# Lab: Remote Databases

Problems for in-class lab for the "[JavaScript Applications" course @ SoftUni](https://softuni.bg/courses/js-applications)

**1. Firebase: All Books**

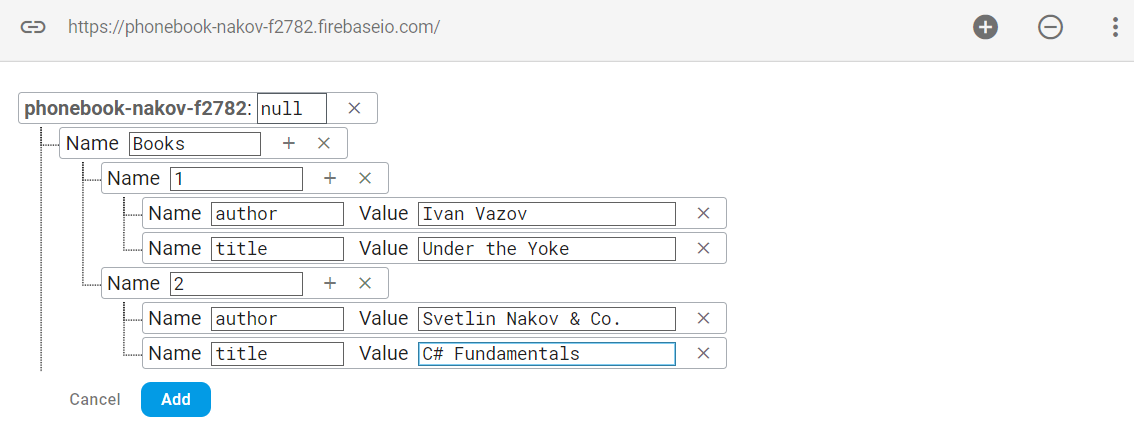
Firebase is a **mobile** and **web application** development **platform**.

Create a "**TestApp**" and then create the **following** structure:

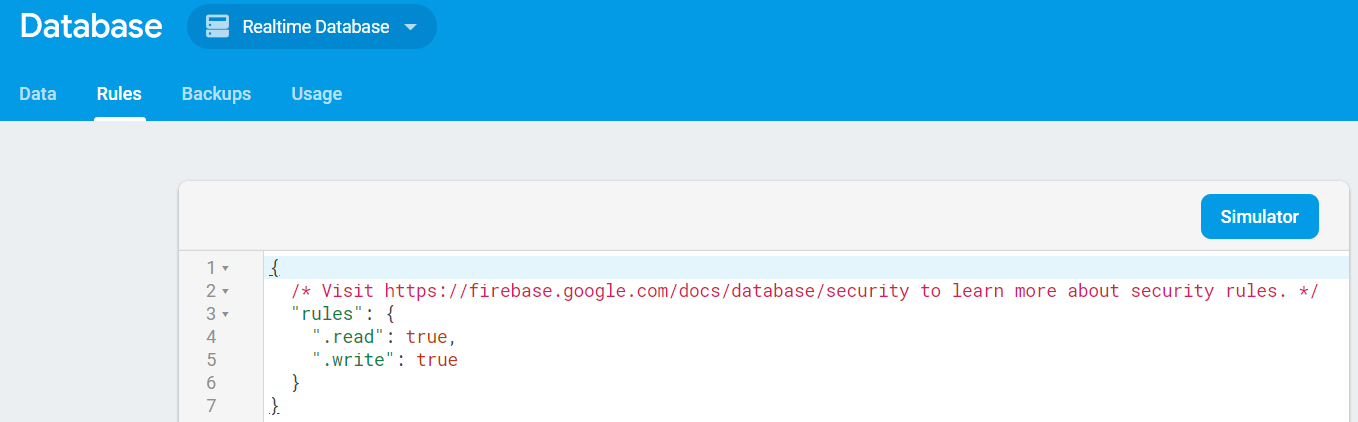


First task is to "**GET**" all books. To consume the request with **POSTMAN** your **url** should be the **following**: https://{databaseId}.firebaseio.com/.json.

