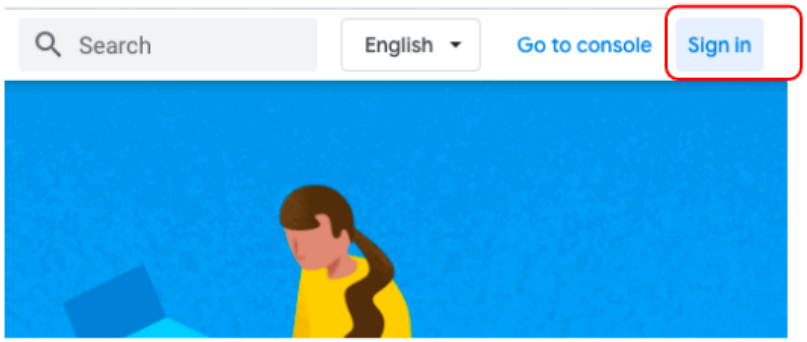
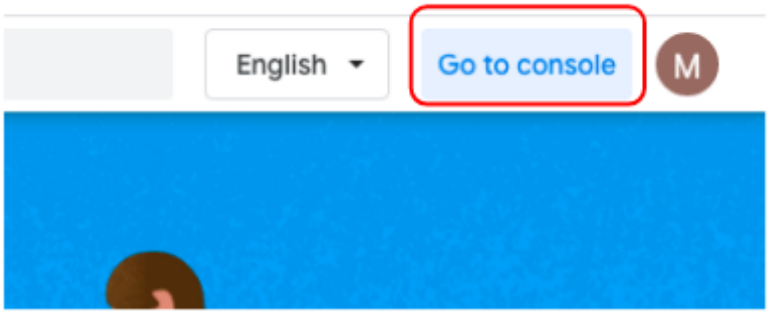
Steps to create database

Open https://firebase.google.com/ it is a firebase page.

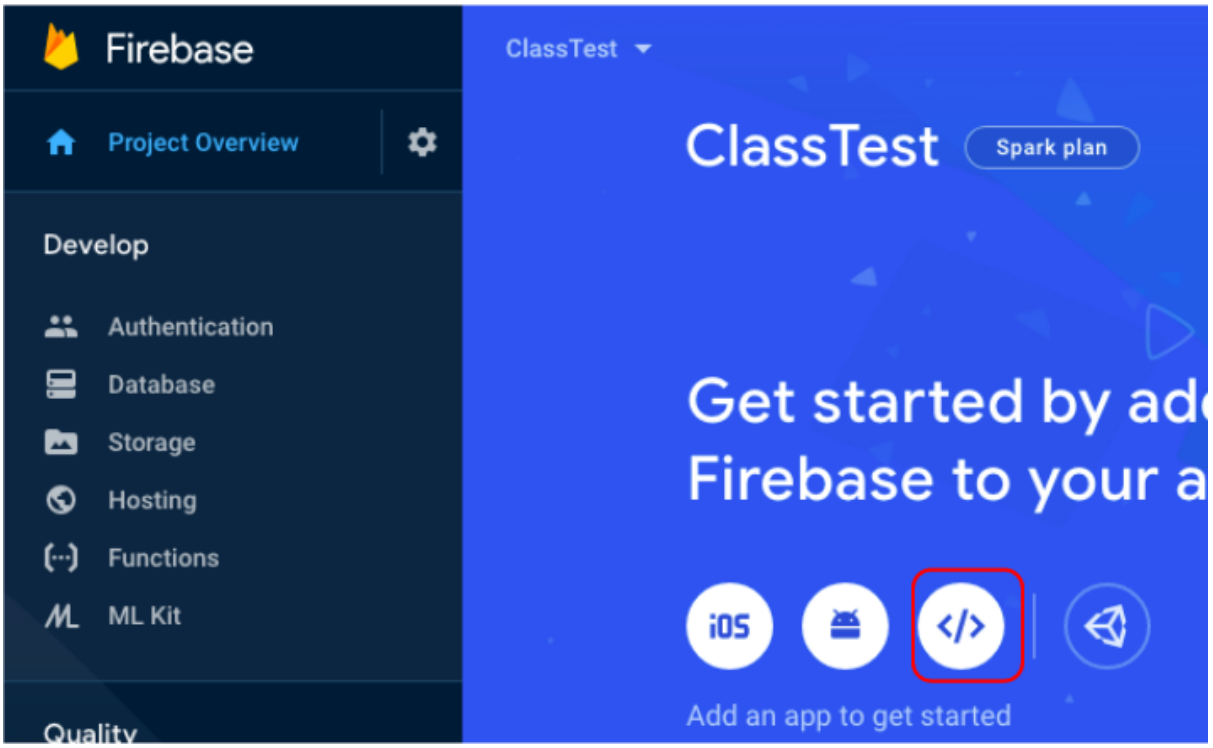
1. Login in your Gmail account if you haven't logged in.



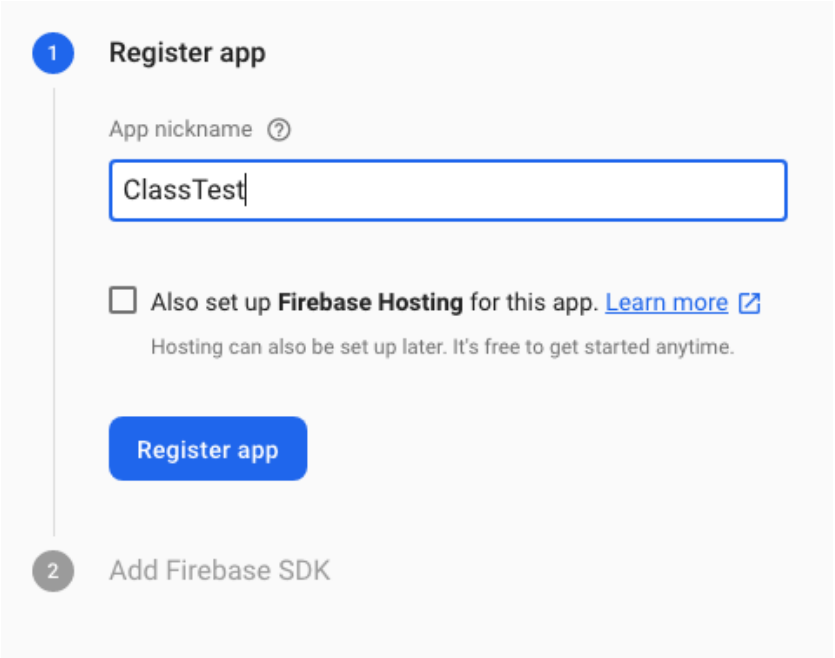
2. Then after login click on **Go to console** on the top right corner.



