Table of Contents

[**PURPOSE** 2](#_Toc24008063)

[**PREQUISITE** 2](#_Toc24008064)

[**HOW TO CHECK THE INSTALLATIONS?** 3](#_Toc24008065)

[***QUESTION 1:*** 3](#_Toc24008066)

[***QUESTION 2:*** 3](#_Toc24008067)

[***QUESTION 3:*** 3](#_Toc24008068)

[**OUTLINE:** 4](#_Toc24008069)

[**1.** **CREATE A PROJECT IN FIREBASE** 5](#_Toc24008070)

[**2.** **CREAT AN APP INSIDE THE FIREBASE** 7](#_Toc24008071)

[**3.** **CONNECT YOUR APP IN YOUR LOCAL MACHINE WITH FIREBASE** 8](#_Toc24008072)

[**4.** **CREATE A REALTIME DATABASE** 14](#_Toc24008073)

[**5.** **DEFINE A STRUCTURE FOR THE DATABASE** 15](#_Toc24008074)

[**6.** **SAVE THE USER PROVIDED DATA INTO THE FIREBASE** 19](#_Toc24008075)

[**7.** **TEST WHETHER THE DATA IS SAVED IN THE DATABASE** 21](#_Toc24008076)

[**8.** **CHANGE THE FIREBASE REFERENCE FIELDS** 22](#_Toc24008077)

[**9.** **PROVIDE THE VALUES FOR SUBMISSION** 24](#_Toc24008078)

[**10.** **WHAT TO SUBMIT** 24](#_Toc24008079)

# **PURPOSE**

Learn how to insert the data provided by the user into firebase database.

# **PREQUISITE**

1. Node JS
2. NPM
3. Firebase tools

Refer to the installation guide if you did not install them earlier

# **HOW TO CHECK THE INSTALLATIONS?**

## ***QUESTION 1:***

How to check whether you have installed the node js or not?

Step 1:

Open command prompt or terminal and type the following command

node -v

Step 2:

If you see a number, then the installation is correct.

## ***QUESTION 2:***

How to check whether you have installed the npm or not?

Step 1:

Open command prompt or terminal and type the following command

npm -v

Step 2:

If you see a number, then the installation is correct.

## ***QUESTION 3:***

How to check whether you have installed the firebase or not?

Step 1:

Open command prompt or terminal and type the following command

Firebase -V

Step 2:

If you see a number, then the installation is correct.

# **OUTLINE:**

1. Create a project in firebase
2. Create an app inside the project in firebase
3. Connect your app in your local machine with firebase
4. Create a realtime database
5. Define a structure of the database
6. Save the user provided data into the firebase
7. Test whether the data is saved in the database
8. Change the firebase reference fields
9. Provide the values for submission
10. What to Submit?

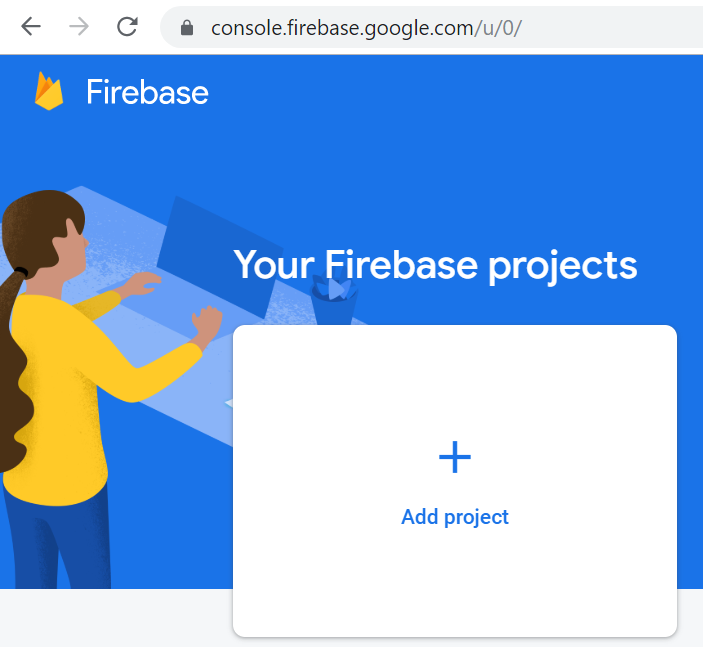
# **CREATE A PROJECT IN FIREBASE**

Step 1:

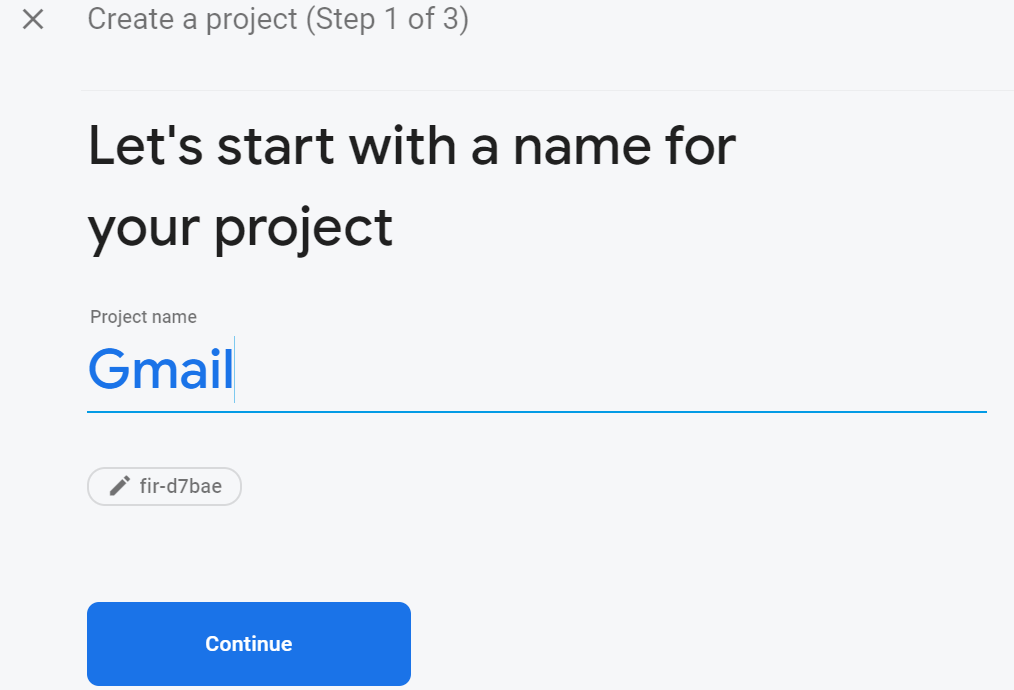
1a) Go to console.firebase.google.com by clicking the following url

Url: <https://console.firebase.google.com/u/0/>

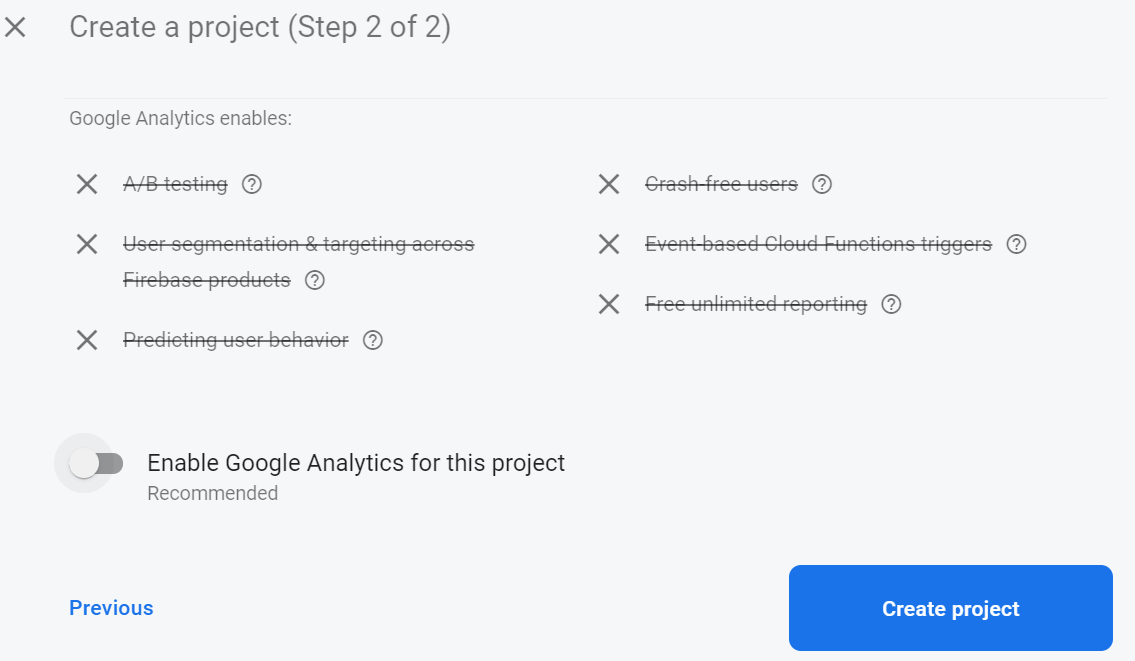
1b) Create a project by clicking on “add project”



