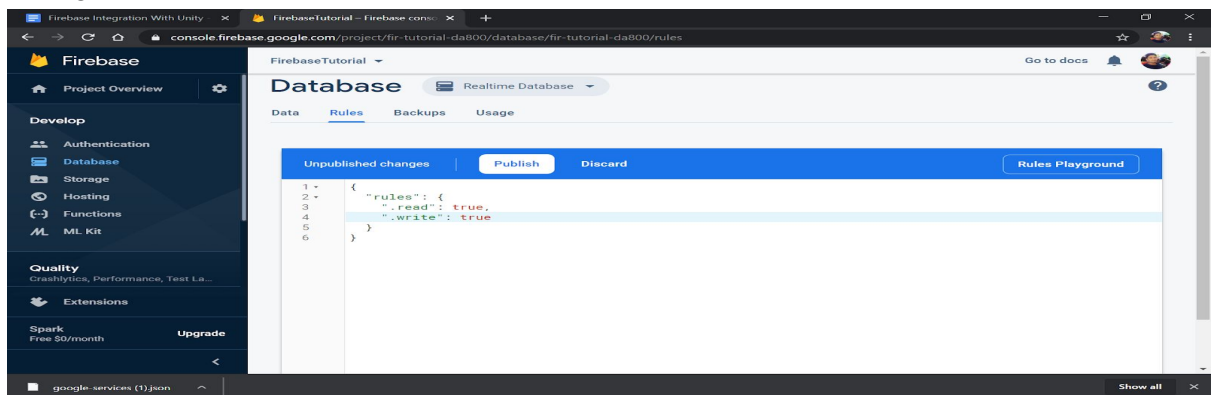


Once you have created your database in locked mode , you need to do two things

- 1) Create a variable and assign it a value(click the + button beside the name of your database) , remember the name of the variable and copy down the url of the database .



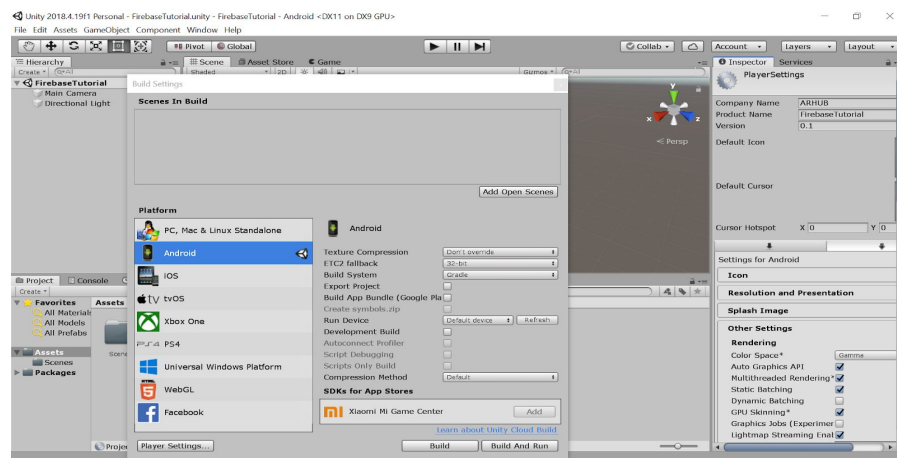
- 2) Change the rules to true for both read and write .