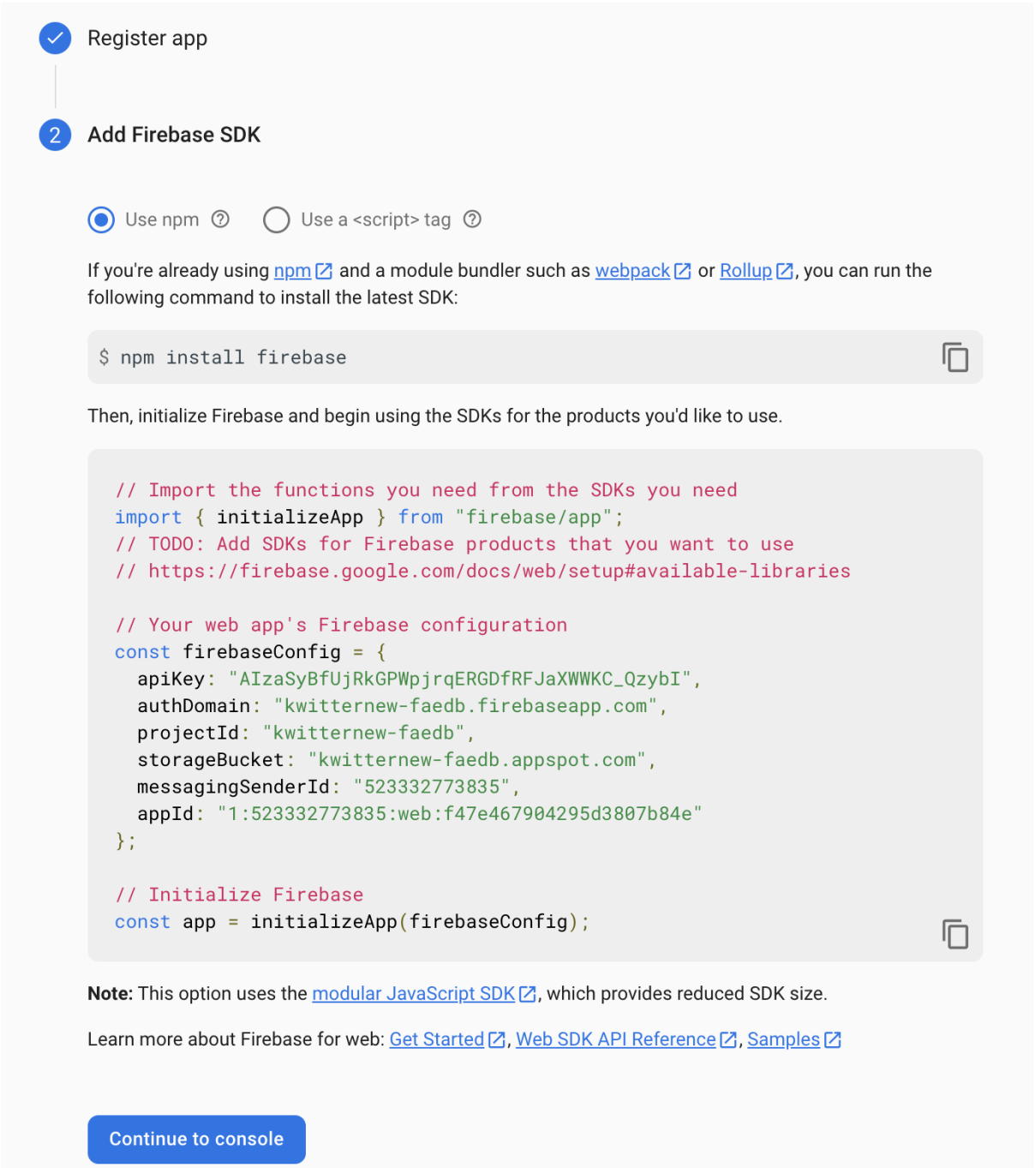
3. So now select the project which you have created in the previous class, you will be redirected to the main page of your project there click on the web symbol.