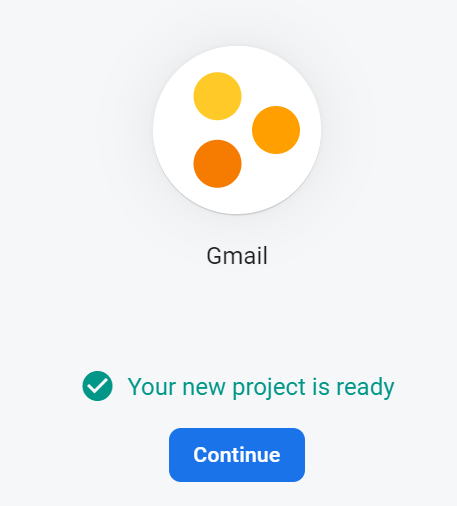
Step 2: Give a name for your project (Example: Gmail) and click on continue as shown below



Step 3: Disable Google Analytics for this project and click “Create project” as shown below

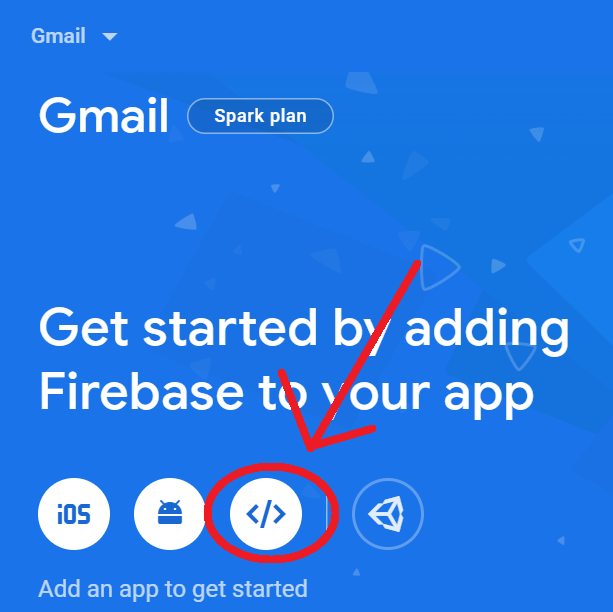


Step 4: Click continue in the below screen.

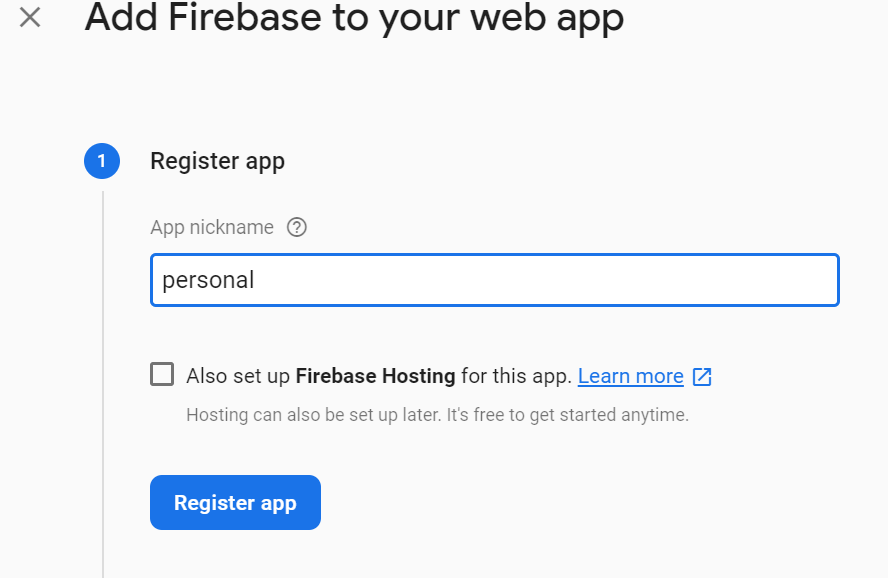


# **CREAT AN APP INSIDE THE FIREBASE**

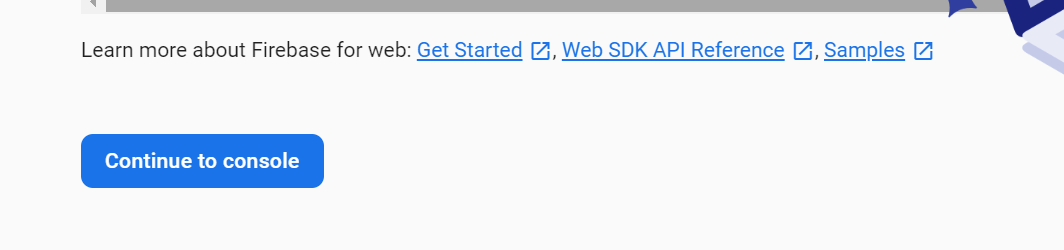
Step 5: In the screen below, click on the pointed icon, which is called as web



Step 6: Next give the name of your app (Example: personal) and click Register app button as shown below

