

## **RESUME**

### **BASIS DATA DOKUMEN TEORI**



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## PENDAHULUAN

### Latar Belakang

Basis data dokumen adalah suatu sistem penyimpanan data yang dirancang khusus untuk menangani informasi dalam bentuk dokumen. Dokumen ini bisa berupa teks, gambar, suara, atau format lainnya. Basis data dokumen bertujuan untuk menyederhanakan pengelolaan, pencarian, dan analisis dokumen dalam suatu aplikasi atau sistem.

### Definisi Basis Data Dokumen

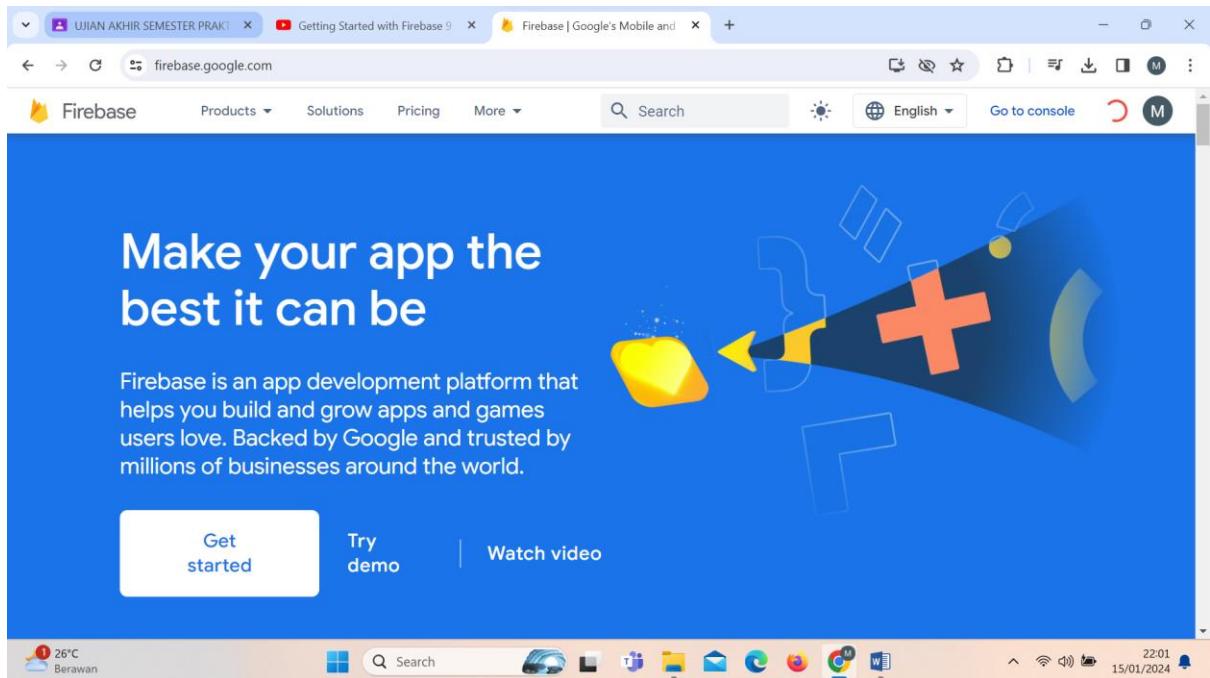
Basis data dokumen adalah jenis sistem manajemen basis data (DBMS) yang dirancang khusus untuk menyimpan, mengelola, dan mengindeks dokumen elektronik. Dokumen ini dapat berupa teks, gambar, audio, atau format lainnya. Yang membedakan basis data dokumen dari jenis DBMS lainnya adalah kemampuannya untuk menyimpan data dalam format dokumen yang fleksibel, tanpa memerlukan skema yang ketat.

### Firebase

Firebase Console adalah antarmuka pengguna web yang disediakan oleh Firebase, sebuah platform pengembangan mobile dan web yang dimiliki oleh Google. Firebase menyediakan berbagai layanan yang mempermudah pengembangan aplikasi, termasuk penyimpanan data, otentikasi pengguna, pengelolaan file, analisis, pemberitahuan, dan banyak lagi. Firebase Console berfungsi sebagai alat pengelolaan yang memungkinkan pengguna untuk mengelola proyek dan sumber daya Firebase mereka.

Firebase Console adalah alat yang sangat penting bagi pengembang dan administrator sistem yang menggunakan Firebase dalam proyek mereka. Ini memberikan visibilitas dan kontrol yang diperlukan untuk mengelola berbagai layanan Firebase dengan mudah dan efisien.

## 1. Firebase



Firebase adalah platform pengembangan aplikasi mobile dan web yang disediakan oleh Google. Firebase menyediakan berbagai layanan dan alat yang memungkinkan pengembang untuk membangun aplikasi yang kuat, skalabel, dan mudah dielola.

## 2. Setting WebPack

### Source Code

A screenshot of the Visual Studio Code (VS Code) interface. The title bar says "Getting-Started-with-Firebase-9-lesson-2". The left sidebar shows a file tree with "OPEN EDITORS" containing "JS bundle.js" and "GETTING...". The main editor area shows the content of "JS bundle.js". The code is a webpack bundle output, starting with a comment about eval-source-map devtool usage. It includes imports from "index.js" and defines "\_webpack\_modules\_" and "\_webpack\_exports\_". The code ends with a comment about the entry module not being inlined due to the devtool. The status bar at the bottom shows the date as 15/01/2024 and the time as 22:13.

The screenshot shows a code editor interface with the title bar "Getting-Started-with-Firebase-9-lesson-2". The left sidebar is titled "EXPLORER" and lists files: "index.html dist", "GETTING-STARTED-WITH-...", "dist", "bundle.js", "index.html", "src", "index.js", ".gitignore", "package-lock.json", "package.json", and "webpack.config.js". The right pane displays the "index.html" file content:

```
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Firebase 9</title>
</head>
<body>
<h1>Getting Started with Firebase 9</h1>
<script src="bundle.js"></script>
</body>
</html>
```

The status bar at the bottom shows "Ln 13, Col 8" and "Spaces: 2, UTF-8, LF, HTML, Blackbox".

The screenshot shows a code editor interface with the title bar "Getting-Started-with-Firebase-9-lesson-2". The left sidebar is titled "EXPLORER" and lists files: "index.js src", "GETTING-STARTED-WITH-...", "dist", "bundle.js", "index.html", "src", "index.js", ".gitignore", "package-lock.json", "package.json", and "webpack.config.js". The right pane displays the "index.js" file content:

```
console.log('Hello from index.js')
```

The status bar at the bottom shows "Ln 1, Col 1" and "Spaces: 4, UTF-8, CRLF, JavaScript, Blackbox".

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-2". The Explorer sidebar on the left lists files: package-lock.json, dist, bundle.js, index.html, src, index.js, .gitignore, package.json, and webpack.config.js. The main editor area displays the contents of package-lock.json:

```
1  {
2    "name": "getting-started-with-firebase-9",
3    "version": "1.0.0",
4    "lockfileVersion": 1,
5    "requires": true,
6    "dependencies": {
7      "@discoverys/json-ext": {
8        "version": "0.5.5",
9        "resolved": "https://registry.npmjs.org/@discoverys/json-ext/-/json-ext-0.5.5.tgz",
10       "integrity": "sha512-6nFkSmSeV/rqSaS4cWhgmpnYw194f6hmmWF5is6b0JnaJzoiD0NTc9A1UwPhVsowkjHErCZTiw@jg+BLIA=="
11     },
12     "@types/eslint": {
13       "version": "7.28.2",
14       "resolved": "https://registry.npmjs.org/@types/eslint/-/eslint-7.28.2.tgz",
15       "integrity": "sha512-kubbADPkfoU75KgKeKLsFHxu4ipH7wYg0TRT33NK3N3yi7jlFAoygIWBV+KbuHx/G+AvuGX6D11nK35gfJA=="
16     },
17     "@types/eslint-scope": {
18       "version": "3.7.1",
19       "resolved": "https://registry.npmjs.org/@types/eslint-scope/-/eslint-scope-3.7.1.tgz",
20       "integrity": "sha512-qCFeogqiptms4Fg29Wp0Tk5nHizfpKCemSN63ksBQYKtXoJEmJagV+DhVmbapZz4/5YaOV1nZwsU79fFm1g=="
21     },
22     "@types/eslint-scope": {
23       "version": "3.7.1",
24       "resolved": "https://registry.npmjs.org/@types/eslint-scope/-/eslint-scope-3.7.1.tgz",
25       "integrity": "sha512-qCFeogqiptms4Fg29Wp0Tk5nHizfpKCemSN63ksBQYKtXoJEmJagV+DhVmbapZz4/5YaOV1nZwsU79fFm1g=="
26     },
27   },
28 }
```

The status bar at the bottom shows "Ln 1, Col 1" and "Blackbox".

This screenshot is identical to the one above, showing the same VS Code interface and package-lock.json file content. The difference is that the code editor window has been scaled down significantly, resulting in a large amount of vertical scroll bar on the right side of the editor area.