4. Now give the name to the app, and press the **Register app** button.

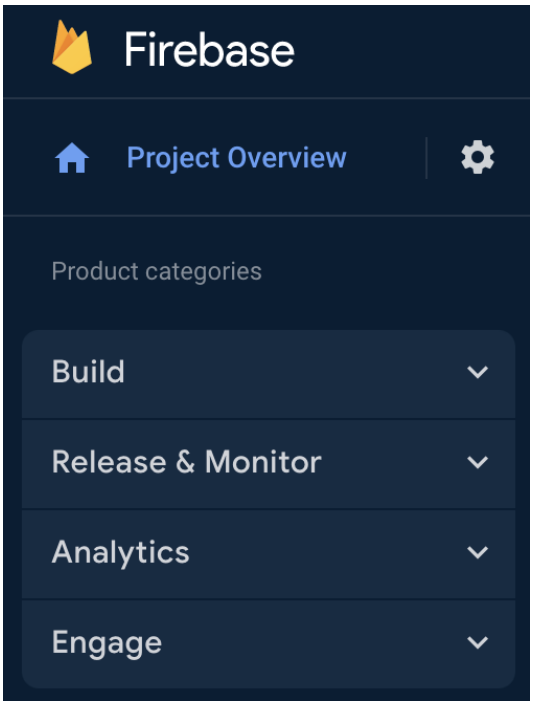


5. Now it will generate firebase links. Once done, click on the **"Continue to Console"** button.

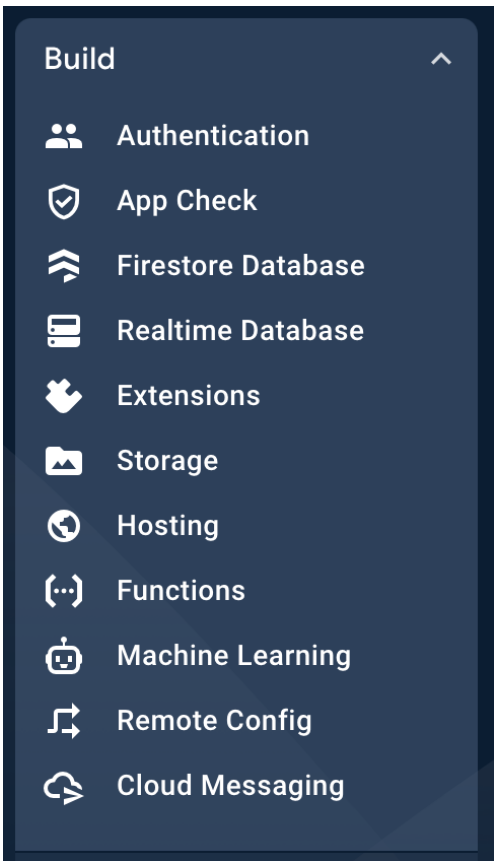


6. On the console select the project name which you have created in the previous class.

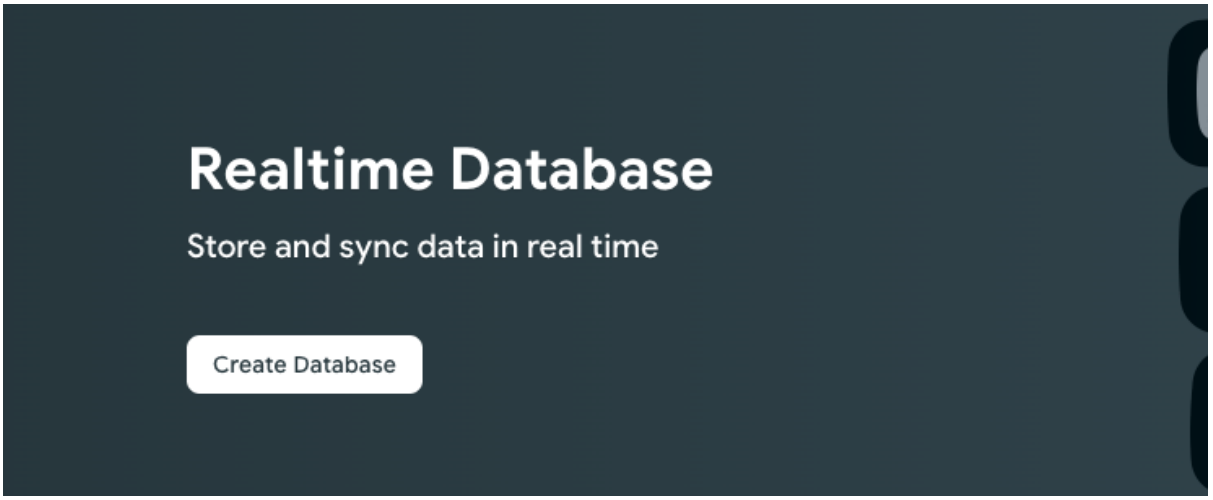
7. Then on left hand side click on **Build**:



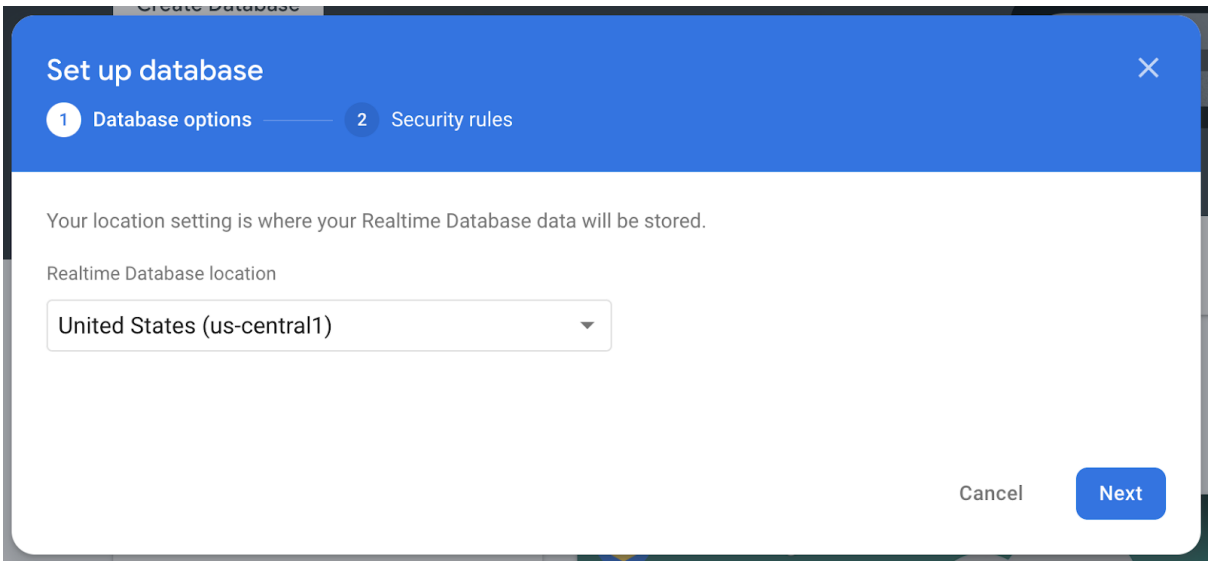
8. Inside the “**Build**” product category click on **Realtime Database**:



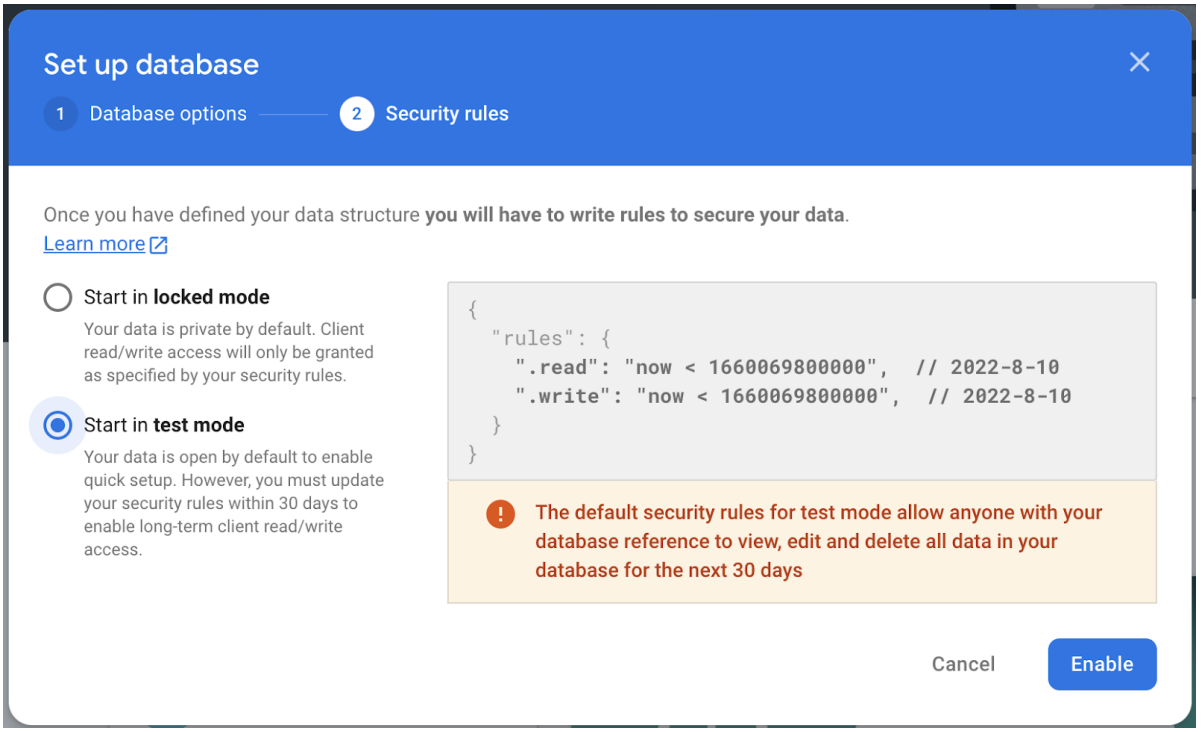
9. Then click on **Create Database**:



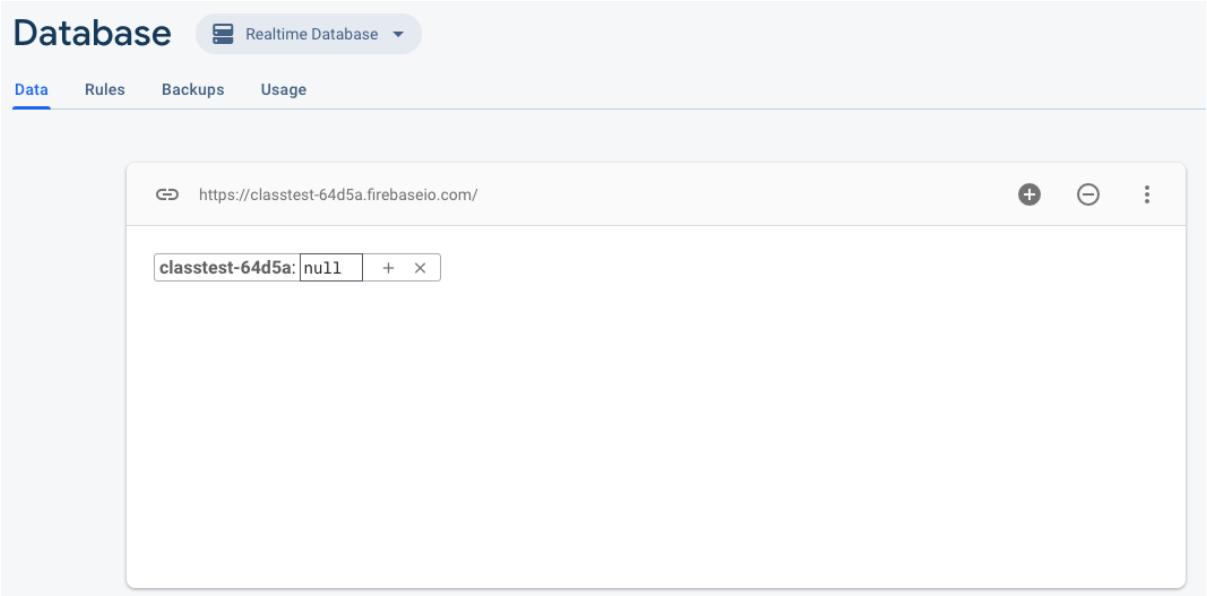
10. Then select the location of your Realtime Database as **“United States**” and click on the **“Next”** button.



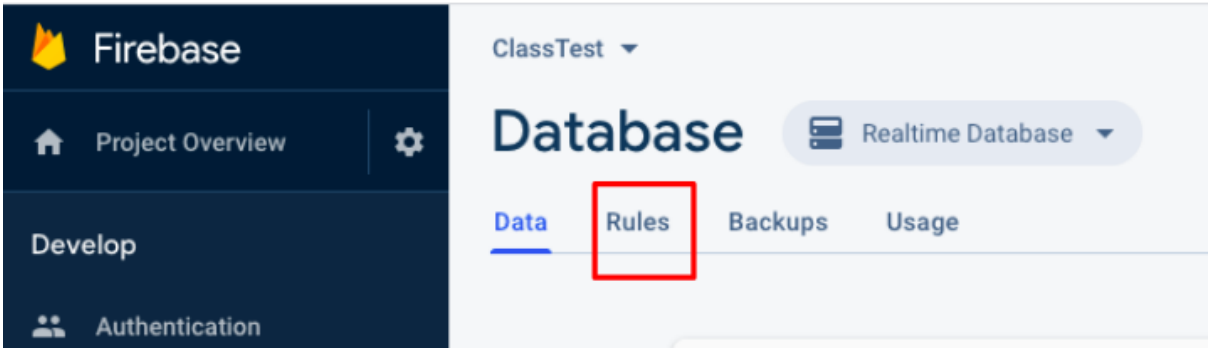
11. Then select test mode and press the **enable** button.



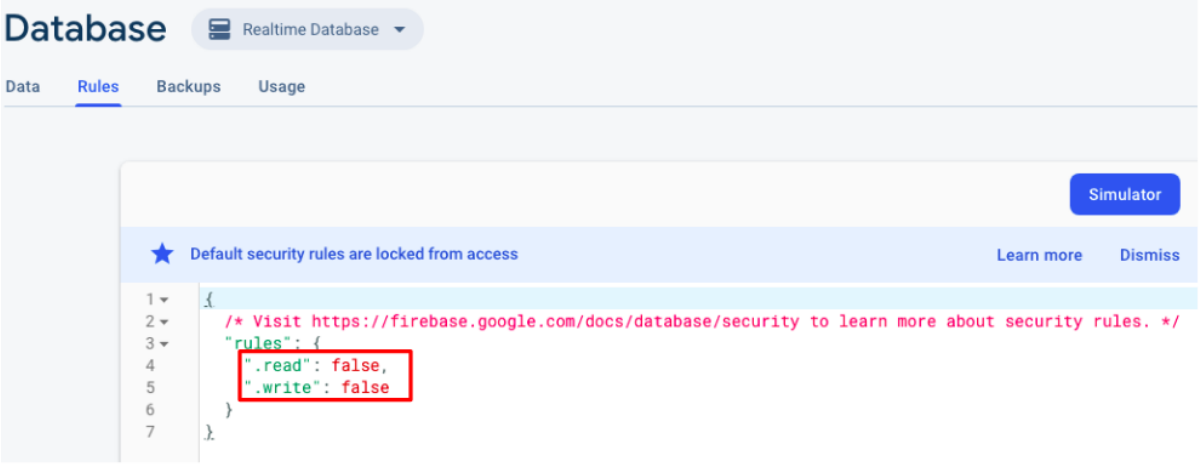
Great, we have made our database:



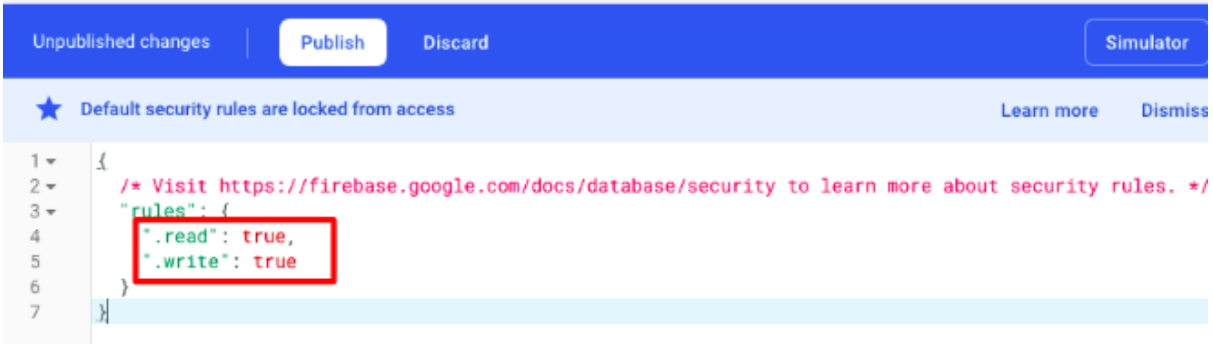
12. Now we want to read and write data in firebase, so just check the rules of reading and writing data in firebase, for that rule. Click **Rules**:



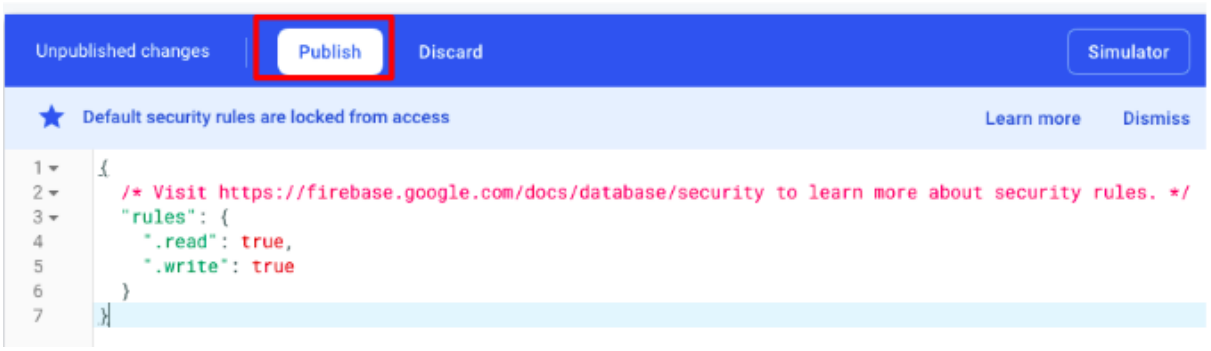
- If the rules are **false** like this:



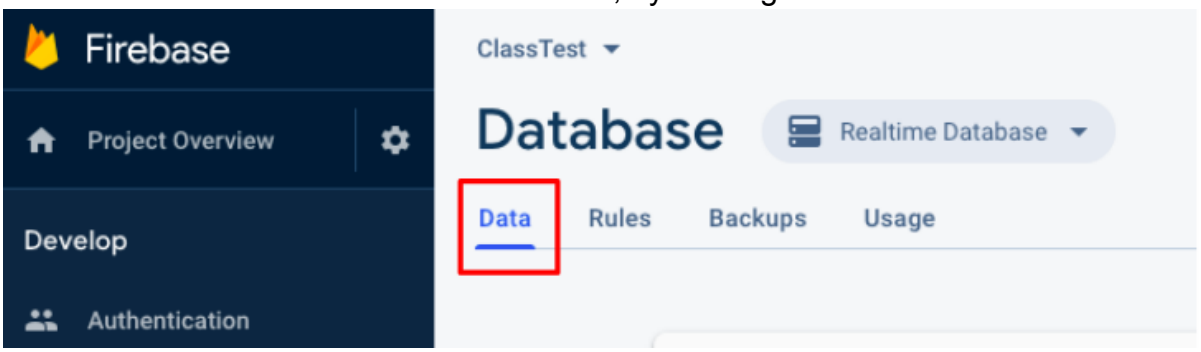
- Then double click on the **false**, and change it to **true**, like this:



- Then click on **Publish**:



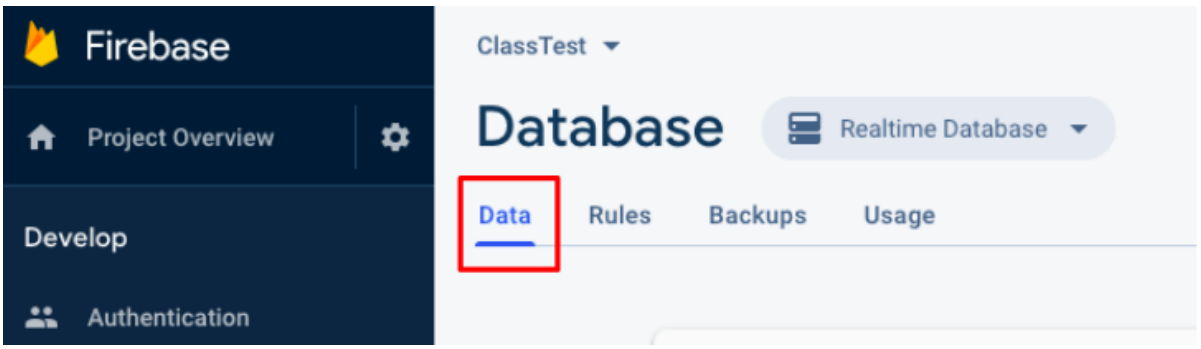
- Then come back on database, by clicking on **Data**:



- If the rules are **not false** like this:

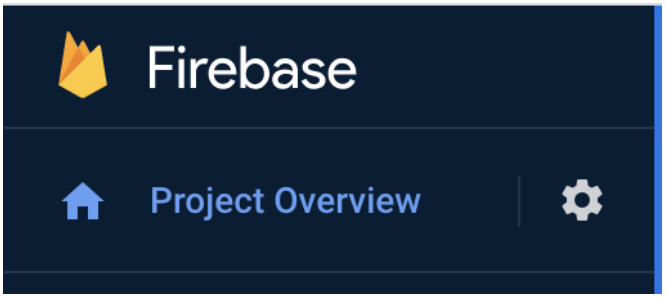
```
{
  "rules": {
    ".read": "now < 1601058600000",   // 2020-9-26
    ".write": "now < 1601058600000",   // 2020-9-26
  }
}
```

having **now** keyword and some number, then let it be and come back on database, by clicking on **Data:**