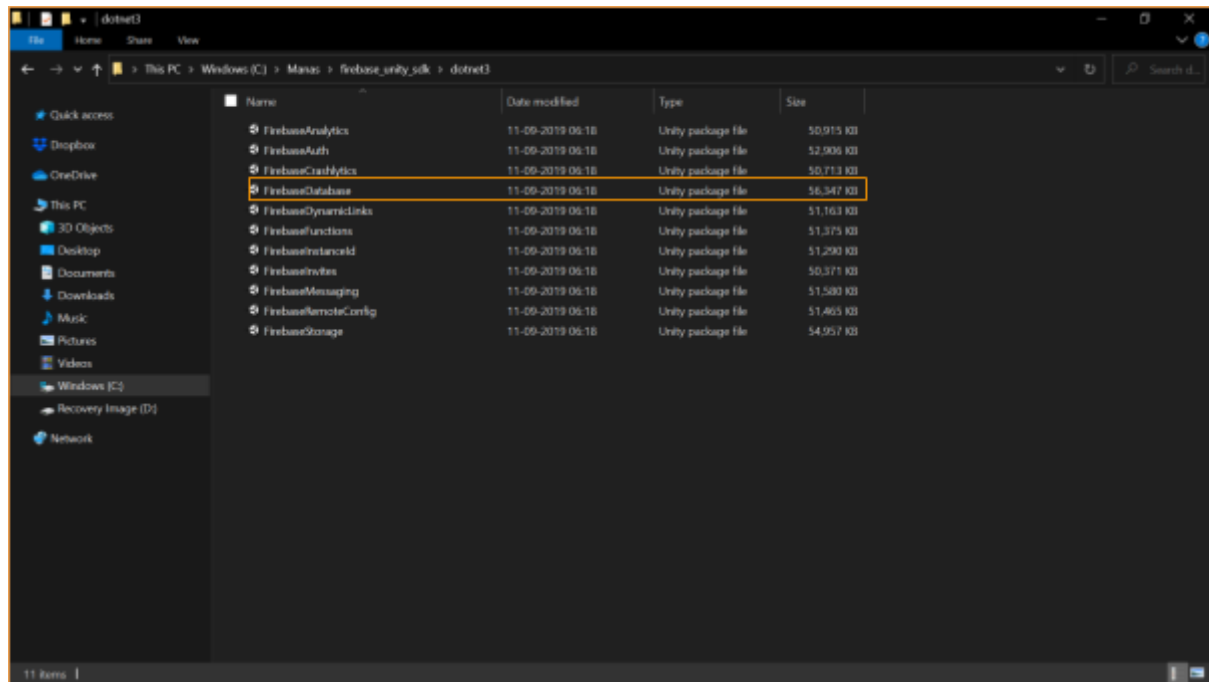
STEP 5:

Here comes the unity part where we will first set our project for unity integration . The basic thing we will learn is to update value on the database .

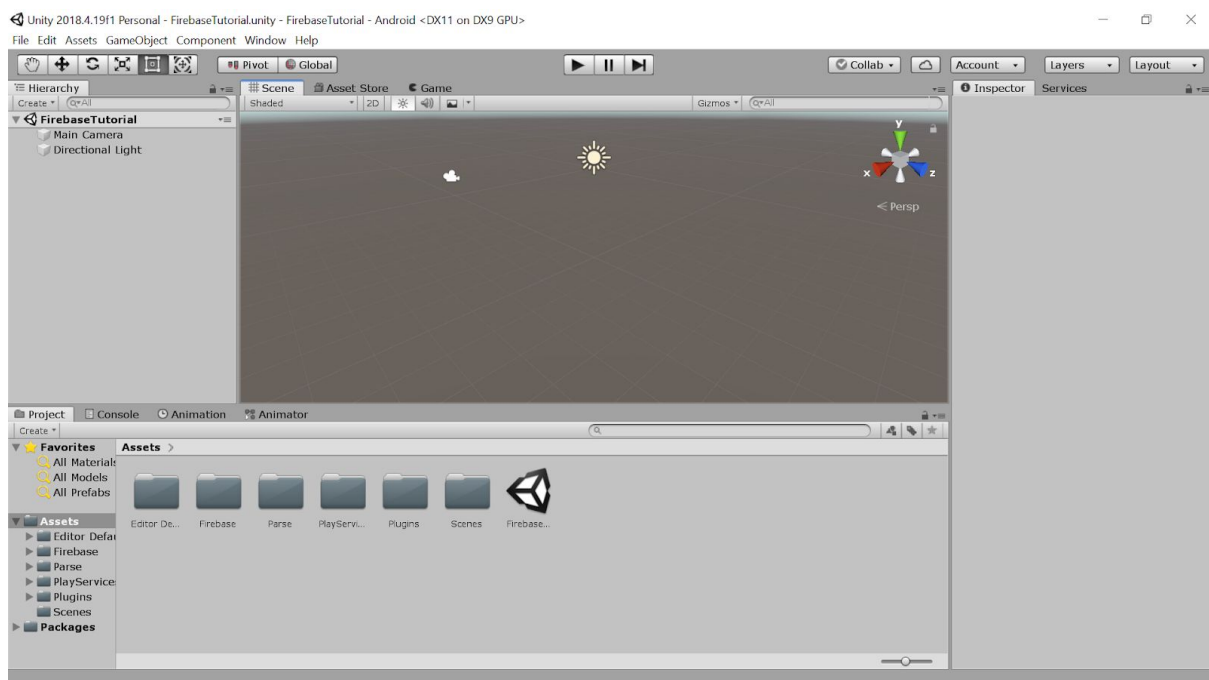
- 1) Create a new unity project and do the following steps :
 - a) Export your project to android .
 - b) Save the scene .
 - c) In project settings change the package name to one registered in the firebase.