**DatabaseId** is unique for every application. You can **find** yours from here:



We **should** also do one more configuration. Go to Database/Rules and set **.read** & **.write** actions to "**true**". This will allow us to **send** request with **POSTMAN**. Beware that now everyone can **manipulate** our database and even **delete** it. (this is for **testing** purposes only).



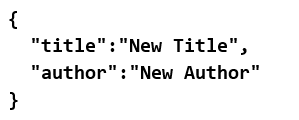
**2. Firebase: Get Book**

"**GET**" the Book with **id**: 1. Don’t forget the **.json** extension at the end (otherwise you will receive the whole **html**).

https://testapp-a2707.firebaseio.com/Books/1.json

**3. Firebase: Create Book**

To **create** a book, we will have to send a "**POST**" request and the JSON body should be in the **following** format:



<https://testapp-a2707.firebaseio.com/Books/.json>

"-M3MX7FEOsTkpL8Fcbn8": {

"author": "Test Book",

"title": "Cool Title"

}

**4. Firebase: Patch Book**

The HTTP command "**PATCH**" **modifies** an existing HTTP **resource** (it can also create the resource if it does **not** exist). The JSON body should be in the **following** format:

{

"author": "Test Book",

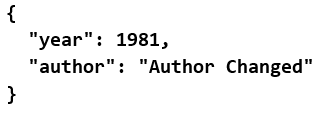
"title": "Cool Title",

"year": 1981

}

<https://testapp-a2707.firebaseio.com/Books/-M3MX7FEOsTkpL8Fcbn8.json>

Не подменя целия обект, а добавя само нови пропъртита.



**5. Firebase: Change Book Author**

The next task is to execute a "**PUT**" command (the difference is that with "**PUT"** we can update a resource **partially**). In our case we have to **change** the author’s name to "**New author was assigned**".

**REQUEST**: https://{databaseId}.firebaseio.com/Books/7/author/.json

The JSON body should be in the **following** format:

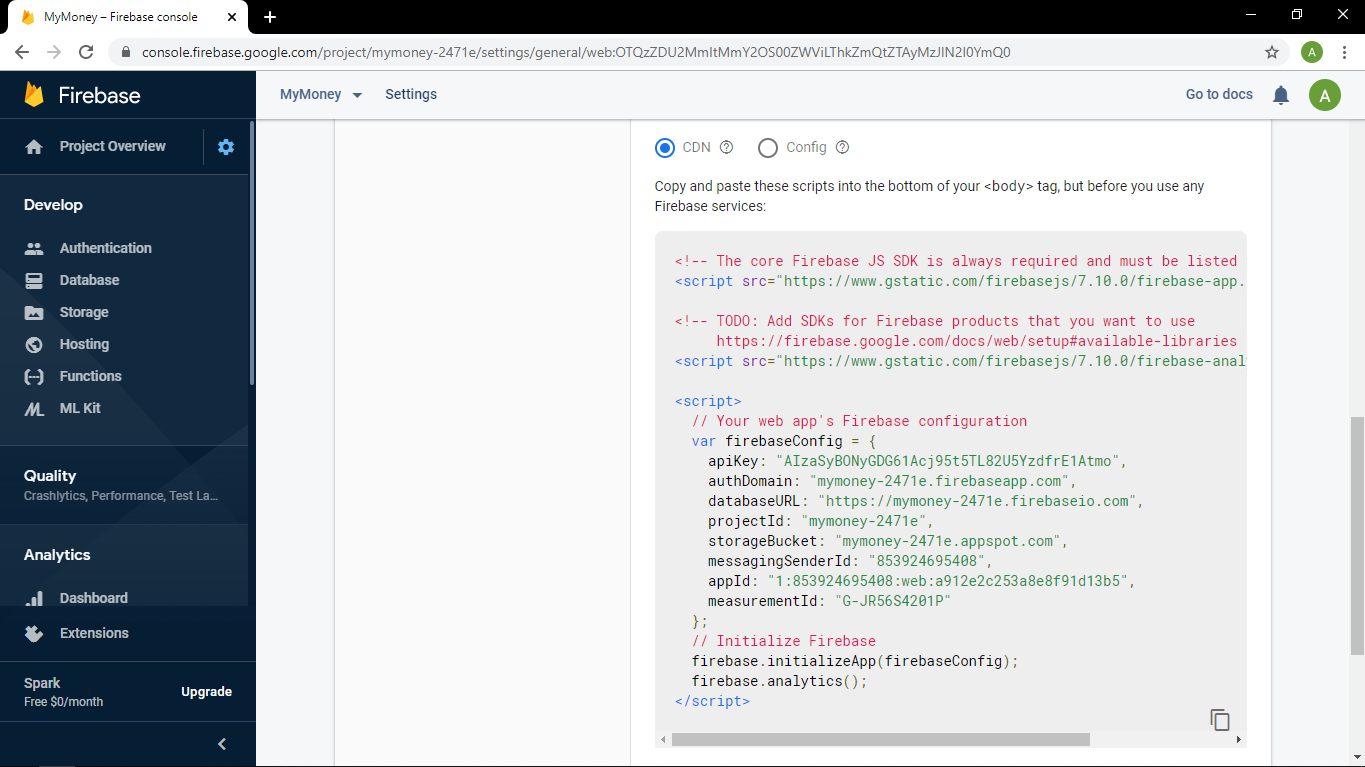
"**New author was assigned**".

https://testapp-a2707.firebaseio.com/Books/-M3MX7FEOsTkpL8Fcbn8/author.json

**6. Firebase: Initialize Project**

**Initializing** project is done with **config object** and then passed **to initializeApp** method.

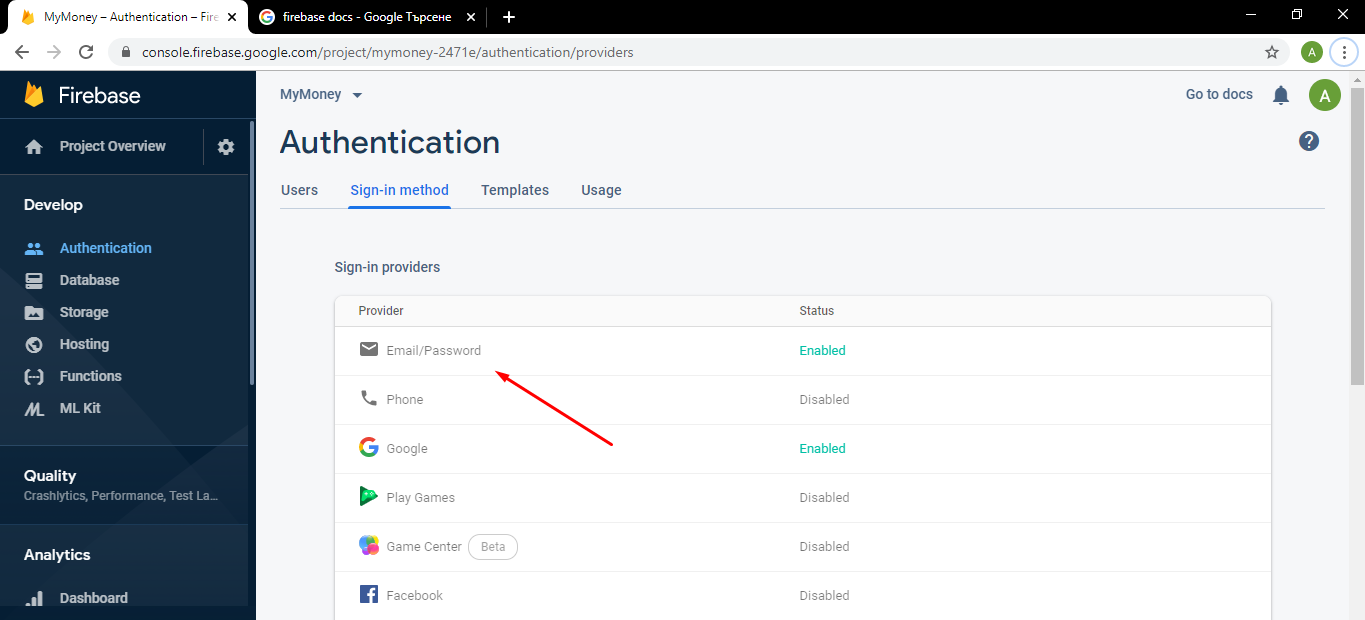
You can find your **config file** in your project, then **Project Settings** > **General**.