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-2". The Explorer sidebar on the left lists files: package-lock.json, bundle.js, index.html, index.js, .gitignore, package.json, and webpack.config.js. The main editor area displays the contents of package-lock.json, which is a large JSON object detailing dependency information. The status bar at the bottom shows "Ln 1, Col 1" and "Spaces: 2, UTF-8, LF, () JSON, Blackbox". The bottom right corner shows the date and time as "15/01/2024 22:14".

```
{ "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-api-error/-/helper-api-error-1.11.1.tgz", "integrity": "sha512-iGbfyc5Bq+NnNuX8b5hwBrRjf0ocrJPI6GWFodBFzmFnyvrQ83SHKhmlCU/8Jv67i4GJZBMhEzltxzchNgtQ==", "dev": true }, "@webassemblyjs/helper-buffer": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-buffer/-/helper-buffer-1.11.1.tgz", "integrity": "sha512-gwIkF65aDNeeXa8JxxA2BAk+REjSyhrNC9ZwdT0f8jc4dQqeDQ7G4m0f2QCLPJiMTTO6wfDmRmj/pW0PsUvIcA==", "dev": true }, "@webassemblyjs/helper-numbers": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-numbers/-/helper-numbers-1.11.1.tgz", "integrity": "sha512-vDkbxB8zfnPdNK9Rajcey5C0w+QJugEg1N0ofkm0817ld77An1KYQF7aarZuCrV+l0vql+68gSDr3k9LPQ==", "dev": true, "requires": { "@webassemblyjs/floating-point-hex-parser": "1.11.1", "@webassemblyjs/helper-api-error": "1.11.1", "@xtuc/long": "4.2.2" } }, "@webassemblyjs/helper-wasm-bytecode": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-wasm-bytecode/-/helper-wasm-bytecode-1.11.1.tgz", "integrity": "sha512-PvoOjJwXeTrSF/qfudJhw1vDQxFge1bMqtq52WiXc6Xgg1IREdngmPN3bs4Ro085Pnl/nFrXucXji+8X62Q==", "dev": true }, "@webassemblyjs/helper-wasm-section": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-wasm-section/-/helper-wasm-section-1.11.1.tgz", "integrity": "sha512-10P9No29rYX1j7F3EVPX3JvGPQPae+AmuSTPiF9eBQeChHl6iqjMIwR9JmOJXwpnn/oVGdk7I5IlskuMwU/pg==", "dev": true, "requires": { "@webassemblyjs/ast": "1.11.1", "@webassemblyjs/helper-buffer": "1.11.1", "@webassemblyjs/helper-wasm-bytecode": "1.11.1", "@webassemblyjs/wasm-gen": "1.11.1" } }, "@webassemblyjs/ieee754": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/ieee754/-/ieee754-1.11.1.tgz", "integrity": "sha512-hJ87QIPtAMKbfq6CGtKZYjivEwZD0QugYd3qKSadTNOhVY7p+gFP6Sr01LRVTaG1JjFj+r3YchoqRYxNH3M0GQ==", "dev": true, "requires": { "@xtuc/ieee754": "^1.2.0" } }, "@webassemblyjs/leb128": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/leb128/-/leb128-1.11.1.tgz", "integrity": "sha512-10P9No29rYX1j7F3EVPX3JvGPQPae+AmuSTPiF9eBQeChHl6iqjMIwR9JmOJXwpnn/oVGdk7I5IlskuMwU/pg==", "dev": true }
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-2". The Explorer sidebar on the left lists files: package-lock.json, bundle.js, index.html, index.js, .gitignore, package.json, and webpack.config.js. The main editor area displays the contents of package-lock.json, which is a large JSON object detailing dependency information. The status bar at the bottom shows "Ln 1, Col 1" and "Spaces: 2, UTF-8, LF, () JSON, Blackbox". The bottom right corner shows the date and time as "15/01/2024 22:14".

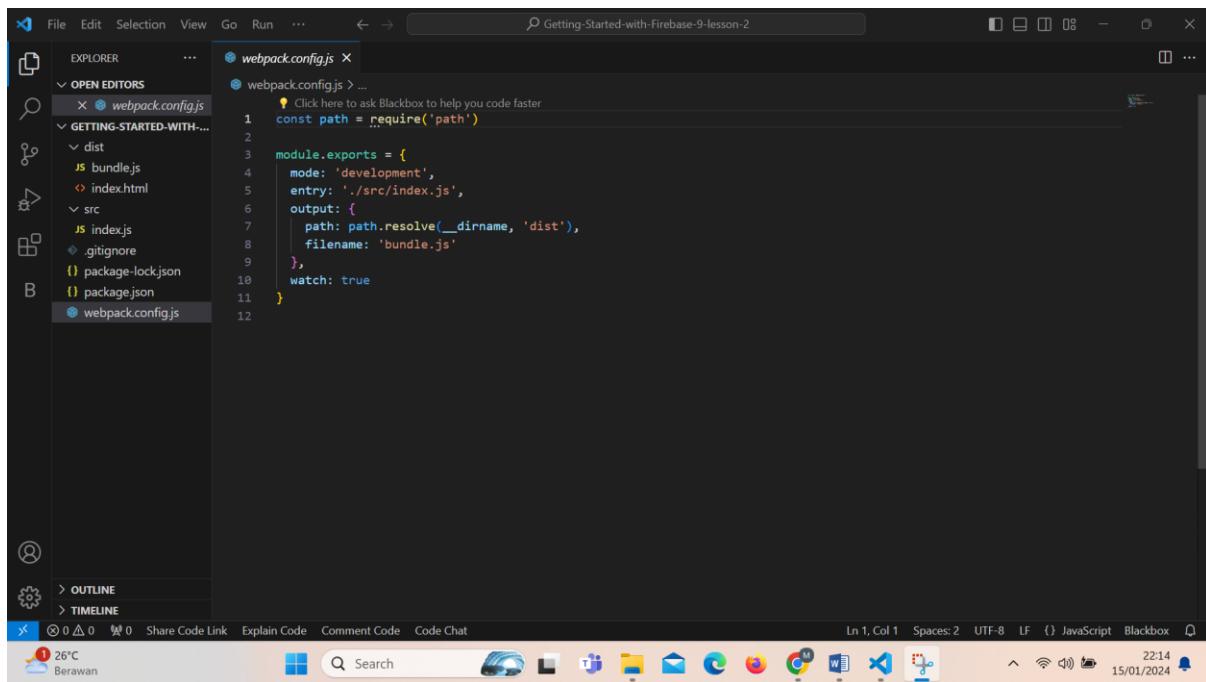
```
{ "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-wasm-bytecode/-/helper-wasm-bytecode-1.11.1.tgz", "integrity": "sha512-PvoOjJwXeTrSF/qfudJhw1vDQxFge1bMqtq52WiXc6Xgg1IREdngmPN3bs4Ro085Pnl/nFrXucXji+8X62Q==", "dev": true }, "@webassemblyjs/helper-wasm-section": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/helper-wasm-section/-/helper-wasm-section-1.11.1.tgz", "integrity": "sha512-10P9No29rYX1j7F3EVPX3JvGPQPae+AmuSTPiF9eBQeChHl6iqjMIwR9JmOJXwpnn/oVGdk7I5IlskuMwU/pg==", "dev": true, "requires": { "@webassemblyjs/ast": "1.11.1", "@webassemblyjs/helper-buffer": "1.11.1", "@webassemblyjs/helper-wasm-bytecode": "1.11.1", "@webassemblyjs/wasm-gen": "1.11.1" } }, "@webassemblyjs/ieee754": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/ieee754/-/ieee754-1.11.1.tgz", "integrity": "sha512-hJ87QIPtAMKbfq6CGtKZYjivEwZD0QugYd3qKSadTNOhVY7p+gFP6Sr01LRVTaG1JjFj+r3YchoqRYxNH3M0GQ==", "dev": true, "requires": { "@xtuc/ieee754": "^1.2.0" } }, "@webassemblyjs/leb128": { "version": "1.11.1", "resolved": "https://registry.npmjs.org/@webassemblyjs/leb128/-/leb128-1.11.1.tgz", "integrity": "sha512-10P9No29rYX1j7F3EVPX3JvGPQPae+AmuSTPiF9eBQeChHl6iqjMIwR9JmOJXwpnn/oVGdk7I5IlskuMwU/pg==", "dev": true }
```

The screenshot shows the VS Code interface with the package-lock.json file open in the editor. The code is a JSON object containing dependency information for a project named 'Getting-Started-with-Firebase-9-lesson-2'. The 'resolved' field lists several packages from the npm registry, including @webassemblyjs/utf8@1.11.1, @webassemblyjs/wasm-edit@1.11.1, and @webassemblyjs/wasm-parser@1.11.1. The 'dev' field is set to true for these dependencies.

```
119 "resolved": "https://registry.npmjs.org/@webassemblyjs/leb128/-/leb128-1.11.1.tgz",
120 "integrity": "sha512-8J2P0hNZeu+Th1YZXpzW6miwqQUGcIHT1G/sf72gLVDZ5AdYTqPNbHzh6K1M5VmKvFxwGSwZADz+qBWxeRw=="
121 "dev": true,
122 "requires": {
123   "@xtuc/long": "4.2.2"
124 }
125 "@webassemblyjs/utf8": {
126   "version": "1.11.1",
127   "resolved": "https://registry.npmjs.org/@webassemblyjs/utf8/-/utf8-1.11.1.tgz",
128   "integrity": "sha512-9kqcxAEdMhiwQkHpkNiorZzqpGroQQ2IGrHHxCy+Ozng0ofyMA0lTqilKvs1uzTRejX+/O0EOT7KxqVPuXosQ=="
129   "dev": true
130 },
131 "@webassemblyjs/wasm-edit": {
132   "version": "1.11.1",
133   "resolved": "https://registry.npmjs.org/@webassemblyjs/wasm-edit/-/wasm-edit-1.11.1.tgz",
134   "integrity": "sha512-g+RsupUCiaTHfR8CDgnsVRVZFJqdkPHpsHMfJuWQzWU3tvnLC07UqHICFP+4XYL2tnr1amv11sdp06TnYCmVKA=="
135   "dev": true,
136   "requires": {
137     "@webassemblyjs/ast": "1.11.1",
138     "@webassemblyjs/helper-buffer": "1.11.1",
139     "@webassemblyjs/helper-wasm-bytecode": "1.11.1",
140     "@webassemblyjs/helper-wasm-section": "1.11.1",
141     "@webassemblyjs/wasm-gen": "1.11.1",
142     "@webassemblyjs/wasm-opt": "1.11.1",
143     "@webassemblyjs/wasm-parser": "1.11.1",
144     "@webassemblyjs/wasm-printer": "1.11.1"
145   }
146 },
147 },
```

The screenshot shows the VS Code interface with the package.json file open in the editor. The code is a JSON object defining a new project named 'getting-started-with-firebase-9'. It includes fields for name, version, description, main file ('index.js'), scripts (with test and build commands), repository (git URL), author, license, bugs (issues URL), homepage, and devDependencies (webpack@^5.60.0 and webpack-cli@^4.9.1).

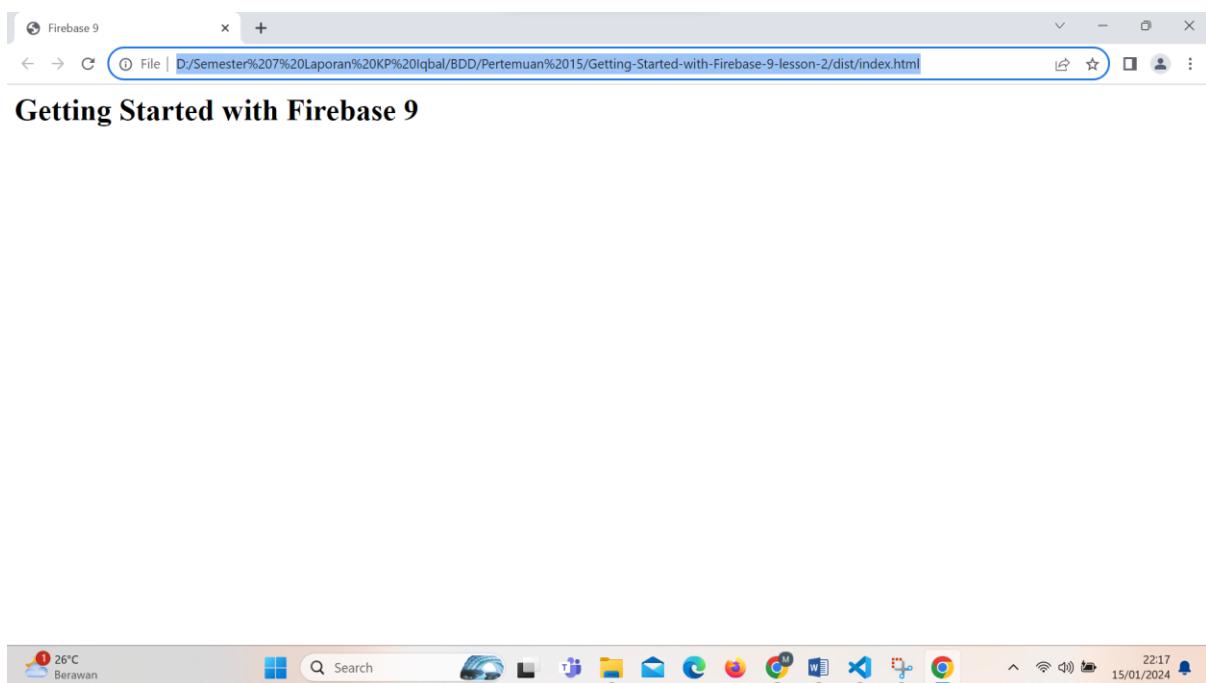
```
1 "name": "getting-started-with-firebase-9",
2 "version": "1.0.0",
3 "description": "",
4 "main": "index.js",
5 "scripts": {
6   "test": "echo \\"Error: no test specified\\" && exit 1",
7   "build": "webpack --mode=development"
8 },
9 "repository": {
10   "type": "git",
11   "url": "git+https://github.com/iamshaunjp/Getting-Started-with-Firebase-9.git"
12 },
13 "author": "",
14 "license": "ISC",
15 "bugs": {
16   "url": "https://github.com/iamshaunjp/Getting-Started-with-Firebase-9/issues"
17 },
18 "homepage": "https://github.com/iamshaunjp/Getting-Started-with-Firebase-9#readme",
19 "devDependencies": {
20   "webpack": "^5.60.0",
21   "webpack-cli": "^4.9.1"
22 }
23 }
```