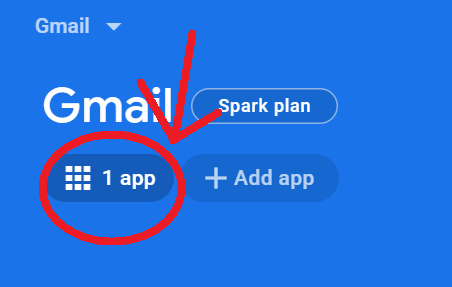


Step 7: Click on the continue to console button

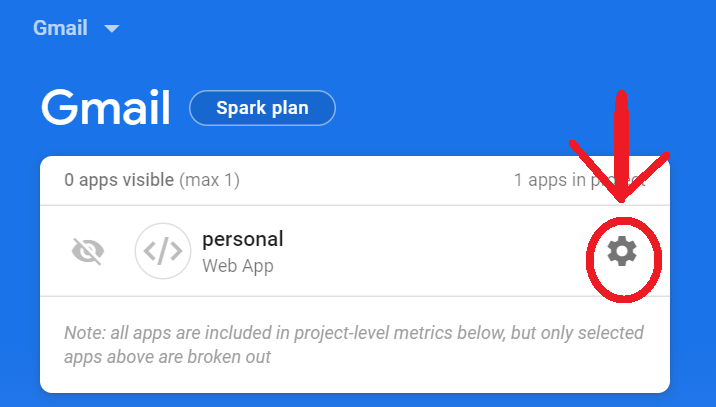


# **CONNECT YOUR APP IN YOUR LOCAL MACHINE WITH FIREBASE**

Step 8: Click on 1 app as shown below

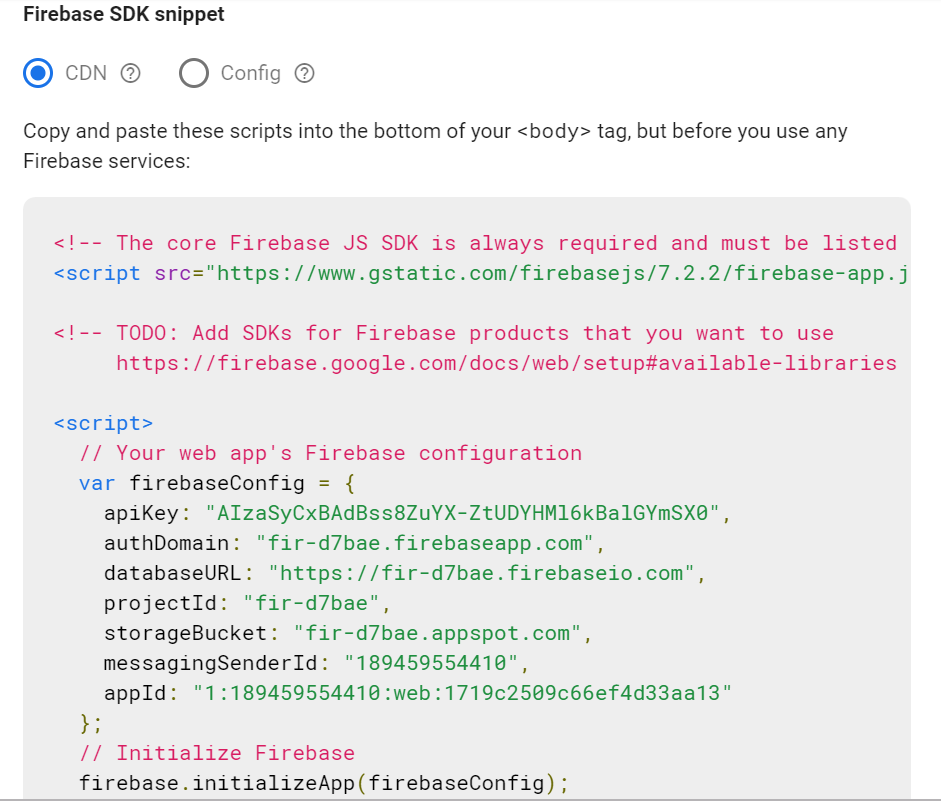


Step 9: Click on the app settings as shown below



Step 10: Scroll down to find “Firebase SDK snippet” in your firebase

Step 11: Click on CDN in your firebase



Step 12: Click on the below icon to copy the code in your firebase



Step 13: Paste the copied code at the end of the body tag in your index.html (your login form)

Step 14: Add the following two references in the index.html body tag after the <script src="https://www.gstatic.com/firebasejs/7.2.3/firebase-app.js"></script>.

<script src="https://www.gstatic.com/firebasejs/6.1.1/firebase-auth.js"></script>

  <script src="https://www.gstatic.com/firebasejs/6.1.1/firebase-database.js"></script>

Example: Your index.html code should look like this

<html>

<head>

  <title>Main Page</title>

</head>

<body>

  <form id="details\_div" class="main-div" style="display:block">

    <h3>Please Enter your Details</h3><br>

    Student Name: Hema<br>

    Student ID: 013343343 <br>

    Database ID: 1213 <br><br>

    Please enter your first name: <input type="text" placeholder="First Name..." id="firstname" required="true"/><br>

    Please enter your last name: <input type="text" placeholder="Last Name..." id="lastname" required="true"/><br>

    Please enter your student id: <input type="text" placeholder="Student ID..." id="sid" required="true"/><br>

    Please enter your class number (01 or 02):<input type="text" placeholder="Class Number..." id="asgnumber" required="true"/><br>

    <button type = "submit" onclick="send()">Send</button><br>

    Note: Please input all the fields. Provide your complete student id. Please provide your name as in the SJSU records.

  </form>

  <script src="https://www.gstatic.com/firebasejs/7.2.3/firebase-app.js"></script>

  <script src="https://www.gstatic.com/firebasejs/6.1.1/firebase-auth.js"></script>

  <script src="https://www.gstatic.com/firebasejs/6.1.1/firebase-database.js"></script>

  <script>

    // Your web app's Firebase configuration

    var firebaseConfig = {

    apiKey: "AIzaSyDVXrE7oMkNJoR1MBOezgwKCRH6HoryyCY",

    authDomain: "assignment4-17a59.firebaseapp.com",

    databaseURL: "https://assignment4-17a59.firebaseio.com",

    projectId: "assignment4-17a59",

    storageBucket: "assignment4-17a59.appspot.com",

    messagingSenderId: "834849354363",

    appId: "1:834849354363:web:b961219f21a5bb228ce8de"

  };

    // Initialize Firebase

    firebase.initializeApp(firebaseConfig);

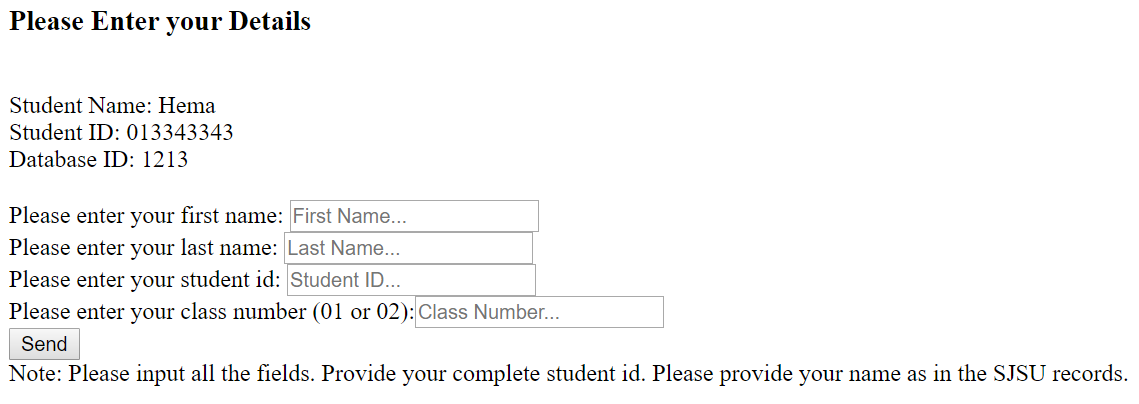
  </script>

  <script src="index.js"></script> </body> </html>

Note 1: In the above code apiKey, authDomain, databaseURL, projectId, storageBucket, messagingSenderId, and appId values must be different and should be your firebase app values.

Note 2: In the index.html code you need to specify your name, id and database id (this can be found in the later step 43) as shown below

**Example** of index.html User Interface in a browser:



Step 15: Create an index.js file and copy the below code

const dbRef = firebase.database().ref();

const detailsRef = dbRef.child('details');

detailsRef.on("child\_added", function(snapshot, prevChildKey) {

  var newPost = snapshot.val();

});

Step 16: After the above step write a function called “send” in the index.js file to fetch the values entered by the user and push them into the database as shown below

function send(){

  var first = document.getElementById("firstname").value;

  var last = document.getElementById("lastname").value;

  var studentid = document.getElementById("sid").value;

  var classnumber = document.getElementById("asgnumber").value;

  detailsRef.push().set({

    first: first,

    last: last,

    studentid: studentid,

    asgntnumber: classnumber

  });

}

**Example:** An Example of complete code in index.js file should look like this

const dbRef = firebase.database().ref();

const detailsRef = dbRef.child('details');

detailsRef.on("child\_added", function(snapshot, prevChildKey) {

  var newPost = snapshot.val();

});

function send(){

  var first = document.getElementById("firstname").value;

  var last = document.getElementById("lastname").value;

  var studentid = document.getElementById("sid").value;

  var classnumber = document.getElementById("asgnumber").value;

  detailsRef.push().set({

    first: first,

    last: last,

    studentid: studentid,

    asgntnumber: classnumber

  });

}

Step 17: Create a new file called index.json

Step 18: Copy the below code into the index.json file

{

  "details": [{

    "first": "Subhankar",

    "last": "Dhar",

    "studentid": "01",

    "asgntnumber": "4"

  }, {

    "first": "Hema",

    "last": "Mutyala",

    "studentid": "02",

    "asgntnumber": "4"

  }]