**7. Firebase: Register**

**Registering** in firebase is made by the **createUserWithEmailOrPassword** **method**.

To **allow** users to register with **their email and password**, you need to go to your project, then **Authentication (in the side bar)** > **Sign-in method.**



|  |
| --- |
| Create User |
| firebase.auth().createUserWithEmailAndPassword(email, password)  .catch((error) => {       // Handle Errors here.       let errorCode = error.code;       let errorMessage = error.message;       // ...  }); |

{

"kind": "identitytoolkit#SignupNewUserResponse",

"idToken": "eyJhbGciOiJSUzI1NiIsImtpZCI6IjFmODhiODE0MjljYzQ1MWEzMzVjMmY1Y2RiM2RmYjM0ZWIzYmJjN2YiLCJ0eXAiOiJKV1QifQ.eyJpc3MiOiJodHRwczovL3NlY3VyZXRva2VuLmdvb2dsZS5jb20vdGVzdGFwcC1hMjcwNyIsImF1ZCI6InRlc3RhcHAtYTI3MDciLCJhdXRoX3RpbWUiOjE1ODUyNDA5NTAsInVzZXJfaWQiOiJyVjI0d29lRDdsUnlUQ1NSdnZ2YURlUTNJNkUyIiwic3ViIjoiclYyNHdvZUQ3bFJ5VENTUnZ2dmFEZVEzSTZFMiIsImlhdCI6MTU4NTI0MDk1MCwiZXhwIjoxNTg1MjQ0NTUwLCJlbWFpbCI6ImthbGluYS5iYXJ6YXNoa2FAZ21haWwuY29tIiwiZW1haWxfdmVyaWZpZWQiOmZhbHNlLCJmaXJlYmFzZSI6eyJpZGVudGl0aWVzIjp7ImVtYWlsIjpbImthbGluYS5iYXJ6YXNoa2FAZ21haWwuY29tIl19LCJzaWduX2luX3Byb3ZpZGVyIjoicGFzc3dvcmQifX0.vy3CGBNL9SkICVYU74kKbqMT0kJKnq5nZyHmYFoaZP68gmSQt3Zsp1bRd2CybrRRv-xCnG7LTTYhmbatkssre3WK\_qBXw1ZQYicF0GK2dD5yjYGnlTr2gkg\_z13oWrpJ5v8iw7ksQkOLDb6Mgo5SDX\_nSjBCM\_w9eHEYX4eBjRdxiMk-c357cmblyCnx8IrEXteMj4tXpg11n\_lmMnhJa6gPSLTgo93dx8fIps3udtM4MynUp-4iKgp7twfD55f6Kc-hj1Oom2pjrJVxmzHfdHn7wjV-X8xHED6tWYdwWxZRxf4xGzGjFZSLhbmca5qZDlCkNg1UsjNi2lIofLea1g",