```
const path = require('path')

module.exports = {
  mode: 'development',
  entry: './src/index.js',
  output: {
    path: path.resolve(__dirname, 'dist'),
    filename: 'bundle.js'
  },
  watch: true
}
```

Hasil Output :



Webpack adalah sebuah alat (tool) yang digunakan untuk mengelola dan menggabungkan file JavaScript, CSS, dan asset lainnya menjadi satu atau beberapa bundle untuk aplikasi web. Visual Studio Code (VS Code) adalah sebuah editor kode sumber yang sangat populer dan banyak digunakan.

Berikut saya lampirkan coding konfigurasi mengenai webpack dan firebase di atas .

3.

The screenshot shows a browser window with multiple tabs open. The active tab is titled 'Add Firebase to your web app'. It displays a 'Register app' section where the 'App nickname' field is filled with 'ikuti web youtube kata asdosnya'. There is also a checkbox for 'Also set up Firebase Hosting for this app' which is unchecked. Below the nickname field, there is a note: 'Hosting can also be set up later. There is no cost to get started anytime.' A blue 'Register app' button is visible. To the right, there is a '2 Add Firebase SDK' section. The browser's taskbar at the bottom shows various pinned icons and the date/time as 15/01/2024, 22:21.

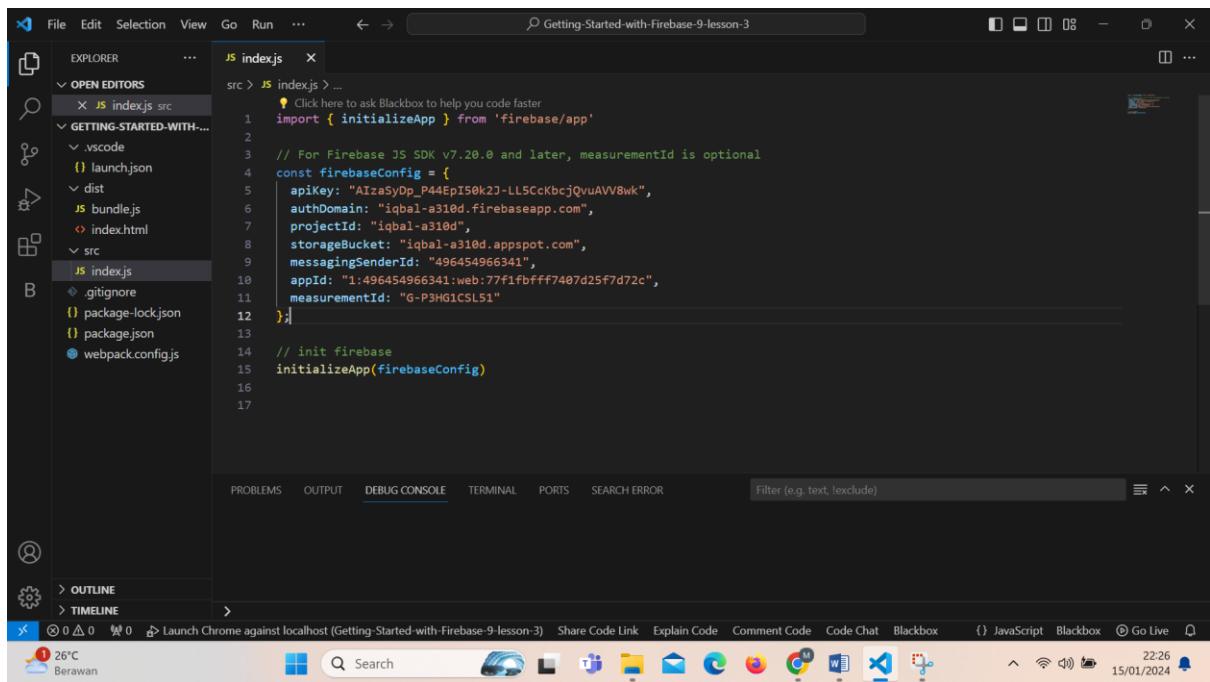
## Link Firebase

The screenshot shows the 'Project settings' page in the Firebase console. On the left, there is a sidebar with navigation links like 'Project Overview', 'Build', 'Release & Monitor', 'Analytics', 'Engage', and 'All products'. The main area is titled 'Project settings' and has a 'Link to a Firebase Hosting site' button. Below it, under 'SDK setup and configuration', there are three radio buttons for 'npm', 'CDN', and 'Config', with 'Config' being selected. A note says 'Get the snippet for your app's Firebase config object.' followed by a link. A large code block shows the Firebase configuration object:

```
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AIzaSyDp_P44EpI50k2J-LL5CcKbcjQvuAVV8wk",
  authDomain: "iqbal-a310d.firebaseio.com",
  projectId: "iqbal-a310d",
  storageBucket: "iqbal-a310d.appspot.com",
  messagingSenderId: "496454966341",
  appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
  measurementId: "G-P3HG1CL51"
};
```

At the bottom, there is a note: 'Are you using npm and a bundler like webpack or Rollup? Check out the [modular SDK](#)'.

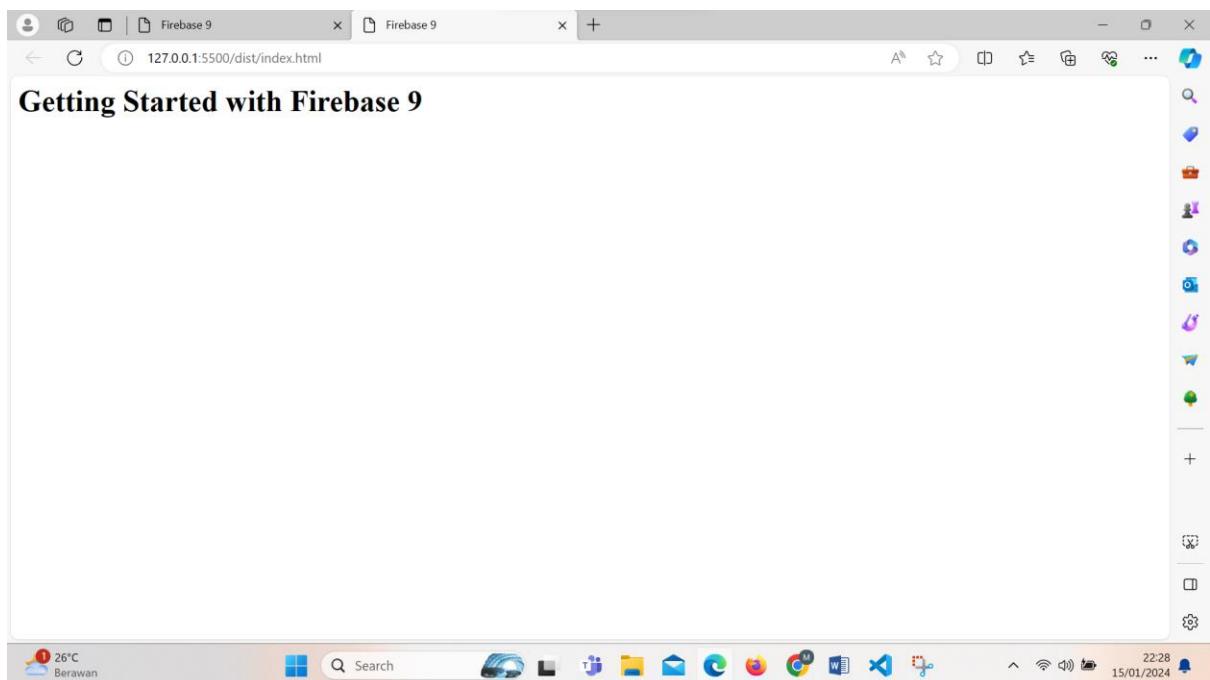
Lalu letakan di source code index.js