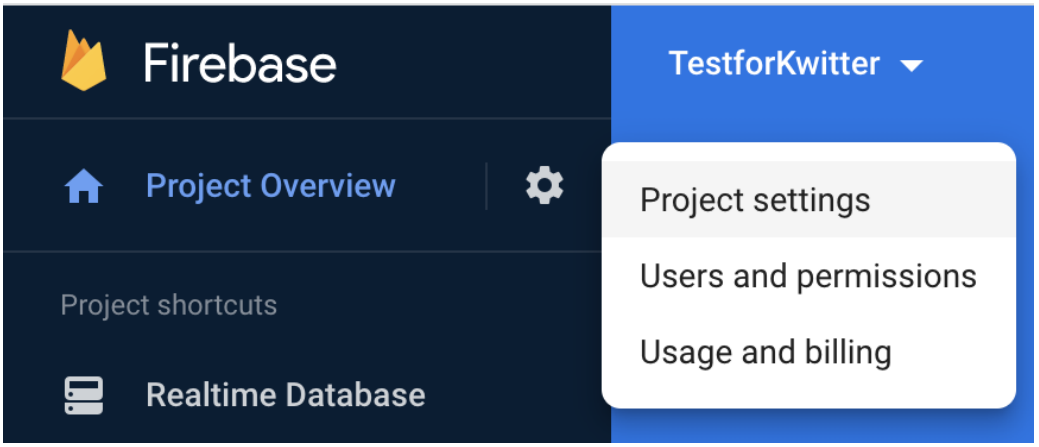


Now to get the updated database link with databaseURL to perform the following steps.

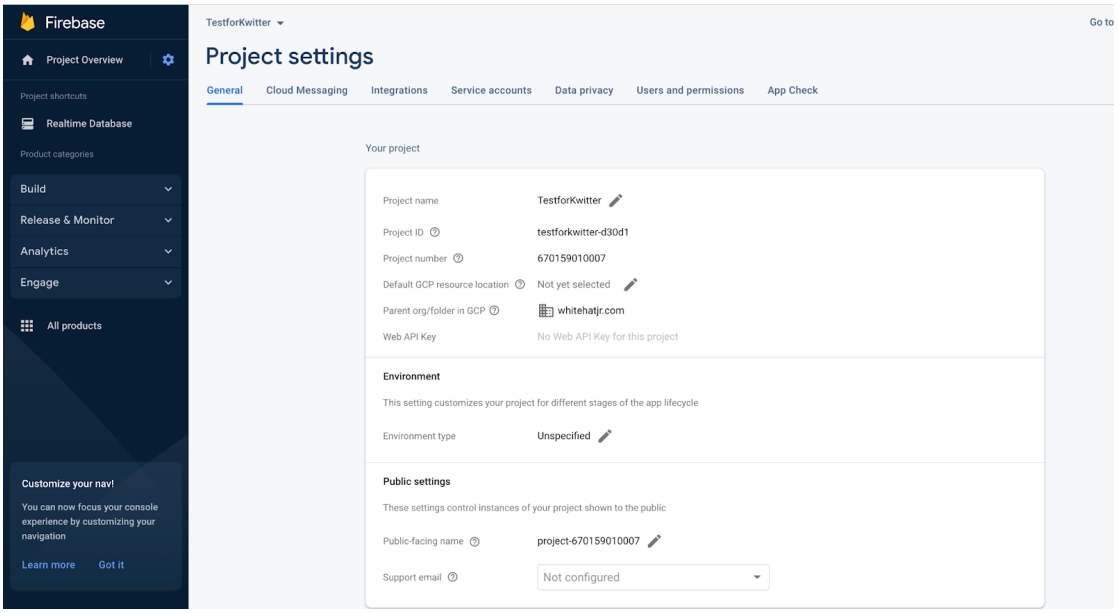
1. On the left slide of the console click on the Gear Icon of the **Project Overview** tab.



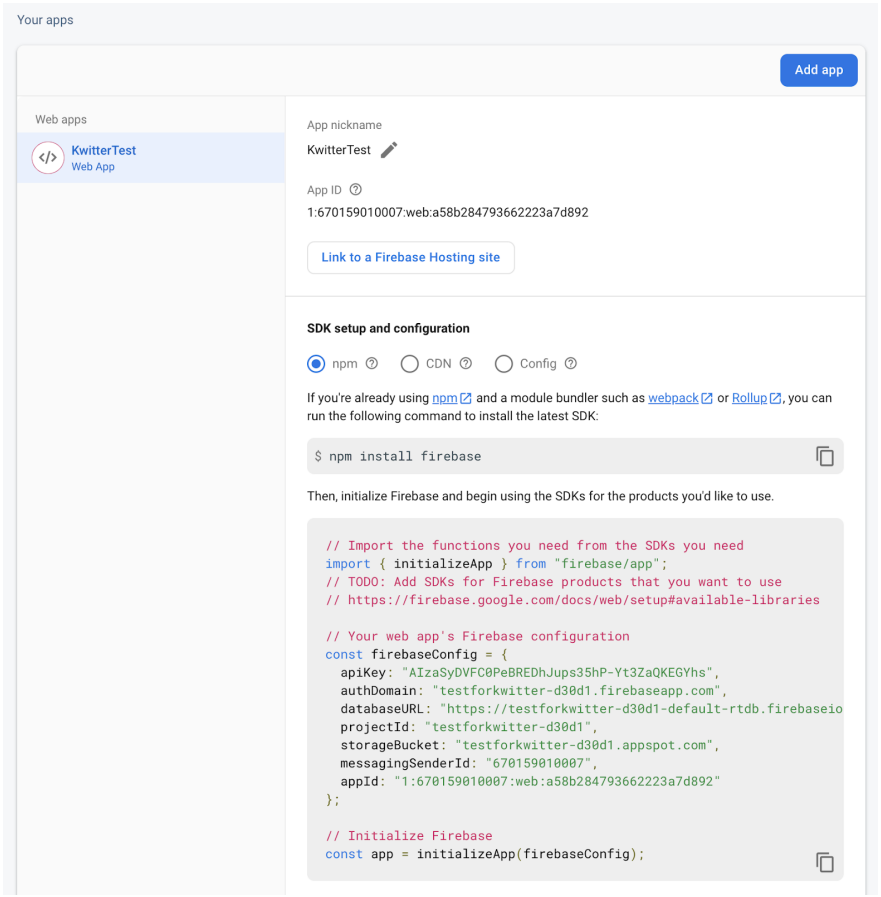
2. Then click on the **“Project Setting”**



3. On the Project setting page, scroll down to **“You apps”**



4. Here you can see the code for “**SDK setup and Configuration”**



5. You need to copy only the marked part of the firebase links and paste it into **kwitter_room**.js file at the starting of the file like the below image.