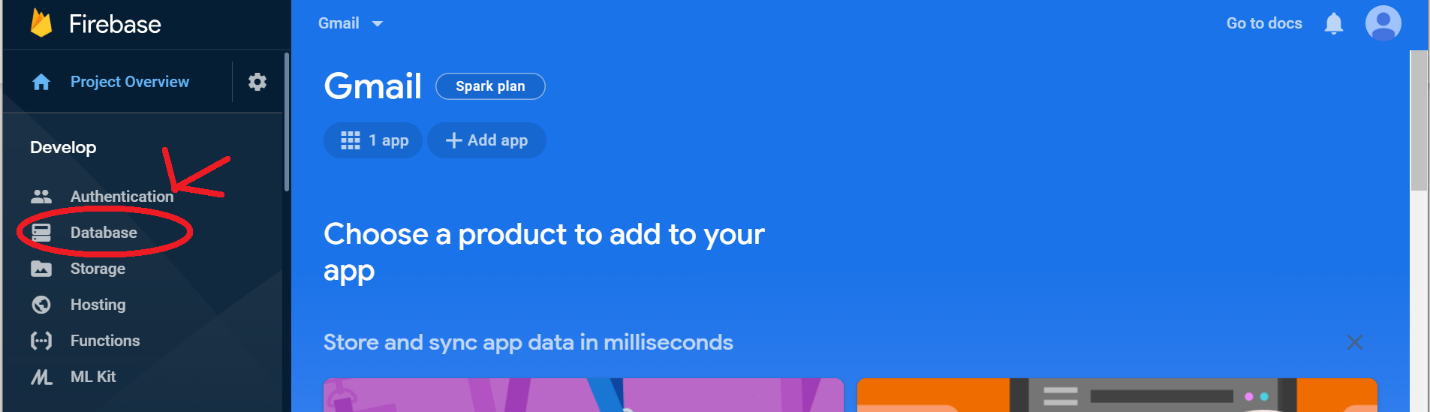
}

# **CREATE A REALTIME DATABASE**

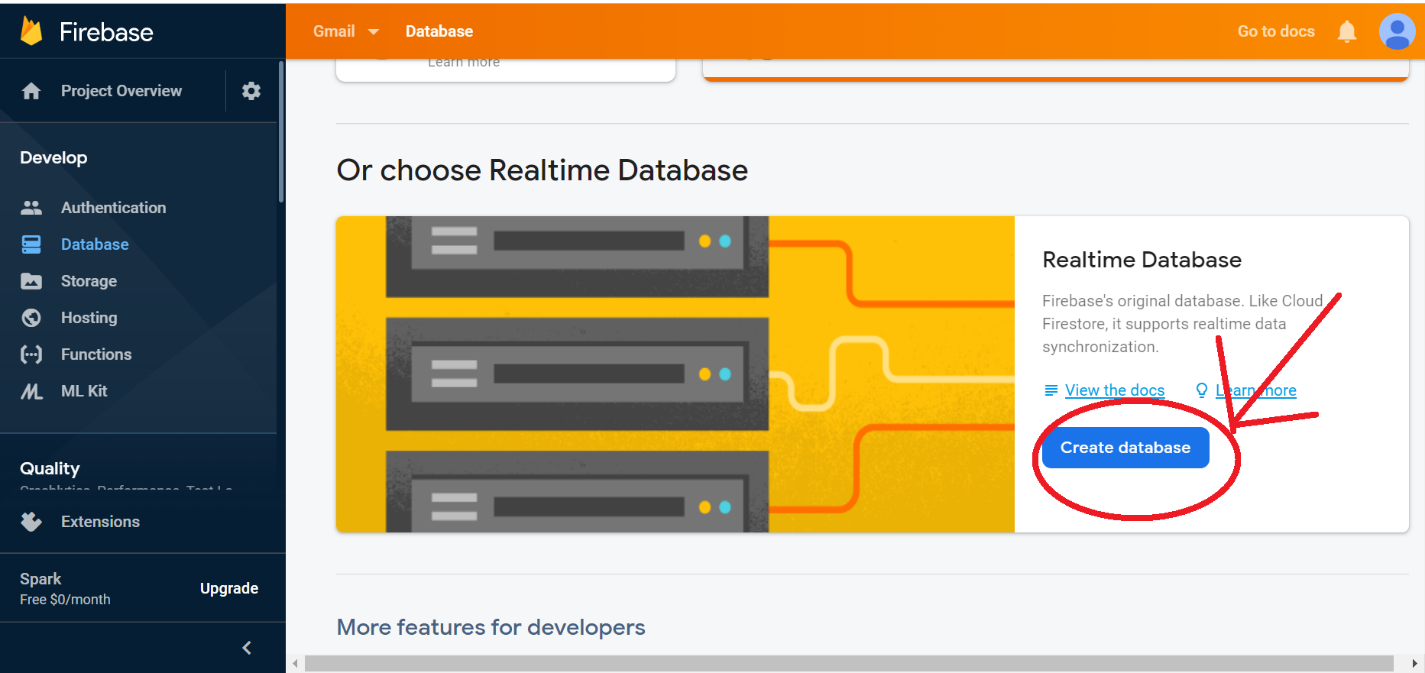
Step 19: Go to <https://console.firebase.google.com/u/0/>

Step 20: Click on your project, here it is Gmail

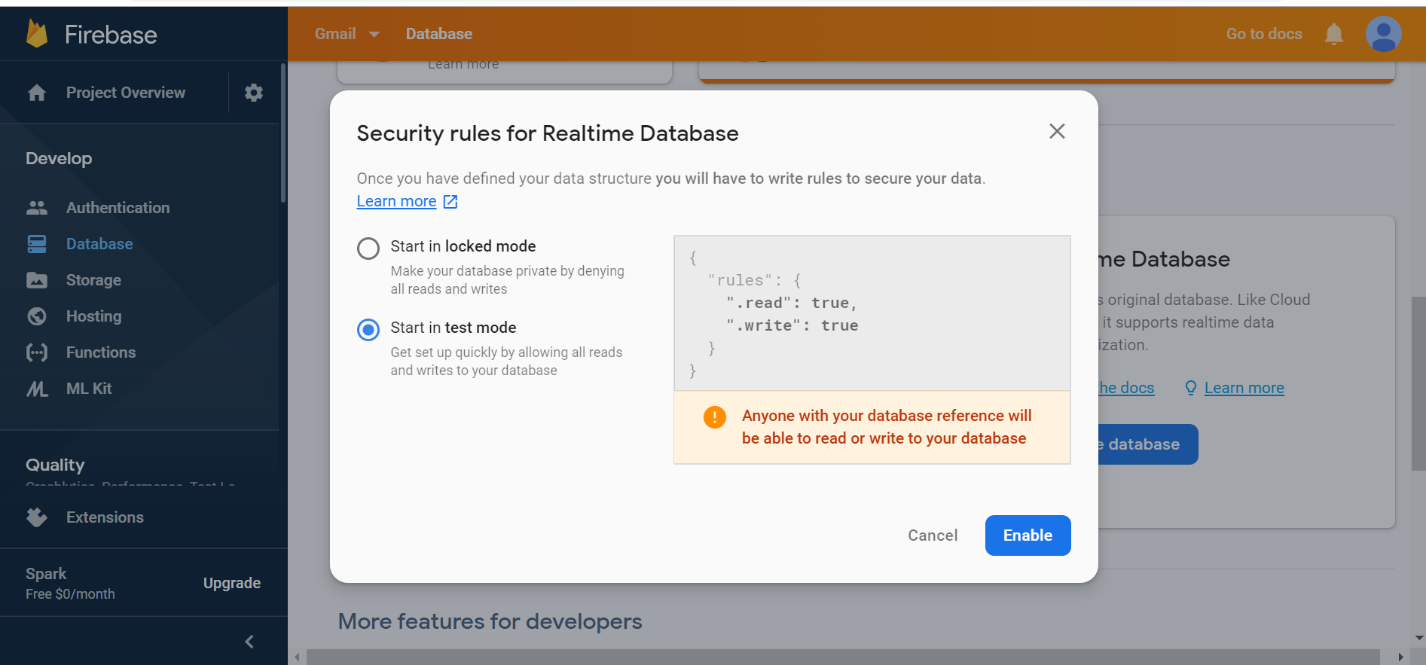
Step 21: Click on the database as shown below



Step 22: In the database page scroll down to see the below create realtime database option