```
src > JS index.js > ...
Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2
3 // For Firebase JS SDK v7.20.0 and later, measurementId is optional
4 const firebaseConfig = {
5   apiKey: "AIzaSyDp_P44EpIS0k2J-LL5CcKbcjQvuAVV8wk",
6   authDomain: "iqbal-a310d.firebaseio.com",
7   projectId: "iqbal-a310d",
8   storageBucket: "iqbal-a310d.appspot.com",
9   messagingSenderId: "496454966341",
10  appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
11  measurementId: "G-P3HG1CSL51"
12 };
13
14 // init firebase
15 initializeApp(firebaseConfig)
16
17
```

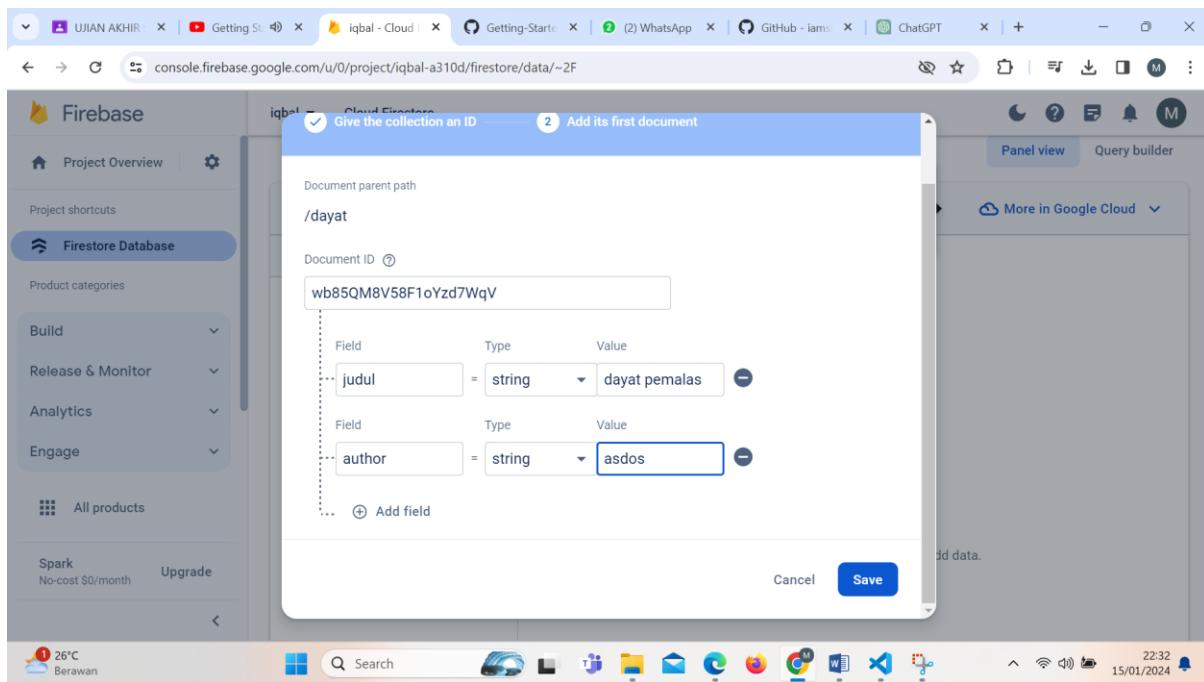
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR Filter (e.g. text, | exclude)

Hasil Output :

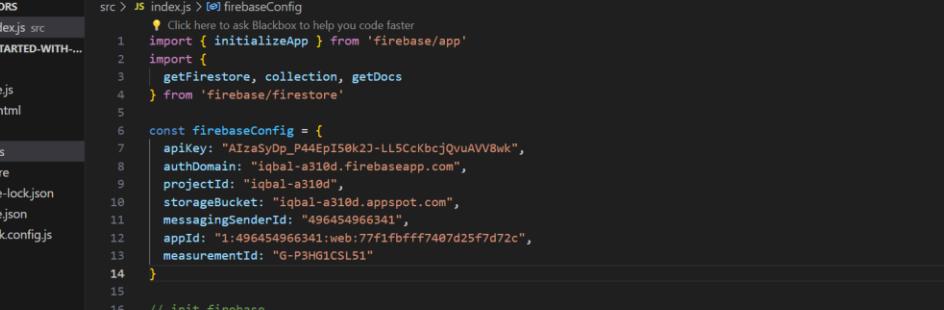


#### 4. Firestore Setup & Fetching Data

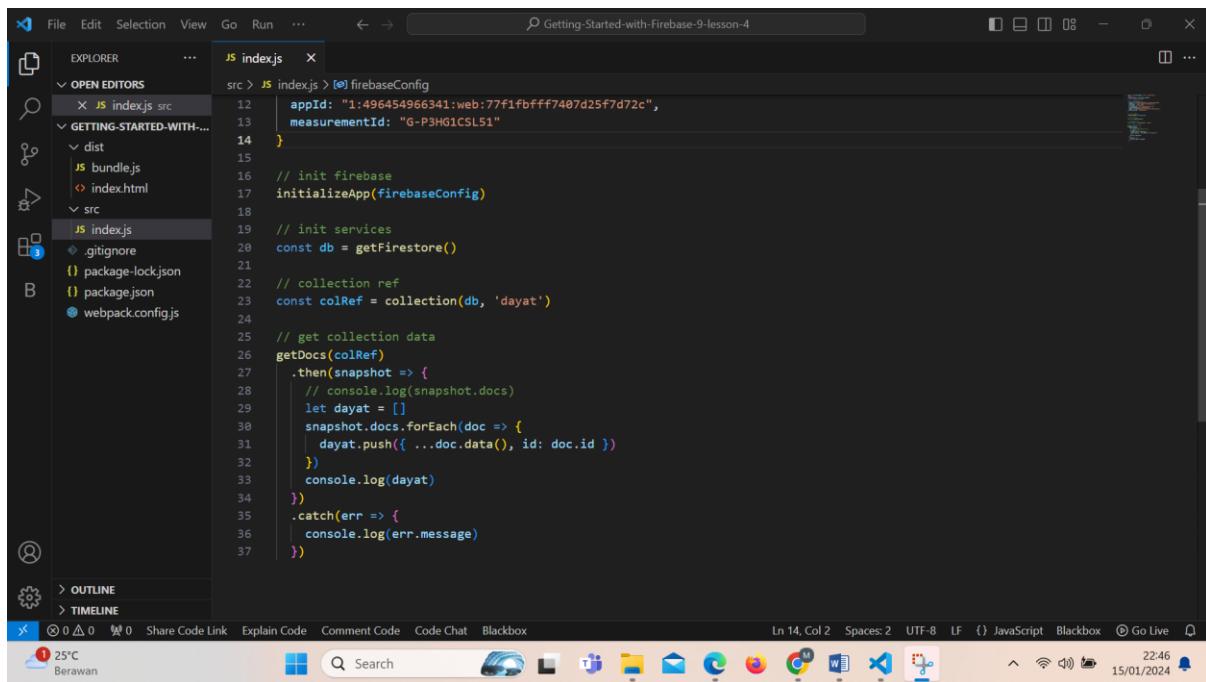
Lakukan konfigurasi pada bagian firestore



Dan konfigurasi pada codingan sebelumnya seperti dibawah ini ,sesuai dengan settingan firestore sebelumnya ,seperti gambar di bawah ini :

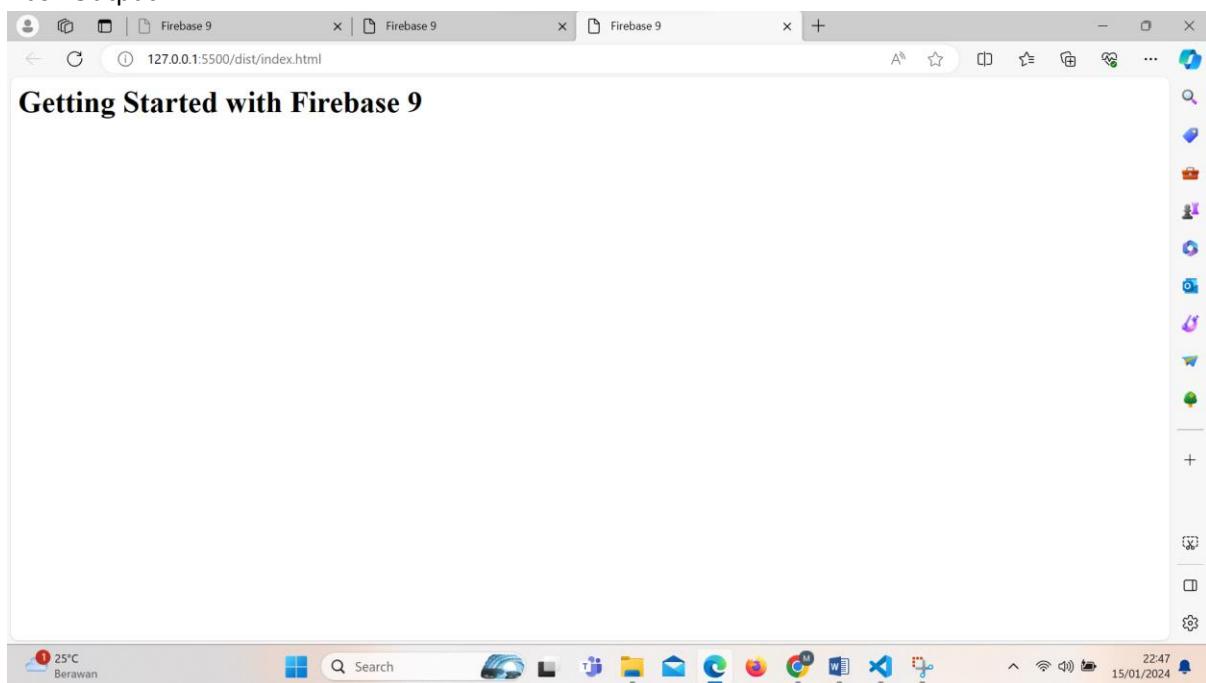


```
src > index.js > firebaseConfig
    Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3     getFirestore, collection, getDocs
4 } from 'firebase/firestore'
5
6 const firebaseConfig = {
7     apiKey: "AIzaSyDp_P44EpT50k2J-Ll5CcKbcjQvuAVV8wk",
8     authDomain: "iqbal-a310d.firebaseio.com",
9     projectId: "iqbal-a310d",
10    storageBucket: "iqbal-a310d.appspot.com",
11    messagingSenderId: "496454966341",
12    appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
13    measurementId: "G-P3H01CLSL51"
14 }
15
16 // init firebase
17 initializeApp(firebaseConfig)
18
19 // init services
20 const db = getFirestore()
21
22 // collection ref
23 const colRef = collection(db, 'dayat')
24
25 // get collection data
26 getDocs(colRef)
27 .then(snapshot => {
28     // console.log(snapshot.docs)
29     let result = []
30     snapshot.forEach(doc => {
31         result.push(doc.data())
32     })
33     return result
34 })
35
36 // export
37 export default db
```



```
src > JS index.js > firebaseConfig
12  appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
13  measurementId: "G-P3HG1CSL51"
14 }
15
16 // init firebase
17 initializeApp(firebaseConfig)
18
19 // init services
20 const db = getFirestore()
21
22 // collection ref
23 const colRef = collection(db, 'dayat')
24
25 // get collection data
26 getDocs(colRef)
27 .then(snapshot => {
28   // console.log(snapshot.docs)
29   let dayat = []
30   snapshot.docs.forEach(doc => {
31     dayat.push({ ...doc.data(), id: doc.id })
32   })
33   console.log(dayat)
34 })
35 .catch(err => {
36   console.log(err.message)
37 })
```

## Hasil Output :



## 5. Adding and Delete Document.

Tambahkan pada index.html codingan berikut :

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-5". The Explorer sidebar on the left lists files: index.js (src), index.html dist, index.html (selected), bundle.js, index.js (dist), .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area displays the content of index.html:

```
dist > index.html > index.html > body > form.delete > button
1 <html lang="en">
2   <head>
3     <meta charset="UTF-8">
4     <meta http-equiv="X-UA-Compatible" content="IE=edge">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Firebase 9</title>
7   </head>
8   <body>
9     <h1>Getting Started with Firebase 9</h1>
10    <h2>Firebase Firestore</h2>
11
12    <form class="add">
13      <label for="title">Title:</label>
14      <input type="text" name="title" required>
15      <label for="author">Author:</label>
16      <input type="text" name="author" required>
17
18      <button>add a new book</button>
19    </form>
20
21    <form class="delete">
22      <label for="id">Document id:</label>
23      <input type="text" name="id" required>
24
25      <button>delete a dayat</button>
26    </form>
27
28
29    <script src="bundle.js"></script>
30
31  </body>

```

This screenshot is identical to the one above, showing the same code in index.html. A new line has been added at the bottom of the file:

```
<script src="bundle.js"></script>
```

Lalu pada bagian index.js , tambahkan codingan delete and adding document sesuai title tadi.

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** On the left, it shows the project structure with files like `index.js`, `bundle.js`, `index.html`, and `webpack.config.js`.
- Editor:** The main editor area displays the `index.js` file content, which is the Firebase configuration script.
- Bottom Status Bar:** Shows the file path as `Getting-Started-with-Firebase-9-lesson-5`, line 59, column 32, and other status indicators like "JavaScript" and "Blackbox".
- Bottom Icons:** Includes icons for file operations, search, and browser integration.