2) Now import the file(firebase database) in the project which was downloaded earlier .



3) After importing is complete and android dependencies are downloaded it would look similar to this :



4) Next step is to create a button that would update values in the firebase realtime firebase. Basic Steps :

- a) In the hierarchy pane right click -> UI -> button .
- b) Resize the button and modify the text according to use.
- c) Create a script .
- d) Name it according to your wish .

The script would contain following LOC:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
// using required header files
using Firebase;
using Firebase.Database;
using Firebase.Unity.Editor;

public class value : MonoBehaviour
{
    int a = 0; // Variable we will use to update the Value variable in database
    private DatabaseReference carrier; // Variable we will use for refering our
    database and to
    //transfer the values
    void Start()
    {

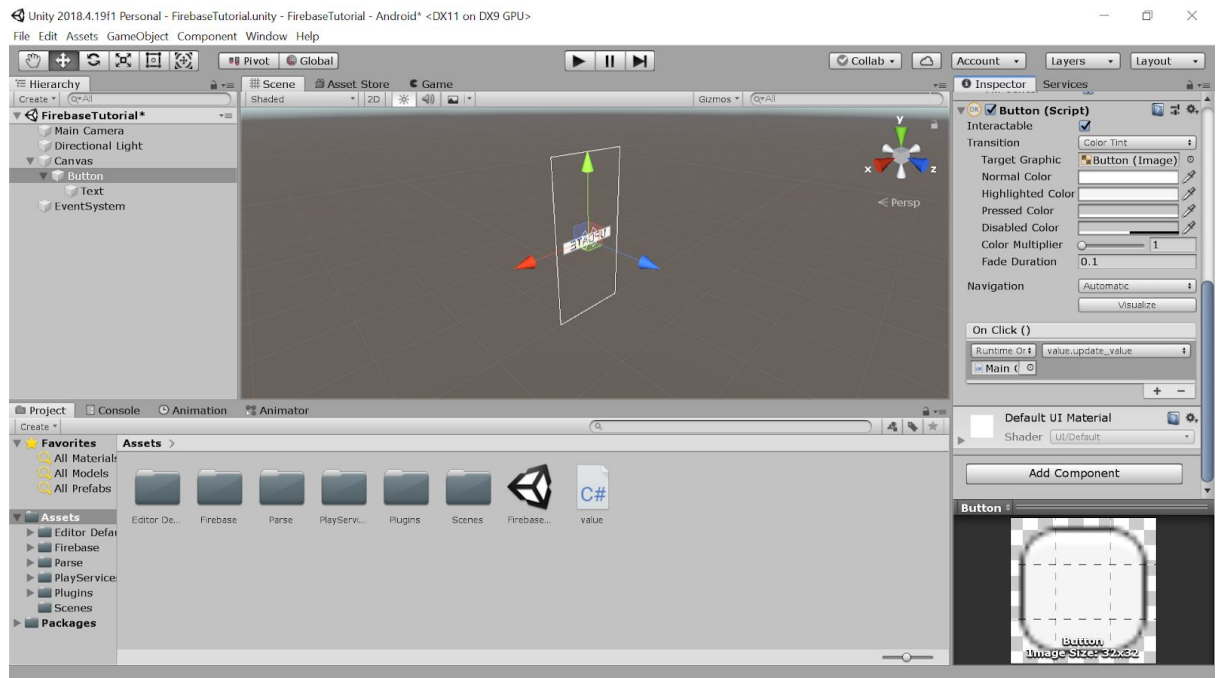
        FirebaseApp.DefaultInstance.SetEditorDatabaseUrl("https://fir-tutorial-da800.firebaseio.com/");
        // the url must be of the database which we have saved for our reference.
        // the above line connects our unity project with the database whose url has
        been given

        carrier = FirebaseDatabase.DefaultInstance.GetReference("Value");
        // the above line uses the variable carrier to connect with the database variable
        named Value
    }

    public void update_value() // function to update the value in the database
    {
        carrier.SetValueAsync(a);
        // the above line assigns the value a to the variable value which has been
        // connected earlier

        a = a + 1;
        //For each button press the value gets increased by one .
    }
}
```


- e) Attach the script to a game object (Maybe Camera) and attach the function `update_value` to the button .



- f) Final important step: import the json file in the project . Make sure it has this particular name `google-services.json` and nothing else .

- g) Hit the play button .

Whenever you click the button the Value would be updated.

Thank you .

My current unity version - 2018.3.19f1