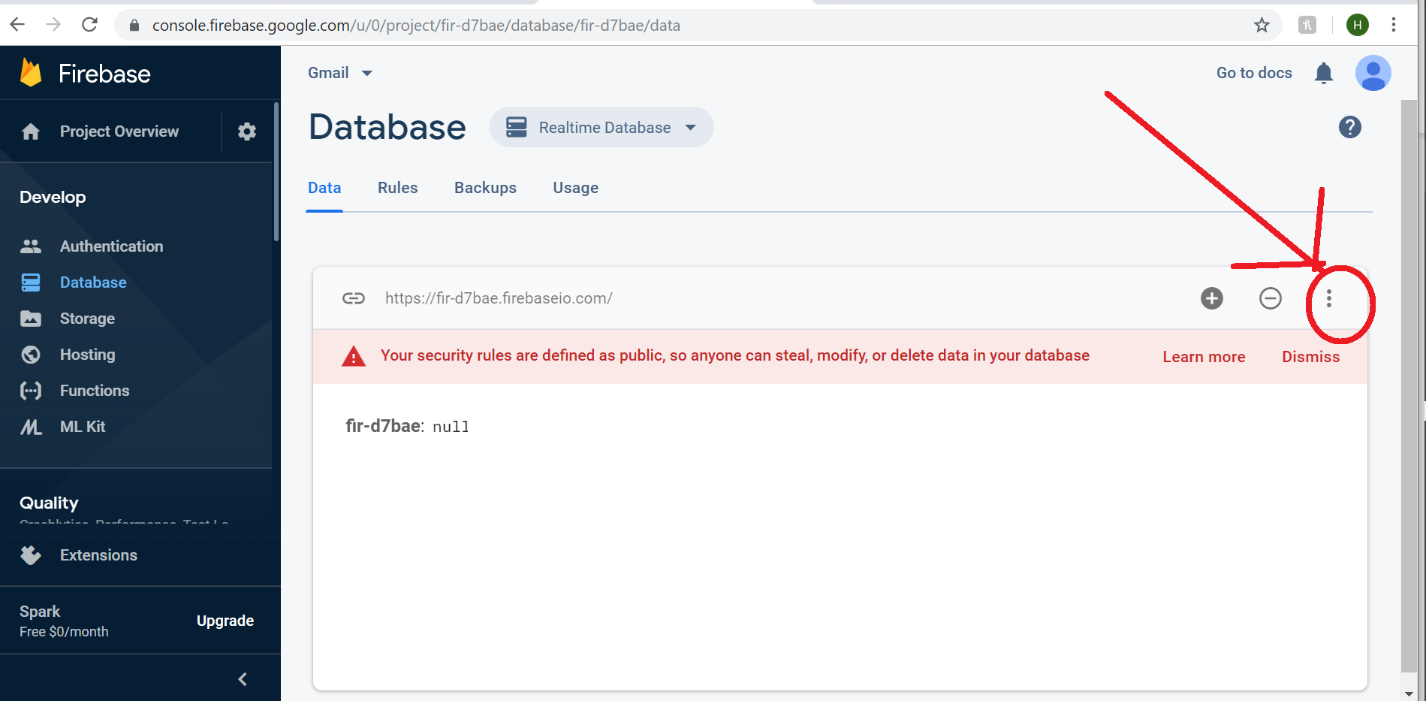


Step 23: After clicking on the create database as shown above, the below page will appear. In this page select “start in test mode” and click “Enable”.

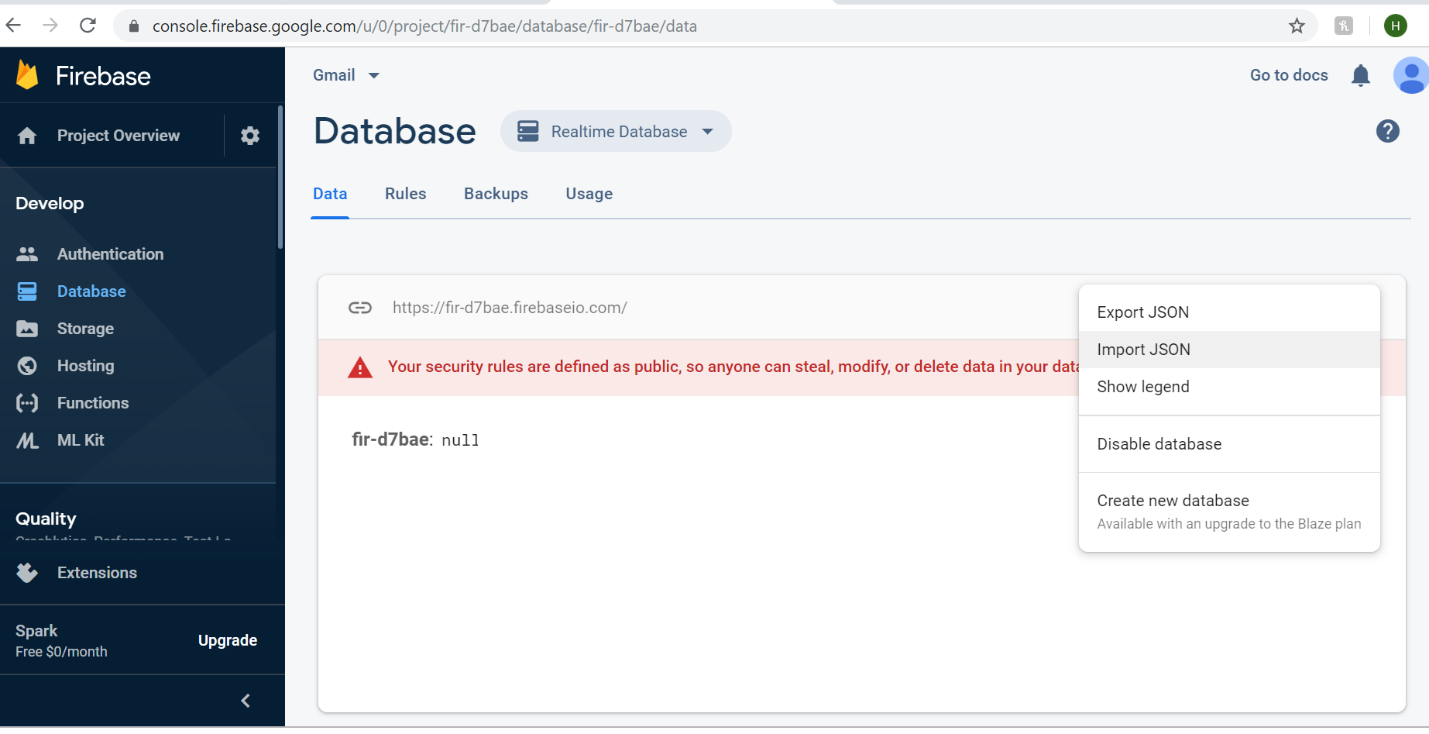


# **DEFINE A STRUCTURE FOR THE DATABASE**

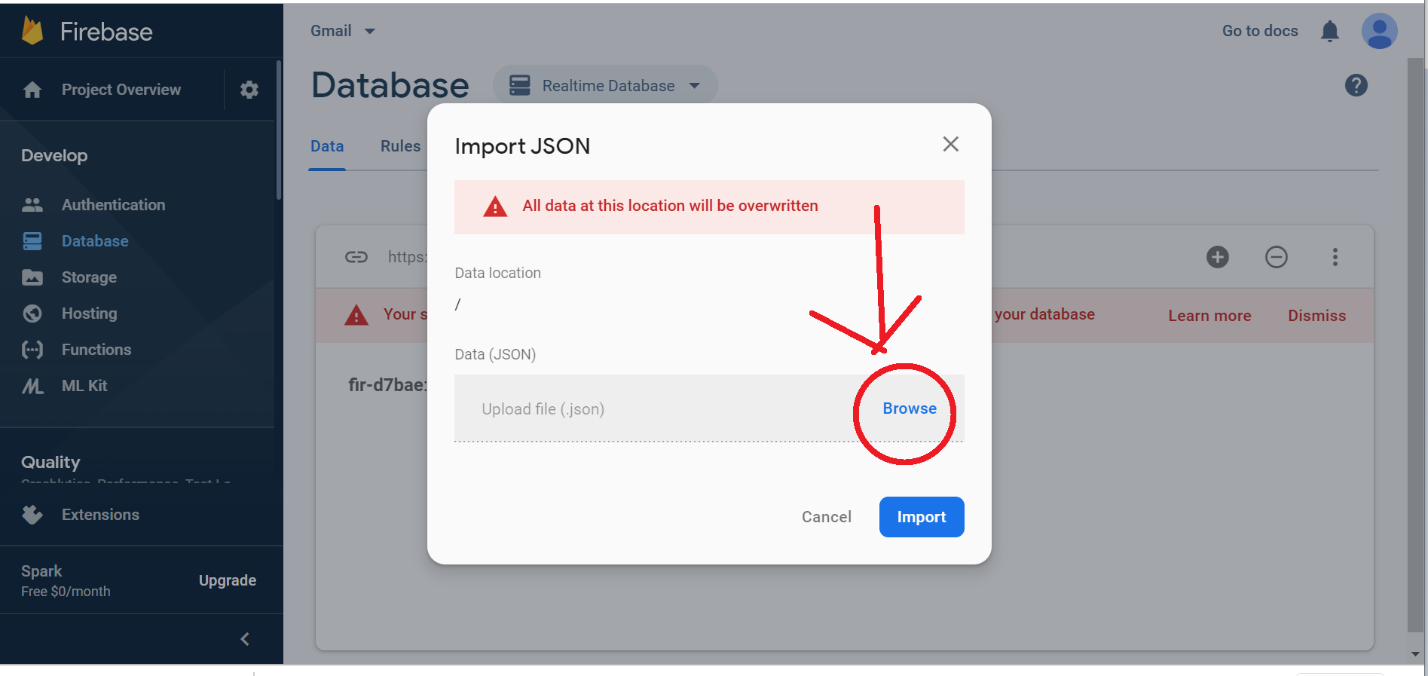
Step 24: In the next page click on 3 little dots as shown below