```
src > index.js > deleteBookForm.addEventListener('submit') callback > docRef
  Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3   getFirestore, collection, getDocs,
4   addDoc, deleteDoc, doc
5 } from 'firebase/firestore'
6
7 const firebaseConfig = {
8   apiKey: "AIzaSyP44EpI50k2J-Ll5CcKbcjQvuAVV8wk",
9   authDomain: "iqbal-a310d.firebaseio.com",
10  projectId: "iqbal-a310d",
11  storageBucket: "iqbal-a310d.appspot.com",
12  messagingSenderId: "496454966341",
13  appId: "1:496454966341:web:771fbfff7407d25f7d72c",
14  measurementId: "G-P3HG1CSL51"
15 }
16
17 // init firebase
18.initializeApp(firebaseConfig)
19
20 // init services
21 const db = getFirestore()
22
23 // collection ref
24 const colRef = collection(db, 'dayat')
25
26 // get collection data
27 getDocs(colRef)
28 .then(snapshot => {
29   console.log(snapshot.docs)
```

The screenshot shows a browser-based code editor interface. The title bar reads "Getting-Started-with-Firebase-9-lesson-5". The left sidebar contains icons for Explorer, Open Editors, Getting Started with..., and a search/timeline outline. The main area shows an "index.js" file with the following code:

```
// init services
const db = getFirestore()

// collection ref
const colRef = collection(db, 'dayat')

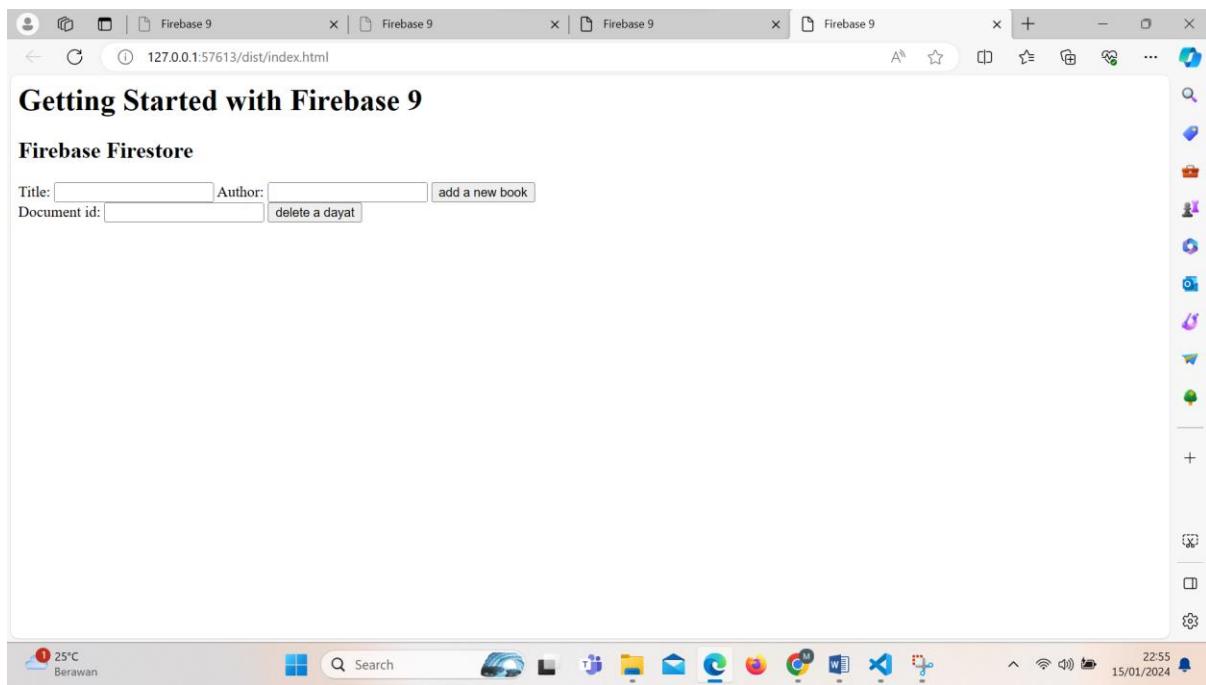
// get collection data
getDocs(colRef)
  .then(snapshot => {
    // console.log(snapshot.docs)
    let books = []
    snapshot.docs.forEach(doc => {
      books.push({ ...doc.data(), id: doc.id })
    })
    console.log(dayat)
  })
  .catch(err => {
    console.log(err.message)
  })

// adding docs
const addBookForm = document.querySelector('.add')
addBookForm.addEventListener('submit', (e) => {
  e.preventDefault()

  addDoc(colRef, {
    title: addBookForm.title.value,
    author: addBookForm.author.value,
  })
})
```

```
src > JS index.js > deleteBookForm.addEventListener('submit') callback > [e] docRef
40 // adding docs
41 const addBookForm = document.querySelector('.add')
42 addBookForm.addEventListener('submit', (e) => {
43   e.preventDefault()
44
45   addDoc(docRef, {
46     title: addBookForm.title.value,
47     author: addBookForm.author.value,
48   })
49   .then(() => {
50     addBookForm.reset()
51   })
52 })
53
54 // deleting docs
55 const deleteBookForm = document.querySelector('.delete')
56 deleteBookForm.addEventListener('submit', (e) => {
57   e.preventDefault()
58
59   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
60
61   deleteDoc(docRef)
62   .then(() => {
63     deleteBookForm.reset()
64   })
65 })
```

Hasil Output :



## 6. Realtime and collection data

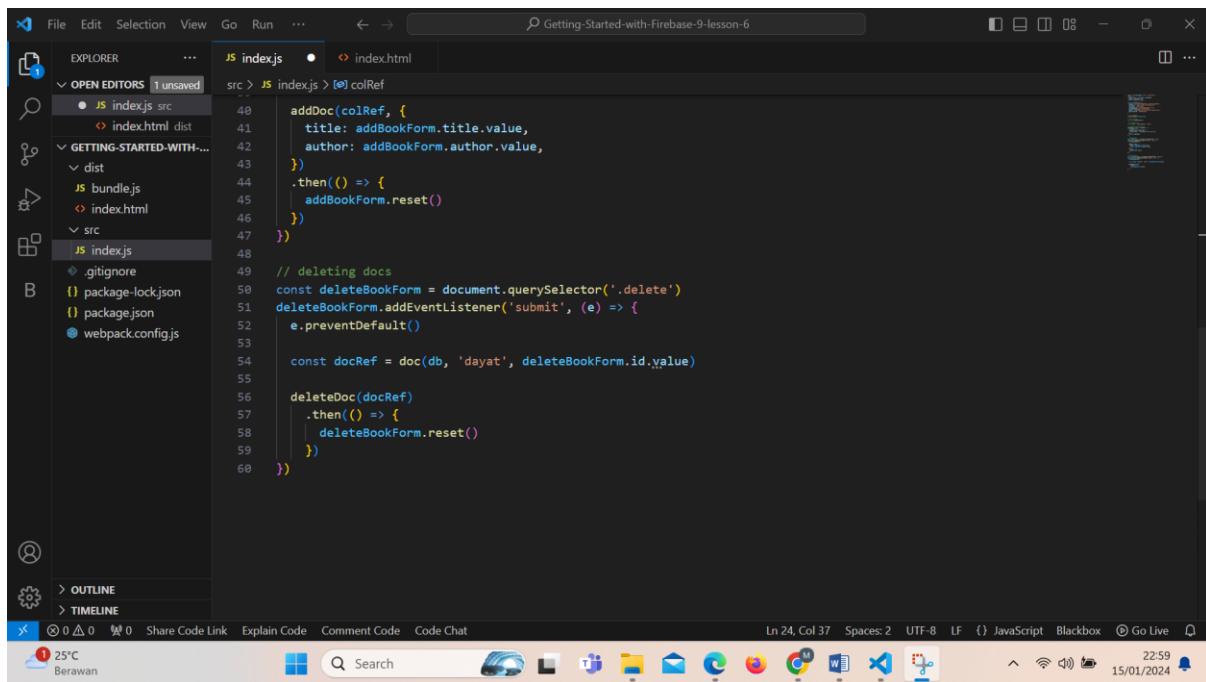
Tambahkan codingan berikut pada program sebelumnya , untuk mendapatkan realtime dan data yang konkrit ketika terjadi perubahan data pada firebase..