"email": "kalina.barzashka@gmail.com",

"refreshToken": "AEu4IL2W7SoXycNqFR-0iNfOlgFJuJsa9W0k3h-UHnvZWULTHpK72kCqMnQla6758q-I153H11rux27aZXqxGrw6xqlGjDhI7H-Zp3Ppa9AI6Fm0\_GMEfVJGSB2yIpglovgQ-UFFLQcZzaCuH0xzjzsGPjDdvx1N5IldOeVN2rmJmB-6rQyRt9BRgLesG348efFj5Z1vdS6IzpkavoVHp63c7Jwhy-kHHg",

"expiresIn": "3600",

"localId": "rV24woeD7lRyTCSRvvvaDeQ3I6E2"

}

Kris:

{

"kind": "identitytoolkit#SignupNewUserResponse",

"idToken": "eyJhbGciOiJSUzI1NiIsImtpZCI6IjFmODhiODE0MjljYzQ1MWEzMzVjMmY1Y2RiM2RmYjM0ZWIzYmJjN2YiLCJ0eXAiOiJKV1QifQ.eyJpc3MiOiJodHRwczovL3NlY3VyZXRva2VuLmdvb2dsZS5jb20vdGVzdGFwcC1hMjcwNyIsImF1ZCI6InRlc3RhcHAtYTI3MDciLCJhdXRoX3RpbWUiOjE1ODUyNDEyMTQsInVzZXJfaWQiOiJuM3Y1dzNyN2NmYnd0MG4wcXBFUU16Vnh1UXUxIiwic3ViIjoibjN2NXczcjdjZmJ3dDBuMHFwRVFNelZ4dVF1MSIsImlhdCI6MTU4NTI0MTIxNCwiZXhwIjoxNTg1MjQ0ODE0LCJlbWFpbCI6ImtyaXNAZ21haWwuY29tIiwiZW1haWxfdmVyaWZpZWQiOmZhbHNlLCJmaXJlYmFzZSI6eyJpZGVudGl0aWVzIjp7ImVtYWlsIjpbImtyaXNAZ21haWwuY29tIl19LCJzaWduX2luX3Byb3ZpZGVyIjoicGFzc3dvcmQifX0.wlNxjLWpNOKn4vl9gd4pmpj9PZ91CBb2AbxwliaDDRlRJxci8H5IxpmPtuJG5WaqBpzZ4BJQ1vpAd0KZ\_4Tm4xKYALpljEXWdomkcNlst\_WK-MUR\_-Rlges5h-cL4AqNUAmULHQZzp9kuCqXa5\_wtJXOFO58kqvWktcmhvoWnTN6p7xCn8PsCpU4r004dFyxsB9UjwFwQ-YpGXbr7u00BJn9aYAv7SKe50iAAO9QqiSG4tMRXs0TL6qmQi5om5JVAbobsINltePjNUmbNuovrAgJba53Tqds8uh2uk5oIt0T1\_PymPtz4K-jNc4ZEfbG1R\_ZGNX0LgVlBYH4Hvb8pA",

"email": "kris@gmail.com",

"refreshToken": "AEu4IL3oe6dkH8-Nw9cfc7tAIzTcLi8RqkIYiecpA8lXF9mITpmWh0N9F2hhD85AyGSqcWaIpe3VuJ9LP4e3sGt-3b0Qfi9anPqdIwGI\_ZFkqJs8PsYktHN\_vVA7nlQbg-ifimGDQH7bKZ56ImXHR9-0cTltE931dxfg1x3z0aL\_1qTzGP0NLJkyqlzdznPFNqfnSpF4nXHj",

"expiresIn": "3600",

"localId": "n3v5w3r7cfbwt0n0qpEQMzVxuQu1"

}

Test:

{

"kind": "identitytoolkit#SignupNewUserResponse",

"idToken": "eyJhbGciOiJSUzI1NiIsImtpZCI6IjFmODhiODE0MjljYzQ1MWEzMzVjMmY1Y2RiM2RmYjM0ZWIzYmJjN2YiLCJ0eXAiOiJKV1QifQ.eyJpc3MiOiJodHRwczovL3NlY3VyZXRva2VuLmdvb2dsZS5jb20vdGVzdGFwcC1hMjcwNyIsImF1ZCI6InRlc3RhcHAtYTI3MDciLCJhdXRoX3RpbWUiOjE1ODUyNDEyNjIsInVzZXJfaWQiOiJLTkkyOGhpVjk3Yml0clVOOVp2Z2xVd0tnTWwxIiwic3ViIjoiS05JMjhoaVY5N2JpdHJVTjladmdsVXdLZ01sMSIsImlhdCI6MTU4NTI0MTI2MiwiZXhwIjoxNTg1MjQ0ODYyLCJlbWFpbCI6InRlc3RAZ21haWwuY29tIiwiZW1haWxfdmVyaWZpZWQiOmZhbHNlLCJmaXJlYmFzZSI6eyJpZGVudGl0aWVzIjp7ImVtYWlsIjpbInRlc3RAZ21haWwuY29tIl19LCJzaWduX2luX3Byb3ZpZGVyIjoicGFzc3dvcmQifX0.QOlkTctynlF2lqpnuDx8RqM0EO0gsCYO88WWEblcaSNH6gMgZrzEXfk0lE7N4Hkz4kG3moz8f0PYGKZ\_cfuunX2dxLQQ1ce4YH4QeG6Z5XMaabFHWgSlgwDFcwm0P\_kBBdil6C4LzHT342egUWKf1t-cZR0dKxB5hPAYssQmifvwbhhfLXOAt1juRWMVDa5DOK8-bff-nrulL0h4y-DGzV10ss93AeLgHl4fEOBnK3wCRHKthBFF1nkTkJS7RghtyBbkzHVR18PheZVBUxAYnuboXPGxBy1HLk7TiVY2rPKDHTMNhAsssO9j5F32VhcQ2SPaJJPTS4NQSkwBhMbPbA",

"email": "test@gmail.com",

"refreshToken": "AEu4IL1Ej3HrBpIZP4hTgXKyJUCd9jFmjSUTpCQpdajclPLy0wE8T0AprVzaQ2eS512k4ypOk2NE7dV\_ABZAqhEtDHujCm-cNq\_n\_f2vko0MU4LsFAviC4N-0jKfWhu0wO\_vwZDB1W3Zd7YG3MOyvhRcuXn3GurFQaIVxuC1cOzrut4bY2fyddf-\_1Cpu8xXvSm4Tjz9UUoQ",

"expiresIn": "3600",

"localId": "KNI28hiV97bitrUN9ZvglUwKgMl1"

}

**8. Firebase: Login**

**Signing** user in firebase is made by the **signInWithEmailAndPassword method.**

|  |
| --- |
| Login User |
| firebase.auth().signInUserWithEmailAndPassword(email, password)  .catch((error) => {       // Handle Errors here.       let errorCode = error.code;       let errorMessage = error.message;       // ...  }); |

**8. Firebase: Get User Data (data observer)**

**Getting** the user data in firebase is made by the **onAuthStateChanged method.**

|  |
| --- |
| Get User Data |
| firebase.auth().onAuthStateChanged((user) => {      if (user) {          // User is signed in.          let displayName = user.displayName;          let email = user.email;          let emailVerified = user.emailVerified;          let isAnonymous = user.isAnonymous;          let uid = user.uid;          // ...      } else {          // User is signed out.          // ...      }  }); |

**8. Firebase: Logout User**

**Logging out** user in firebase is made by the **signOut method.**

|  |
| --- |
| Sign Out User |
| firebase.auth().signOut()      .then(() => {          // Sign-out successful.      })      .catch((error) => {          // An error happened.      }); |