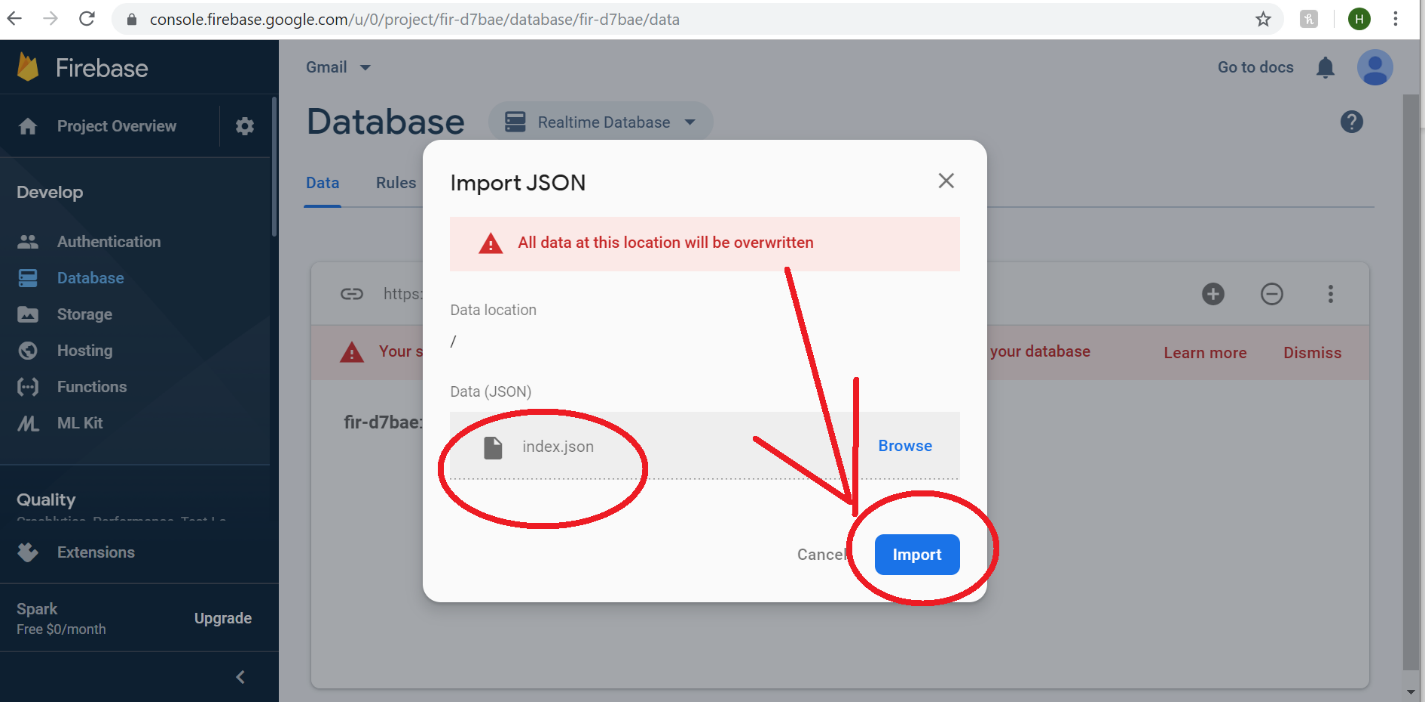
Step 25: Select import JSON , as shown below



Step 26: Click on Browse and select your index.json file

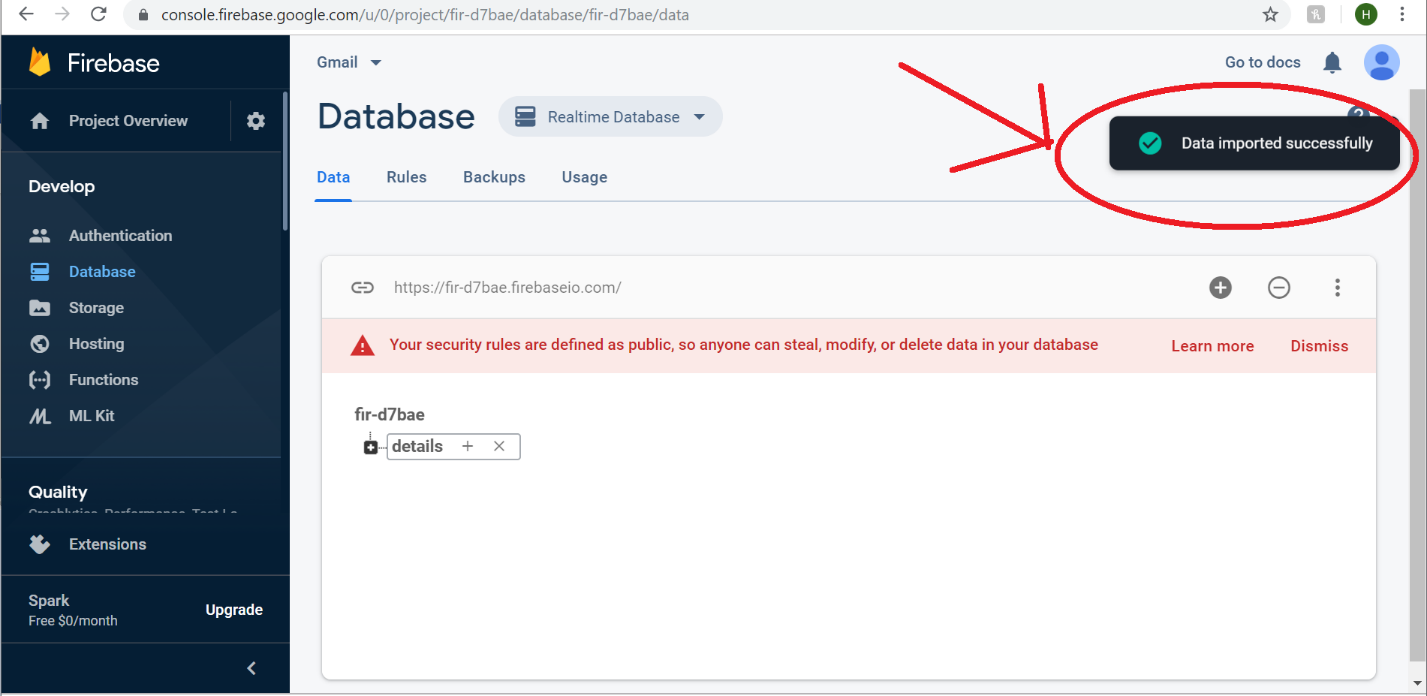


Step 27: Your index.json file should appear below



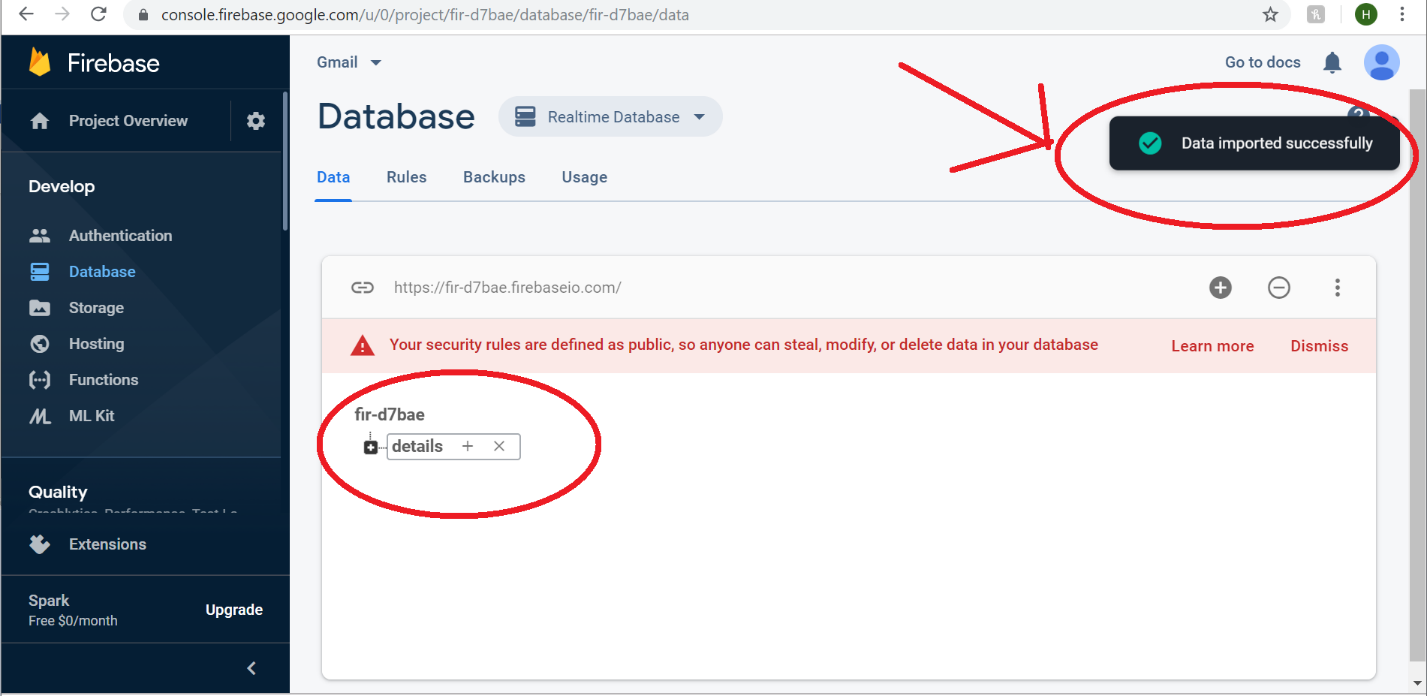
Step 28: Click on import option as shown above