```
src > JS index.js > colRef
    Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3     getFirestore, collection, onSnapshot,
4     addDoc, deleteDoc, doc,
5 } from 'firebase/firestore'
6
7 const firebaseConfig = {
8     apiKey: "AIzaSyDp_P44EpI50k2J-Ll5CcKbcjQvuAVV8wk",
9     authDomain: "iqbal-a310d.firebaseio.com",
10    projectId: "iqbal-a310d",
11    storageBucket: "iqbal-a310d.appspot.com",
12    messagingSenderId: "496454966341",
13    appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
14    measurementId: "G-P3H61CSL51"
15 }
16
17 // init firebase
18.initializeApp(firebaseConfig)
19
20 // init services
21 const db = getFirestore()
22
23 // collection ref
24 const colRef = collection(db, 'dayat')
25
26 // realtime collection data
27 onSnapshot(colRef, (snapshot) => {
28     let books = []
29     snapshot.docs.forEach(doc => {
30         books.push({ ...doc.data(), id: doc.id })
31     })
32     console.log(books)
33 })
34
35 // adding docs
36 const addBookForm = document.querySelector('.add')
37 addBookForm.addEventListener('submit', (e) => {
38     e.preventDefault()
39
40     addDoc(colRef, {
41         title: addBookForm.title.value,
42         author: addBookForm.author.value,
43     })
44     .then(() => {
45         addBookForm.reset()
46     })
47 })
48
49 // deleting docs
50 const deleteBookForm = document.querySelector('.delete')
51 deleteBookForm.addEventListener('submit', (e) => {
52     e.preventDefault()
53
54     const docRef = doc(db, 'dayat', deleteBookForm.id.value)
55     deleteDoc(docRef)
56 })
```

This screenshot shows the initial state of the index.js file in Visual Studio Code. The code imports necessary Firebase modules and configures the app. It then defines a collection reference for 'dayat' and uses an onSnapshot listener to log the real-time data to the console. Below this, it sets up a form for adding new documents to the collection, and a form for deleting specific documents.

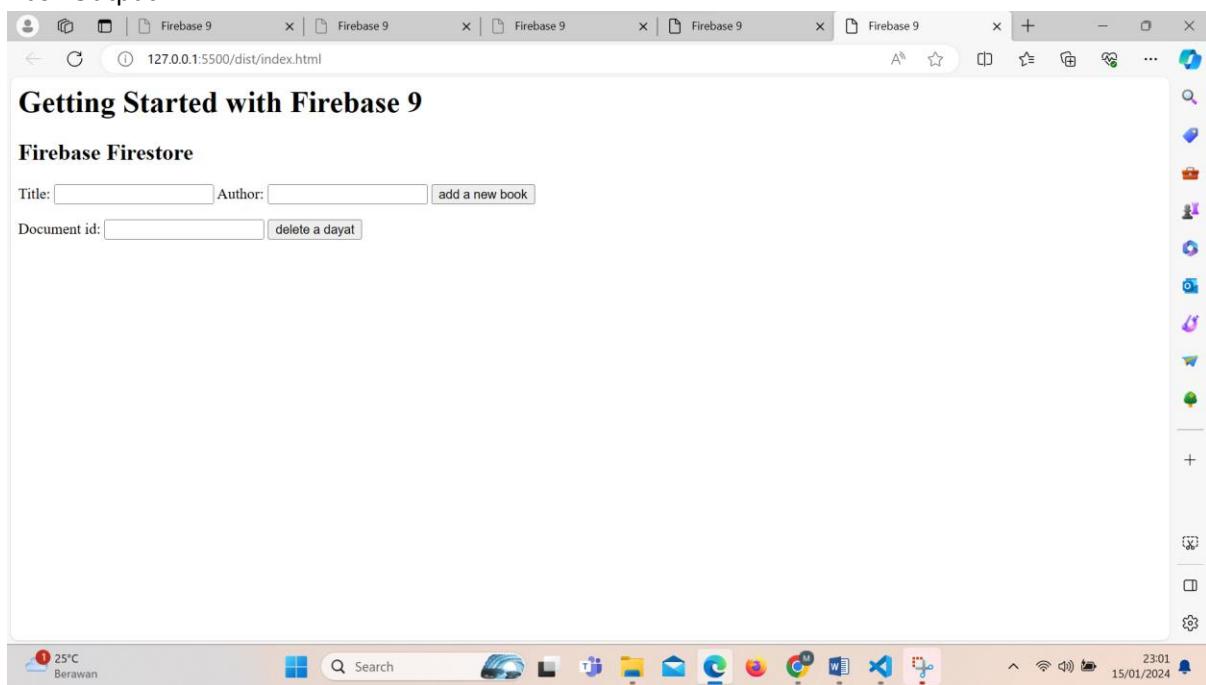
```
src > JS index.js > colRef
    Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3     getFirestore, collection, onSnapshot,
4     addDoc, deleteDoc, doc,
5 } from 'firebase/firestore'
6
7 const firebaseConfig = {
8     apiKey: "AIzaSyDp_P44EpI50k2J-Ll5CcKbcjQvuAVV8wk",
9     authDomain: "iqbal-a310d.firebaseio.com",
10    projectId: "iqbal-a310d",
11    storageBucket: "iqbal-a310d.appspot.com",
12    messagingSenderId: "496454966341",
13    appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
14    measurementId: "G-P3H61CSL51"
15 }
16
17 // init firebase
18.initializeApp(firebaseConfig)
19
20 // init services
21 const db = getFirestore()
22
23 // collection ref
24 const colRef = collection(db, 'dayat')
25
26 // realtime collection data
27 onSnapshot(colRef, (snapshot) => {
28     let books = []
29     snapshot.docs.forEach(doc => {
30         books.push({ ...doc.data(), id: doc.id })
31     })
32     console.log(books)
33 })
34
35 // adding docs
36 const addBookForm = document.querySelector('.add')
37 addBookForm.addEventListener('submit', (e) => {
38     e.preventDefault()
39
40     addDoc(colRef, {
41         title: addBookForm.title.value,
42         author: addBookForm.author.value,
43     })
44     .then(() => {
45         addBookForm.reset()
46     })
47 })
48
49 // deleting docs
50 const deleteBookForm = document.querySelector('.delete')
51 deleteBookForm.addEventListener('submit', (e) => {
52     e.preventDefault()
53
54     const docRef = doc(db, 'dayat', deleteBookForm.id.value)
55     deleteDoc(docRef)
56 })
```

This screenshot shows the completed state of the index.js file. The code remains largely the same as the previous version, but the addition of a new document is now handled by a promise chain that includes a call to addBookForm.reset() after the document is added. The deletion logic also uses a promise chain to handle the deletion process.



```
src > JS index.js > colRef
40   addDoc(colRef, {
41     title: addBookForm.title.value,
42     author: addBookForm.author.value,
43   })
44   .then(() => {
45     addBookForm.reset()
46   })
47 }
48 // deleting docs
49 const deleteBookForm = document.querySelector('.delete')
50 deleteBookForm.addEventListener('submit', (e) => {
51   e.preventDefault()
52
53   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
54
55   deleteDoc(docRef)
56   .then(() => {
57     deleteBookForm.reset()
58   })
59 })
60 }
```

## Hasil Output :



## 7. Firebase Queeries..

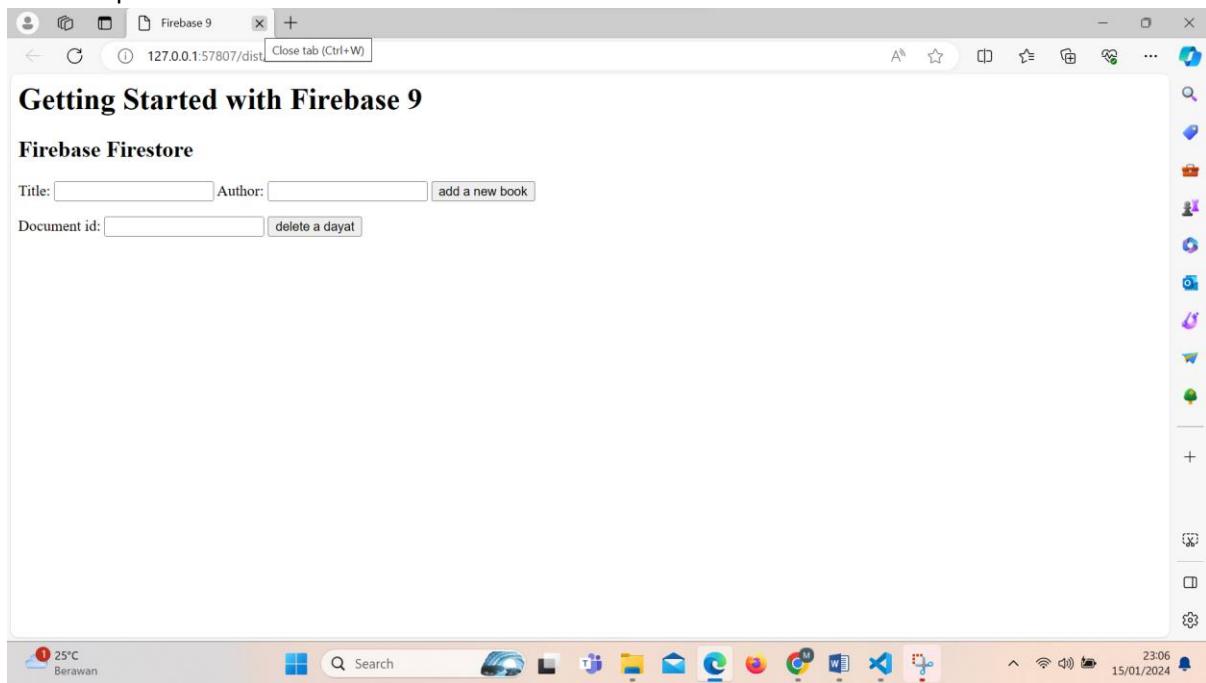
Untuk konfigurasi queries pada visual studio code agar terhubung pada firebase, tambahkan codingan di bawah ini pada bagian index.js

```
src > JS index.js > deleteBookForm.addEventListener('submit') callback > then() callback
  1 import { initializeApp } from 'firebase/app'
  2 import {
  3   getFirestore, collection, onSnapshot,
  4   addDoc, deleteDoc, doc,
  5   query, where
  6 } from 'firebase/firestore'
  7
  8 const firebaseConfig = {
  9   apiKey: "AIzaSyDp_P44EpI50k2J-LL5CcKbcjQvuAVV8wk",
10   authDomain: "iqbal-a310d.firebaseio.com",
11   projectId: "iqbal-a310d",
12   storageBucket: "iqbal-a310d.appspot.com",
13   messagingSenderId: "496454966341",
14   appId: "1:496454966341:web:77fbffff7407d25f7d72c",
15   measurementId: "G-P3HG1CSL51"
16 }
17
18 // init firebase
19 initializeApp(firebaseConfig)
20
21 // init services
22 const db = getFirestore()
23
24 // collection ref
25 const colRef = collection(db, 'dayat')
26
27 // queries
28 const q = query(colRef, where("author", "==", "patrick rothfuss"))
29
```

```
src > JS index.js > deleteBookForm.addEventListener('submit') callback > then() callback
  28 const q = query(colRef, where("author", "==", "patrick rothfuss"))
  29
  30 // realtime collection data
  31 onSnapshot(q, (snapshot) => {
  32   let books = []
  33   snapshot.docs.forEach(doc => {
  34     books.push({ ...doc.data(), id: doc.id })
  35   })
  36   console.log(books)
  37 }
  38
  39 // adding docs
  40 const addBookForm = document.querySelector('.add')
  41 addBookForm.addEventListener('submit', (e) => {
  42   e.preventDefault()
  43
  44   addDoc(colRef, {
  45     title: addBookForm.title.value,
  46     author: addBookForm.author.value,
  47   })
  48   .then(() => {
  49     addBookForm.reset()
  50   })
  51 }
  52
  53 // deleting docs
  54 const deleteBookForm = document.querySelector('.delete')
  55 deleteBookForm.addEventListener('submit', (e) => {
  56   e.preventDefault()
  57 }
```