Then, initialize Firebase and begin using the SDKs for the products you'd like to use.

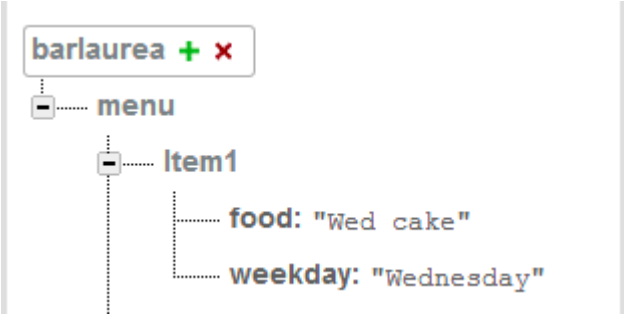
```
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
const firebaseConfig = {
  apiKey: "AIzaSyDVFC0PeBREDhJups35hP-Yt3ZaQKEGYhs",
  authDomain: "testforkwitter-d30d1.firebaseapp.com",
  databaseURL: "https://testforkwitter-d30d1-default-rtdb.firebaseio
  projectId: "testforkwitter-d30d1",
  storageBucket: "testforkwitter-d30d1.appspot.com",
  messagingSenderId: "670159010007",
  appId: "1:670159010007:web:a58b284793662223a7d892"
};

// Initialize Firebase
const app = initializeApp(firebaseConfig);
```

Your code will look like this in the **kwitter_room.js** file, it is present in the kwitter folder, this folder has been downloaded by the student.

kwitter_room.js

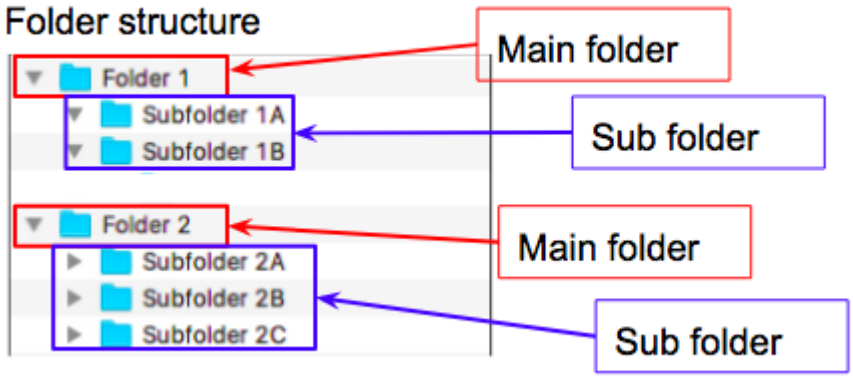
Explaining firebase database structure

Example of firebase database structure.

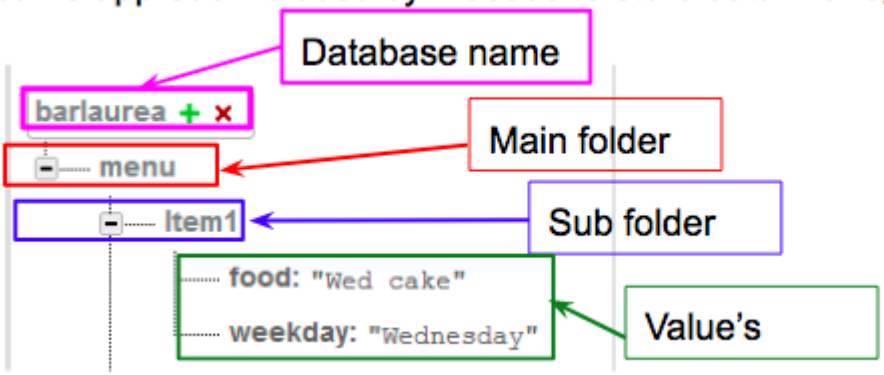


The explanation of the above data structure is given in the below image-

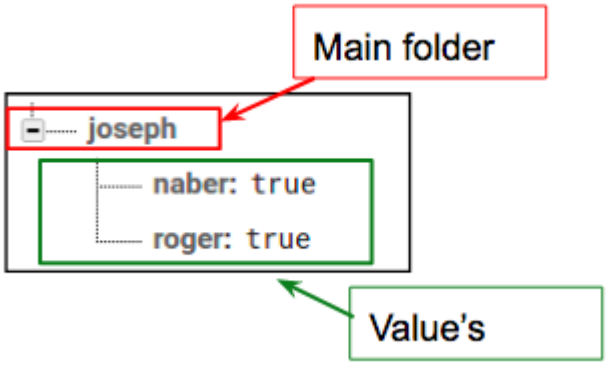
The structure of firebase base database is same like the folder structure



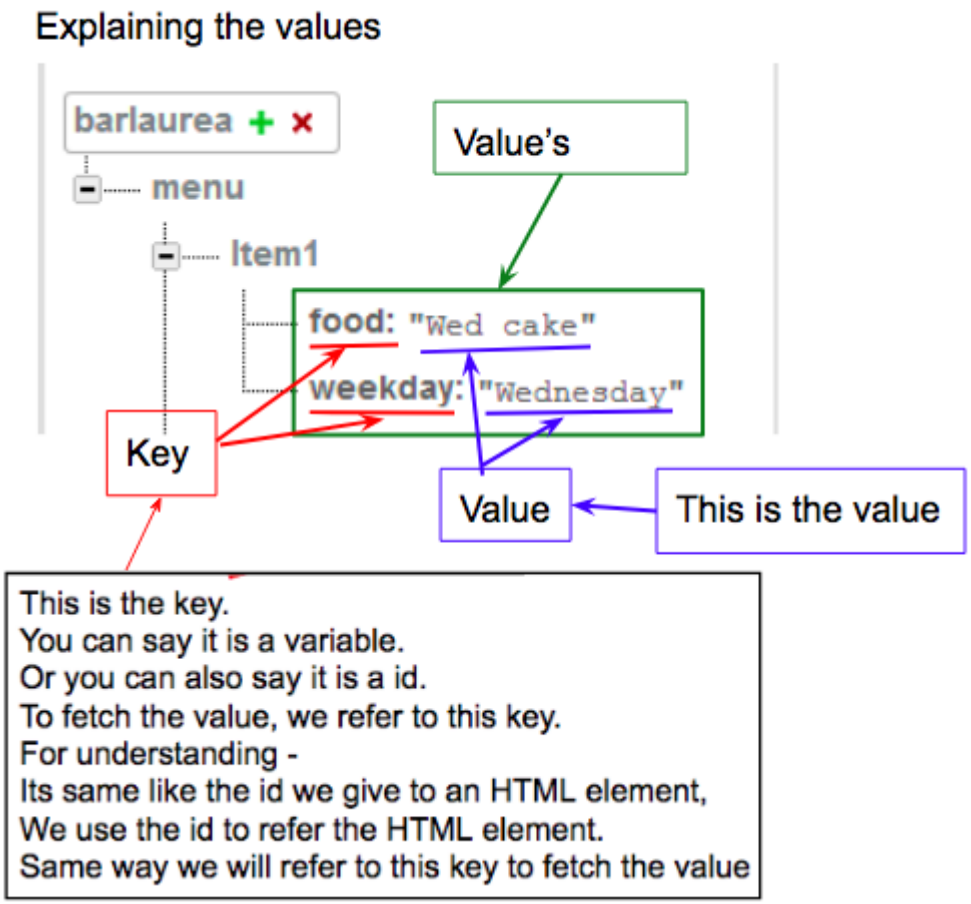
So there are folder and inside this folder there are sub folders, this same approach is used by firebase to store data. For eg -