Once you click on the import option as shown above you should be able to see the “data import successfully” message



This message lasts for few seconds so don’t panic if you did not notice

Step 29: Also, you should see your details table being create as shown below



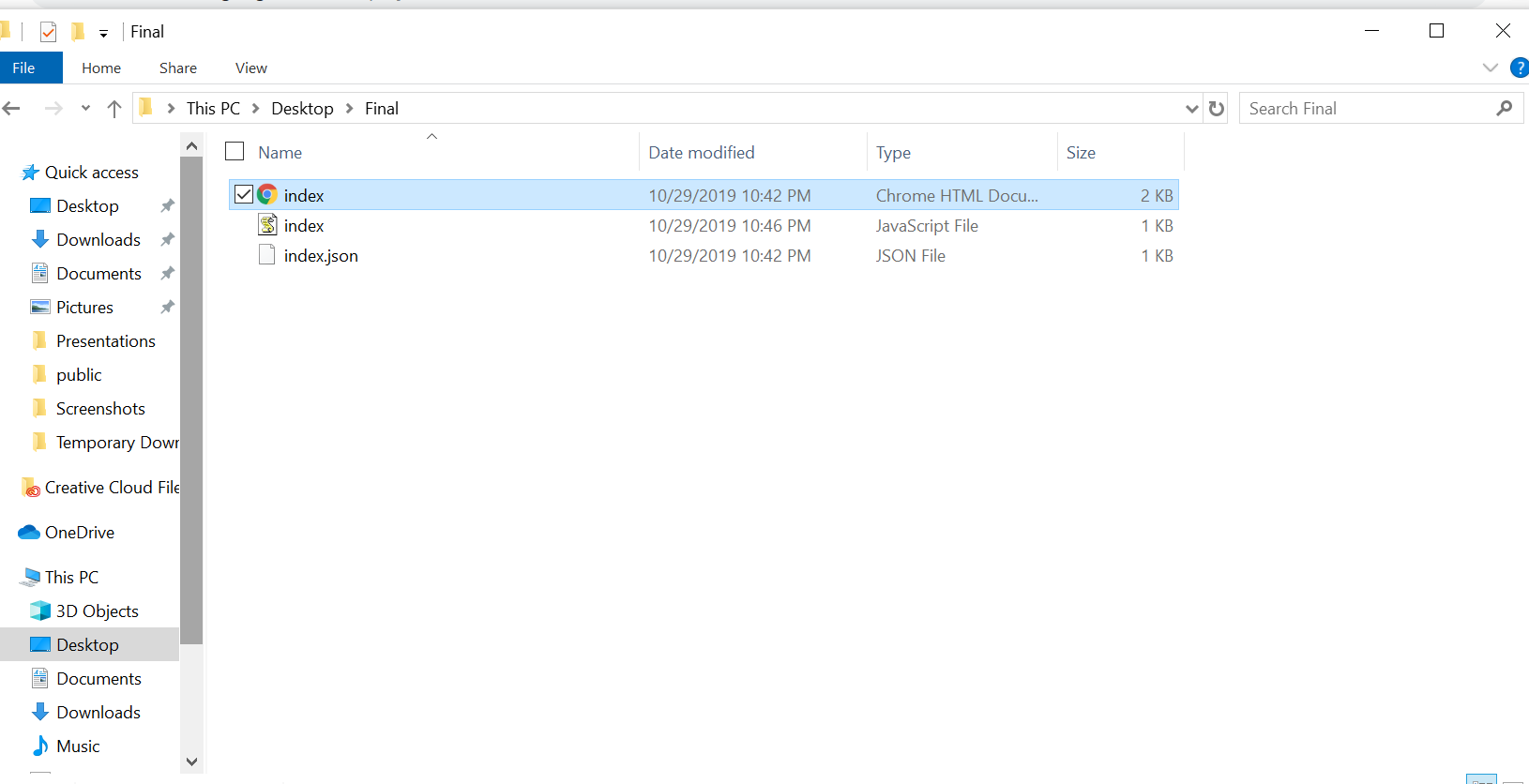
Step 30: Click on the + sign beside the details to see all the data that is being imported

It should look like below:



# **SAVE THE USER PROVIDED DATA INTO THE FIREBASE**

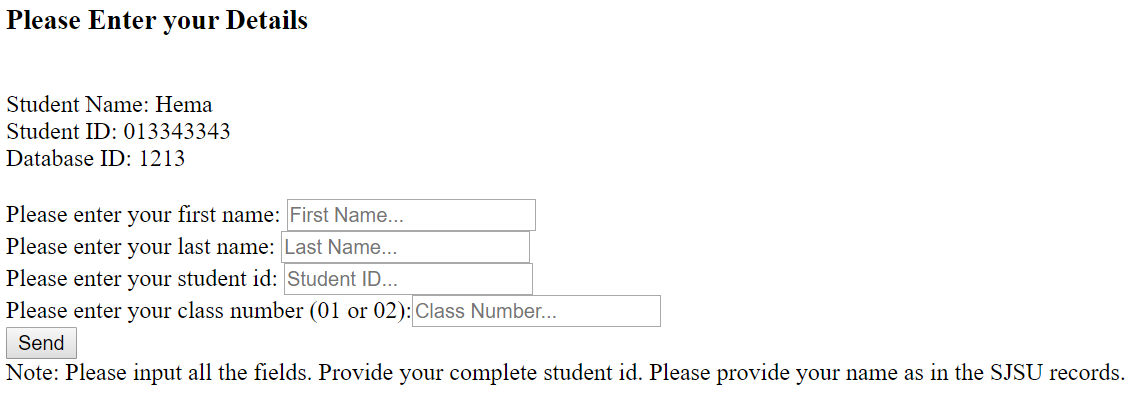
Step 31: Now go to your folder in your computer containing index.html



Step 32: Open your index.html page in a browser

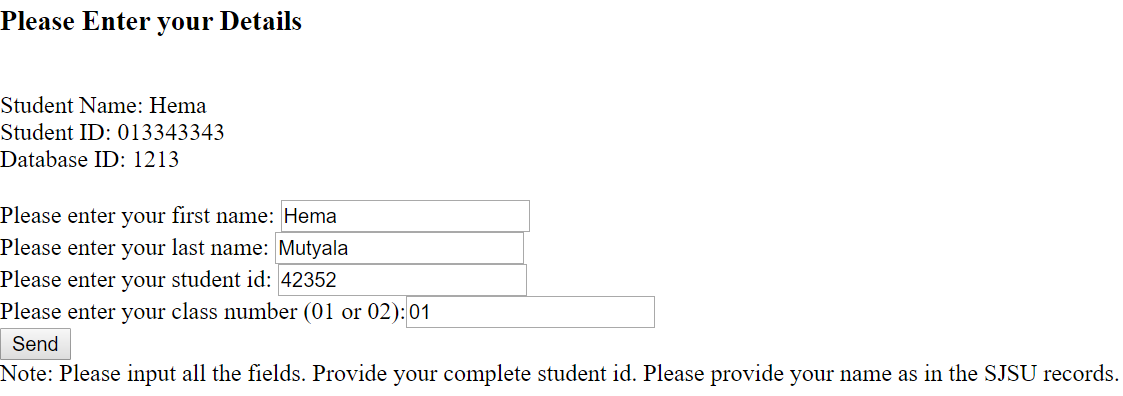
Step 33: You should see the html page similar to the below image.

Note: Styles and positioning might be different but there must be four fields and a send button.



Step 34: Now enter the details and click on send button

Example: Here I am entering a student name Hema Mutyala and her student id is 42352, Class number is 01.