```
src > JS index.js > deleteBookForm.addEventListener('submit') callback > then() callback
48     .then(() => {
49         addBookForm.reset()
50     })
51 }
52
53 // deleting docs
54 const deleteBookForm = document.querySelector('.delete')
55 deleteBookForm.addEventListener('submit', (e) => {
56     e.preventDefault()
57
58     const docRef = doc(db, 'dayat', deleteBookForm.id.value)
59
60     deleteDoc(docRef)
61     .then(() => {
62         deleteBookForm.reset()
63     })
64 })
```

Hasil Output :



## 8. Ordering data dan timestamps.

Untuk konfigurasi data dan timestamps, tambahkan codingan berikut pada index.js..

The screenshot shows a code editor interface with the title bar "Getting-Started-with-Firebase-9-lesson-8". The left sidebar (Explorer) lists files: index.js (selected), index.html, bundle.js, .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area contains the following code:

```
src > JS indexjs > ⚡ deleteBookForm.addEventListener('submit') callback > [o] docRef
  Click here to ask Blackbox to help you code faster
  import { initializeApp } from 'firebase/app'
  import {
    getFirestore, collection, onSnapshot,
    addDoc, deleteDoc, doc,
    query, where,
    orderBy, serverTimestamp
  } from 'firebase/firestore'

  const firebaseConfig = {
    apiKey: "AIzaSyDp_P44EpI50k2J-LL5CcKbcjQvuAVV8wk",
    authDomain: "iqbal-a310d.firebaseioapp.com",
    projectId: "iqbal-a310d",
    storageBucket: "iqbal-a310d.appspot.com",
    messagingSenderId: "496454966341",
    appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
    measurementId: "G-P3HG1CSL51"
  }
  // init firebase
 .initializeApp(firebaseConfig)

  // init services
  const db = getFirestore()

  // collection ref
  const colRef = collection(db, 'dayat')

  // queries
  const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
```

The screenshot shows the same code editor interface with the title bar "Getting-Started-with-Firebase-9-lesson-8". The Explorer sidebar remains the same. The main editor area now contains the completed code for index.js:

```
src > JS indexjs > ⚡ deleteBookForm.addEventListener('submit') callback > [o] docRef
  Click here to ask Blackbox to help you code faster
  ...
  const colRef = collection(db, 'dayat')

  const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))

  onSnapshot(q, (snapshot) => {
    let books = []
    snapshot.docs.forEach(doc => {
      books.push({ ...doc.data(), id: doc.id })
    })
    console.log(books)
  })

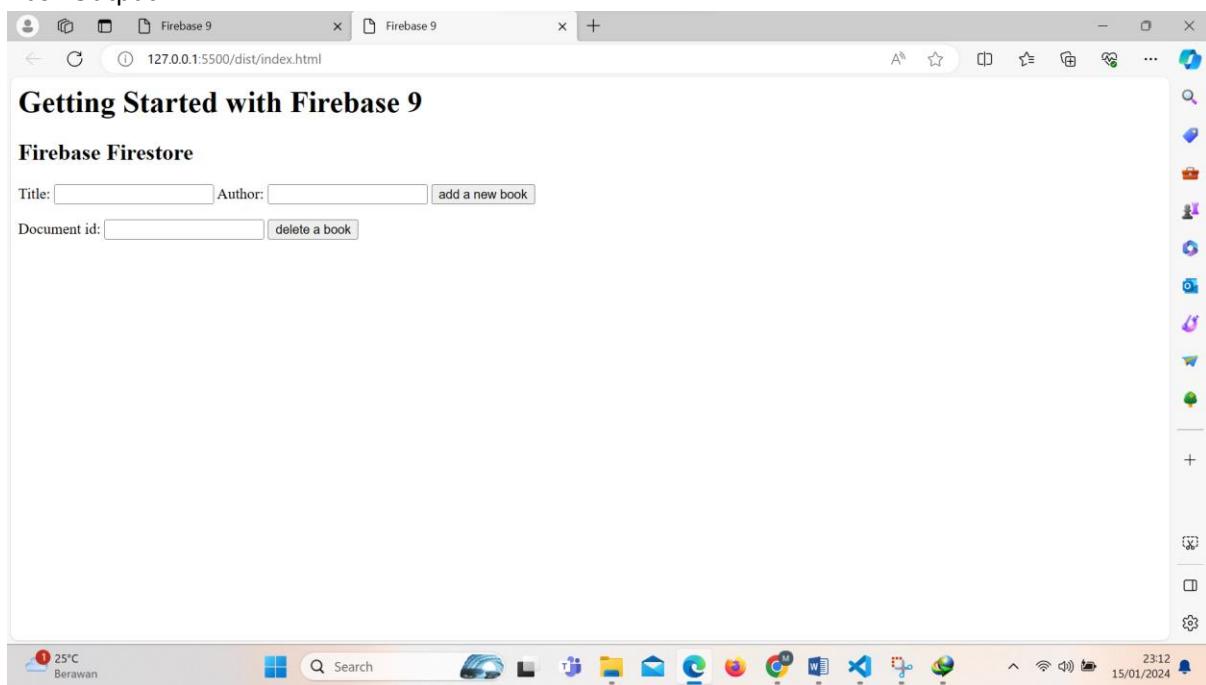
  const addBookForm = document.querySelector('.add')
  addBookForm.addEventListener('submit', (e) => {
    e.preventDefault()

    addDoc(colRef, {
      title: addBookForm.title.value,
      author: addBookForm.author.value,
      createdAt: serverTimestamp()
    })
    .then(() => {
      addBookForm.reset()
    })
  })
```

The screenshot shows the Visual Studio Code interface with the file 'index.js' open. The code handles form submissions to add and delete documents in Firestore. It uses querySelector to find forms, addEventListener to listen for 'submit' events, and then adds or deletes documents based on the form type. The code includes imports for 'deleteBookForm' and 'addBookForm' from 'bundle.js', and uses 'serverTimestamp' for document creation.

```
src > JS index.js > deleteBookForm.addEventListener('submit') callback > [e] docRef
40 const addBookForm = document.querySelector('.add')
41 addBookForm.addEventListener('submit', (e) => {
42   e.preventDefault()
43
44   addDoc(colRef, {
45     title: addBookForm.title.value,
46     author: addBookForm.author.value,
47     createdAt: serverTimestamp()
48   })
49   .then(() => {
50     addBookForm.reset()
51   })
52 })
53
54 // deleting docs
55 const deleteBookForm = document.querySelector('.delete')
56 deleteBookForm.addEventListener('submit', (e) => {
57   e.preventDefault()
58
59   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
60
61   deleteDoc(docRef)
62   .then(() => {
63     deleteBookForm.reset()
64   })
65 })
```

## Hasil Output :



## 9. Fetching A Single Document.

Untuk fetching a single document , tambahkan format codingan berikut pada program sebelumnya di halaman index.js yaitu get.

The screenshot shows a code editor interface with the following details:

- File Path:** src > JS index.js
- Content:** The code initializes Firebase and Firestore, setting up a collection reference for 'dayat'.

```
src > JS index.js > docRef
Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3   getFirestore, collection, onSnapshot,
4   addDoc, deleteDoc, doc,
5   query, where,
6   orderBy, serverTimestamp,
7   getDoc,
8 } from 'firebase/firestore'
9
10 const firebaseConfig = {
11   apiKey: "AIzaSyDp_P44EpIS0k2J-LL5CcKbcjQvuAVV8wk",
12   authDomain: "iqbal-a310d.firebaseioapp.com",
13   projectId: "iqbal-a310d",
14   storageBucket: "iqbal-a310d.appspot.com",
15   messagingSenderId: "496454966341",
16   appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
17   measurementId: "G-P3HG1CSL51"
18 }
19
20 // init firebase
21 initializeApp(firebaseConfig)
22
23 // init services
24 const db = getFirestore()
25
26 // collection ref
27 const colRef = collection(db, 'dayat')
28
29 // queries
30 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
31
32 // realtime collection data
33 onSnapshot(q, (snapshot) => {
34   let books = []
35   snapshot.docs.forEach(doc => {
36     books.push({ ...doc.data(), id: doc.id })
37   })
38   console.log(books)
39 })
40
41 // adding docs
42 const addBookForm = document.querySelector('.add')
43 addBookForm.addEventListener('submit', (e) => {
44   e.preventDefault()
45
46   addDoc(colRef, {
47     title: addBookForm.title.value,
48     author: addBookForm.author.value,
```

- Editor Tools:** Includes Explain Code, Comment Code, and Code Chat buttons.
- System Status:** Shows 25°C, Berawan, and a date/time of 15/01/2024.

The screenshot shows the same code editor interface, but now with a red error marker on line 26. The code has been modified to include a new section for adding documents to the collection.

```
src > JS index.js > docRef
20 // init firebase
21 initializeApp(firebaseConfig)
22
23 // init services
24 const db = getFirestore()
25
26 // collection ref
27 const colRef = collection(db, 'dayat')
28
29 // queries
30 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
31
32 // realtime collection data
33 onSnapshot(q, (snapshot) => {
34   let books = []
35   snapshot.docs.forEach(doc => {
36     books.push({ ...doc.data(), id: doc.id })
37   })
38   console.log(books)
39 })
40
41 // adding docs
42 const addBookForm = document.querySelector('.add')
43 addBookForm.addEventListener('submit', (e) => {
44   e.preventDefault()
45
46   addDoc(colRef, {
47     title: addBookForm.title.value,
48     author: addBookForm.author.value,
```

```
src > JS index.js > docRef
  +-----+
  52   addBookForm.reset()
  53 }
  54 })
  55
  56 // deleting docs
  57 const deleteBookForm = document.querySelector('.delete')
  58 deleteBookForm.addEventListener('submit', (e) => {
  59   e.preventDefault()
  60
  61   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
  62
  63   deleteDoc(docRef)
  64   .then(() => {
  65     deleteBookForm.reset()
  66   })
  67 })
  68
  69 // fetching a single document (& realtime)
  70 const docRef = doc(db, 'dayat', 'gGu4P9x0ZHK9SpA1d9j')
  71
  72 // getDoc(docRef)
  73 // .then(doc => {
  74 //   console.log(doc.data(), doc.id)
  75 // })
  76
  77 onSnapshot(docRef, (doc) => {
  78   console.log(doc.data(), doc.id)
  79 })
```

## 10. Updating Document

Untuk Update document , tambahkan format codingan berikut pada program sebelumnya di halaman index.js dan index.html seperti dibawah ini :