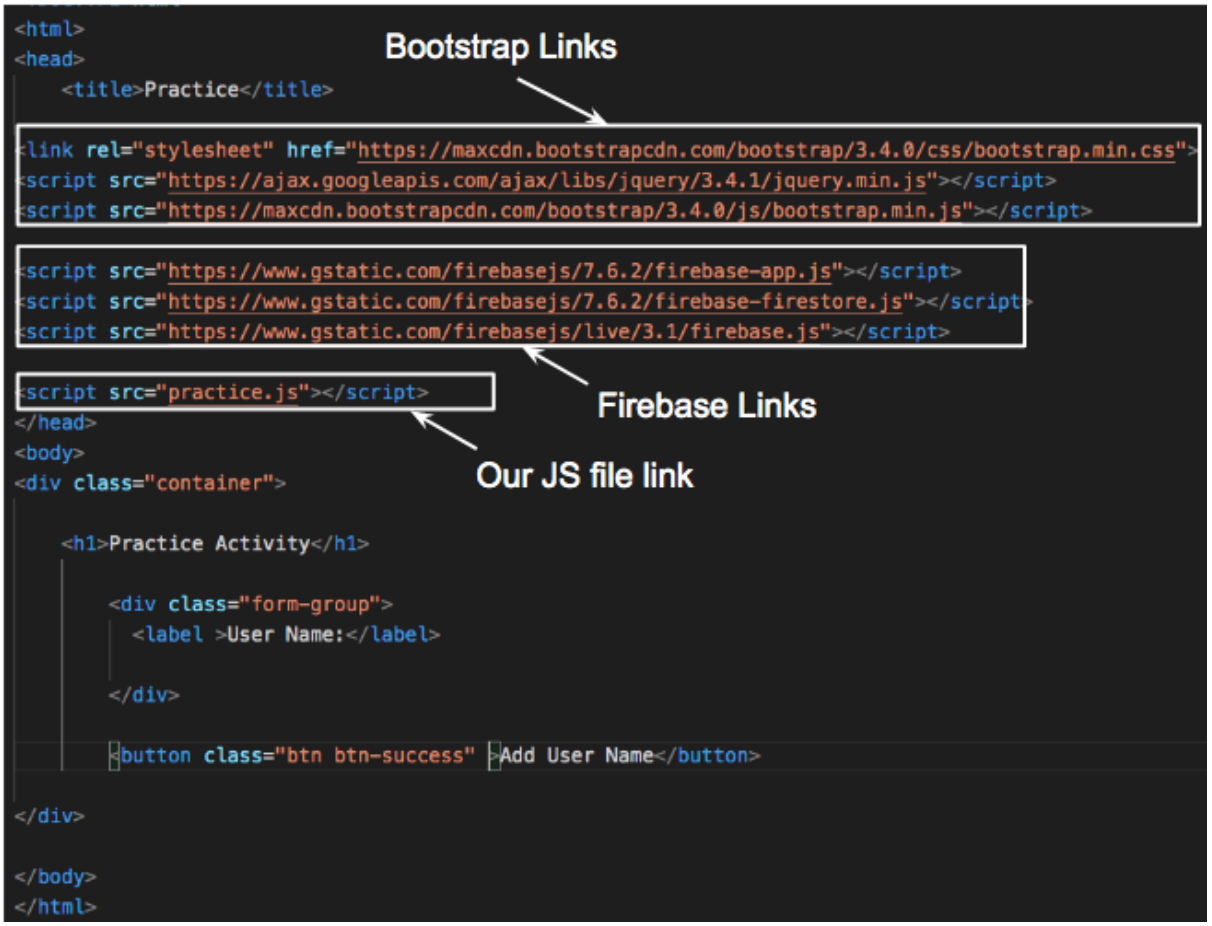
It is not compulsory that the **main folder** should have a **sub folder** and then the **sub folder** have the values like the above image.
The main folder can have the values directly, like this -



Explaining the values



The following code is already given to the student in the student-activity **practice.html**




```
<html>
<head>
    <title>Practice</title>

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/js/bootstrap.min.js"></script>

<script src="https://www.gstatic.com/firebasejs/7.6.2/firebase-app.js"></script>
<script src="https://www.gstatic.com/firebasejs/7.6.2/firebase-firestore.js"></script>
<script src="https://www.gstatic.com/firebasejs/live/3.1/firebase.js"></script>

<script src="practice.js"></script>
</head>
<body>
<div class="container">

    <h1>Practice Activity</h1>

        <div class="form-group">
          <label >User Name:</label>

        </div>

        <button class="btn btn-success" >Add User Name</button>

</div>

</body>
</html>
```

Complete code for practice.html

```html
<html>
<head>
    <title>Practice</title>

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/js/bootstrap.min.js"></script>

<script src="https://www.gstatic.com/firebasejs/7.6.2/firebase-app.js"></script>
<script src="https://www.gstatic.com/firebasejs/7.6.2/firebase-firestore.js"></script>
<script src="https://www.gstatic.com/firebasejs/live/3.1/firebase.js"></script>

<script src="practice.js"></script>
</head>
<body>
<div class="container">

    <h1>Practice Activity</h1>

        <div class="form-group">
          <label >User Name:</label>
        <input type="text" id="user_name" class="form-control" placeholder="User Name">
        </div>

        <button class="btn btn-success" onclick="addUser()">Add User Name</button>

</div>

</body>
</html>
```

Complete the code for practice.js

```javascript
// PASTE YOUR FIREBASE LINK HERE

function addUser()
{
  user_name = document.getElementById("user_name").value;
  firebase.database().ref("/").child(user_name).update({
    purpose : "adding user"
  });
}
```