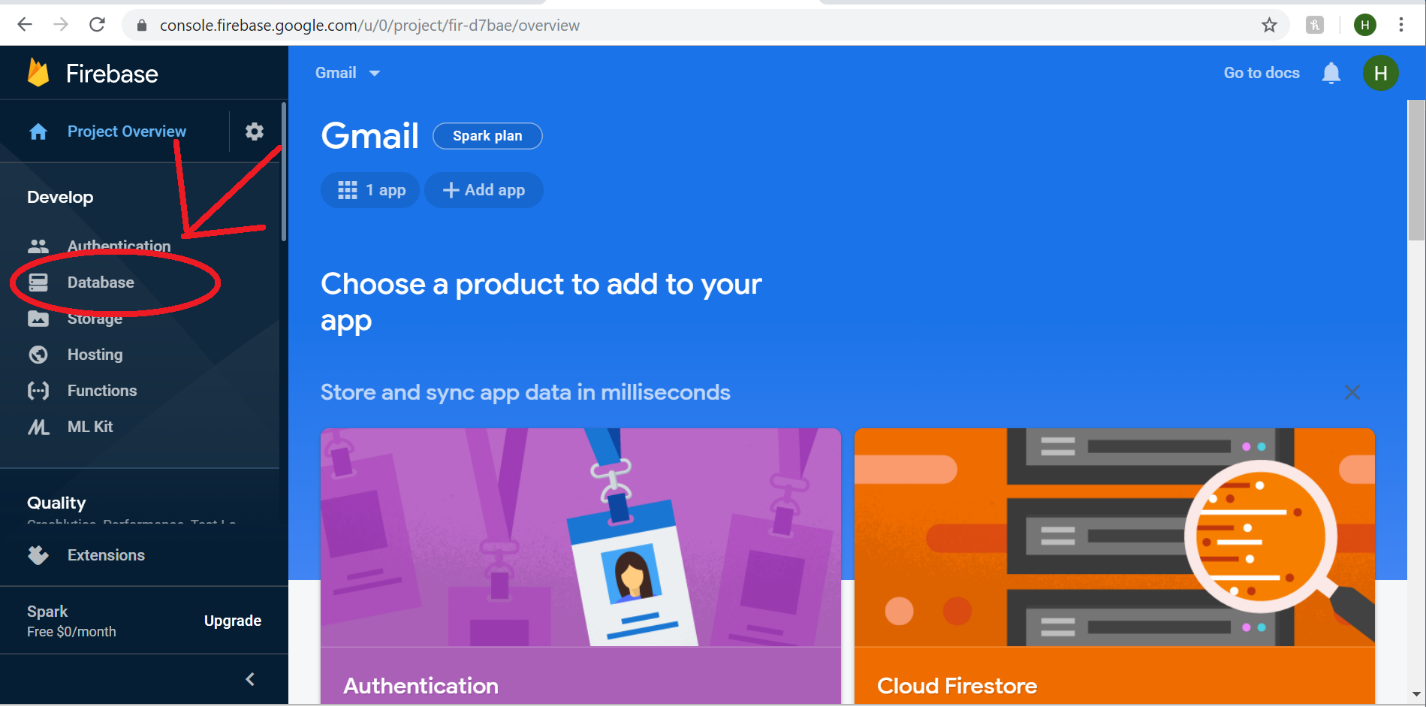


# **TEST WHETHER THE DATA IS SAVED IN THE DATABASE**

Step 35: Go to <https://console.firebase.google.com/u/0/>

Step 36: Click on your project

Step 37: Click on the database as shown below:



Step 38: The data in the database should be like below:

Note: Take a screenshot of your database for submission



If you cannot see the new user added then it is an error.

# **CHANGE THE FIREBASE REFERENCE FIELDS**

Step 39: Open index.html code

Step 40: Locate the following

Note: the values will different for every person

var firebaseConfig = {

    apiKey: "AIzaSyDVXrE7oMkNJcgngfnMBOezgwKCRH6HoryyCY",

    authDomain: "assignment4-17a59.firebaseapp.com",

    databaseURL: "https://assignment4-17a59.firebaseio.com",

    projectId: "assignment4-17a59",

    storageBucket: "assignment4-17a59.appspot.com",

    messagingSenderId: "834849354363",

    appId: "1:834849354363:web:b961219f21a5bb228ce8de"

  };

Step 41: Now Change the above values to

var firebaseConfig = {

    apiKey: "AIzaSyA0Nu09gRQbXhiAgCxjJh1YgHZoR1i5pxM",

    authDomain: "final-2b88e.firebaseapp.com",

    databaseURL: "https://final-2b88e.firebaseio.com",

    projectId: "final-2b88e",

    storageBucket: "final-2b88e.appspot.com",

    messagingSenderId: "665282824354",

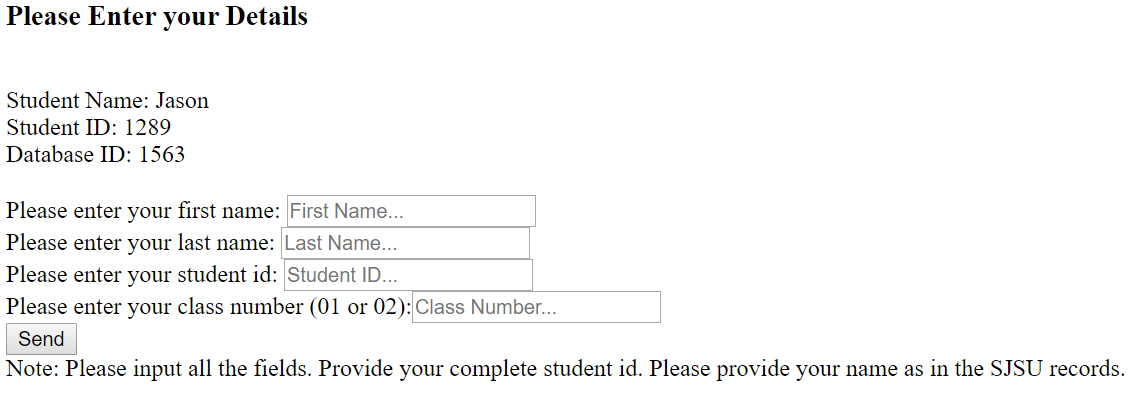
    appId: "1:665282824354:web:164c2045c9bfe0244aaffb"

  };

Step 42: Save the Code

Step 43: Open index.html in a browser

Example: If the student name is Jason and id is 1289, then it has to look like:



Take a screenshot of the above index.html.

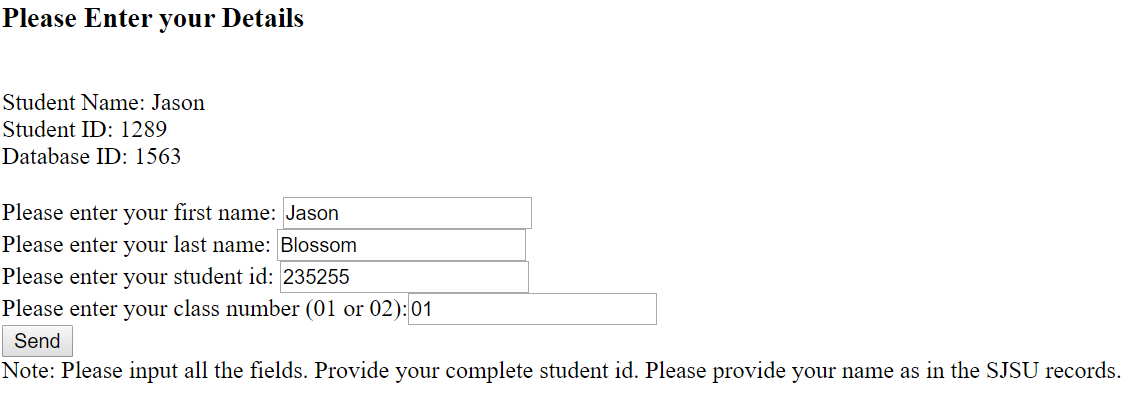
Note: To know your database id, go to step 35, “fir-d7bae” is my database is and you need to locate yours and put in in your index.html code. In the above example John database id is 1563.



# **PROVIDE THE VALUES FOR SUBMISSION**

Step 44: Enter your first name, last name, student id, class number.

Example:



Step 45: Click on “Send” button.

Note: The values you provided will reflect in my database not yours.

# **WHAT TO SUBMIT**

1. One Screenshot of html file as shown in Step 43
2. One Screenshot of your database as shown in the step 38
3. index.html file
4. index.js file
5. index.json file