```
dist > index.html > html > body > form.delete > input
  +-----+
  1 <html lang="en">
  2   <head>
  3     <meta charset="UTF-8">
  4     <meta http-equiv="X-UA-Compatible" content="IE=edge">
  5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
  6     <title>Firebase 9</title>
  7   </head>
  8   <body>
  9     <h1>Getting Started with Firebase 9</h1>
 10
 11     <h2>Firebase Firestore</h2>
 12
 13     <form class="add">
 14       <label for="title">Title:</label>
 15       <input type="text" name="title" required>
 16       <label for="author">Author:</label>
 17       <input type="text" name="author" required>
 18
 19       <button>add a new book</button>
 20     </form>
 21
 22     <form class="delete">
 23       <label for="id">Document id:</label>
 24       <input type="text" name="id" required>
 25
 26       <button>delete a dayat</button>
 27     </form>
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-10". The Explorer sidebar on the left lists files: index.js (marked with a red circle), index.html dist, index.html, index.js, .gitignore, package-lock.json, package.json, and webpack.config.js. The index.html file is open in the editor, displaying HTML code for adding, deleting, and updating documents in a database. The status bar at the bottom shows "Ln 24, Col 35" and "23:20 15/01/2024".

```
<form class="add">
  <label for="title">Title:</label>
  <input type="text" name="title" required>
  <label for="author">Author:</label>
  <input type="text" name="author" required>
  <br>
  <button>add a new book</button>
</form>

<form class="delete">
  <label for="id">Document id:</label>
  <input type="text" name="id" required>
  <br>
  <button>delete a dayat</button>
</form>

<form class="update">
  <label for="id">Document id:</label>
  <input type="text" name="id" required>
  <br>
  <button>update a dayat</button>
</form>

<script src="bundle.js"></script>
</body>
</html>
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-10". The Explorer sidebar on the left lists files: index.js (marked with a red circle), index.html dist, index.html, index.js, .gitignore, package-lock.json, package.json, and webpack.config.js. The index.js file is open in the editor, showing code for initializing Firebase and getting a collection reference. The status bar at the bottom shows "Ln 27, Col 37" and "23:20 15/01/2024".

```
const firebaseConfig = {
  apiKey: "AIzaSyDp_P44EpIS0k23-LLS5CcKbcjQvuAVV8wk",
  authDomain: "iqbal-a310d.firebaseio.com",
  projectId: "iqbal-a310d",
  storageBucket: "iqbal-a310d.appspot.com",
  messagingSenderId: "496454966341",
  appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
  measurementId: "G-P3H61CSL51"
}

// init firebase
initializeApp(firebaseConfig)

// init services
const db = getFirestore()

// collection ref
const colRef = collection(db, 'dayat')
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-10". The Explorer sidebar on the left lists files: index.js, index.html, dist, bundle.js, index.html, and src. The src folder contains index.js, .gitignore, package-lock.json, package.json, and webpack.config.js. The index.js file is open in the editor, showing code for adding books to Firestore. The code uses `getFirestore()`, `collectionRef`, `query`, and `addDoc` methods. It also handles form submission and document creation. The status bar at the bottom shows "Ln 27, Col 37" and "JavaScript".

```
const db = getFirestore()
const colRef = collection(db, 'dayat')
const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
onSnapshot(q, (snapshot) => {
  let books = []
  snapshot.docs.forEach(doc => {
    books.push({ ...doc.data(), id: doc.id })
  })
  console.log(books)
})
// adding docs
const addBookForm = document.querySelector('.add')
addBookForm.addEventListener('submit', (e) => {
  e.preventDefault()
  addDoc(colRef, {
    title: addBookForm.title.value,
    author: addBookForm.author.value,
    createdAt: serverTimestamp()
  })
  .then(() => {
    addBookForm.reset()
  })
})
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-10". The Explorer sidebar on the left lists files: index.js, index.html, dist, bundle.js, index.html, and src. The src folder contains index.js, .gitignore, package-lock.json, package.json, and webpack.config.js. The index.js file is open in the editor, showing code for deleting and updating documents in Firestore. It includes logic for deleting a document using `deleteDoc` and `deleteBookForm.reset()`. It also includes code for fetching a single document and updating it using `updateDoc` and `updateForm.reset()`. The status bar at the bottom shows "Ln 27, Col 37" and "JavaScript".

```
deleteDoc(docRef)
  .then(() => {
    deleteBookForm.reset()
  })
})
// fetching a single document (& realtime)
const docRef = doc(db, 'dayat', 'gGu4P9x0ZHK95spA1d9j')
onSnapshot(docRef, (doc) => {
  console.log(doc.data(), doc.id)
})
// updating a document
const updateForm = document.querySelector('.update')
updateForm.addEventListener('submit', (e) => {
  e.preventDefault()
  let docRef = doc(db, 'dayat', updateForm.id.value)
  updateDoc(docRef, {
    title: 'updated title'
  })
  .then(() => {
    updateForm.reset()
  })
})
```

Hasil Output :

The screenshot shows a browser window with three tabs open, all titled 'Firebase 9'. The active tab displays the 'Getting Started with Firebase 9' page. This page features a heading 'Firebase Firestore' and a form with fields for 'Title' and 'Author', along with buttons for 'add a new book', 'delete a dayat', and 'update a dayat'. There are also two empty 'Document id:' fields with their respective buttons.

## 11. Setting Firebase Auth

Mulai dulu started pada firebase auth

The screenshot shows the Firebase console interface. On the left, a sidebar lists 'Project Overview', 'Firestore Database', and 'Authentication' (which is highlighted). The main area is titled 'Authentication' and contains the text: 'Authenticate and manage users from a variety of providers without server-side code'. Below this is a large yellow badge icon featuring a person's face, a padlock, and a star. At the bottom, there is a 'Learn more' button and a navigation bar with icons for search, file, mail, and other tools.

Lalu aktifkan sign in untuk auth

The screenshot shows the Firebase Authentication console for a project named 'iqbal'. The left sidebar has 'Authentication' selected under 'Firestore Database'. The main panel is titled 'Authentication' and shows the 'Sign-in method' tab selected. It lists two sign-in providers: 'Email/Password' (enabled) and 'Email link (passwordless sign-in)' (disabled). A note explains that email address verification, password recovery, and email address change primitives are provided. At the bottom right are 'Cancel' and 'Save' buttons.

Pada index.js ,tambahkan Source Code :

The screenshot shows a code editor with an open file named 'index.js'. The code defines a 'firebaseConfig' object with various properties like apiKey, authDomain, projectId, storageBucket, messagingSenderId, appId, and measurementId. It then initializes Firebase using this config and initializes services like Firestore and Auth.

```
src > JS index.js > colRef
      Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3   getFirestore, collection, onSnapshot,
4   addDoc, deleteDoc, doc,
5   query, where,
6   orderBy, serverTimestamp,
7   updateDoc
8 } from 'firebase/firestore'
9 import {
10   getAuth
11 } from 'firebase/auth'
12
13 const firebaseConfig = {
14   apiKey: "AIzaSyDp_P44EpIS0k23-LLS5CkCbjQvuAVV8wk",
15   authDomain: "iqbal-a310d.firebaseio.com",
16   projectId: "iqbal-a310d",
17   storageBucket: "iqbal-a310d.appspot.com",
18   messagingSenderId: "496454966341",
19   appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
20   measurementId: "G-P3HG1CSL51"
21 }
22
23 // init firebase
24 initializeApp(firebaseConfig)
25
26 // init services
27 const db = getFirestore()
28 const auth = getAuth()
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-11". The Explorer sidebar on the left shows a project structure with files like index.js, bundle.js, and index.html. The main editor area displays the following JavaScript code:

```
src > JS indexjs > [x] colRef
28 const auth = getAuth()
29
30 // collection ref
31 const colRef = collection(db, 'dayat')
32
33 // queries
34 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
35
36 // realtime collection data
37 onSnapshot(q, (snapshot) => {
38   let books = []
39   snapshot.docs.forEach(doc => {
40     books.push({ ...doc.data(), id: doc.id })
41   })
42   console.log(books)
43 })
44
45 // adding docs
46 const addBookForm = document.querySelector('.add')
47 addBookForm.addEventListener('submit', (e) => {
48   e.preventDefault()
49
50   addDoc(colRef, {
51     title: addBookForm.title.value,
52     author: addBookForm.author.value,
53     createdAt: serverTimestamp()
54   })
55   .then(() => {
56     addBookForm.reset()
57   })
58 })
59
60 // deleting docs
61 const deleteBookForm = document.querySelector('.delete')
62 deleteBookForm.addEventListener('submit', (e) => {
63   e.preventDefault()
64
65   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
66
67   deleteDoc(docRef)
68   .then(() => {
69     deleteBookForm.reset()
70   })
71 })
72
73 // fetching a single document (& realtime)
74 const docRef = doc(db, 'books', 'ggu4P9x0ZHK9SspA1d9j')
75
76 onSnapshot(docRef, (doc) => {
77   console.log(doc.data(), doc.id)
78 })
79
80 // updating a document
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-11". The Explorer sidebar on the left shows a project structure with files like index.js, bundle.js, and index.html. The main editor area displays the following JavaScript code:

```
src > JS indexjs > [x] colRef
24   title: addBookForm.title.value,
25   author: addBookForm.author.value,
26   createdAt: serverTimestamp()
27 }
28 .then(() => {
29   addBookForm.reset()
30 })
31
32 // deleting docs
33 const deleteBookForm = document.querySelector('.delete')
34 deleteBookForm.addEventListener('submit', (e) => {
35   e.preventDefault()
36
37   const docRef = doc(db, 'dayat', deleteBookForm.id.value)
38
39   deleteDoc(docRef)
40   .then(() => {
41     deleteBookForm.reset()
42   })
43 })
44
45 // fetching a single document (& realtime)
46 const docRef = doc(db, 'books', 'ggu4P9x0ZHK9SspA1d9j')
47
48 onSnapshot(docRef, (doc) => {
49   console.log(doc.data(), doc.id)
50 })
51
52 // updating a document
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-11". The Explorer sidebar on the left lists files: index.js (selected), index.html, bundle.js, dist, .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area displays the code for index.js:

```
src > JS index.js > colRef
67 deleteDoc(docRef)
68 .then(() => {
69   deleteBookForm.reset()
70 })
71 }

73 // fetching a single document (& realtime)
74 const docRef = doc(db, 'books', 'gGu4P9x0ZHK9SspA1d9j')
75
76 onSnapshot(docRef, (doc) => {
77   console.log(doc.data(), doc.id)
78 })

79 // updating a document
80 const updateForm = document.querySelector('.update')
81 updateForm.addEventListener('submit', (e) => {
82   e.preventDefault()

83   let docRef = doc(db, 'dayat', updateForm.id.value)
84
85   updateDoc(docRef, {
86     title: 'updated title'
87   })
88   .then(() => {
89     updateForm.reset()
90   })
91 })
92
93 })
```

The status bar at the bottom shows "Ln 31, Col 37" and "JavaScript". The taskbar at the bottom includes icons for Share Code Link, Explain Code, Comment Code, Code Chat, Search Error, and others.

Hasil Output :

The screenshot shows a browser window with four tabs, all titled "Firebase 9". The active tab displays the "Getting Started with Firebase 9" page. The page content includes:

## Getting Started with Firebase 9

### Firebase Firestore

Title:  Author:

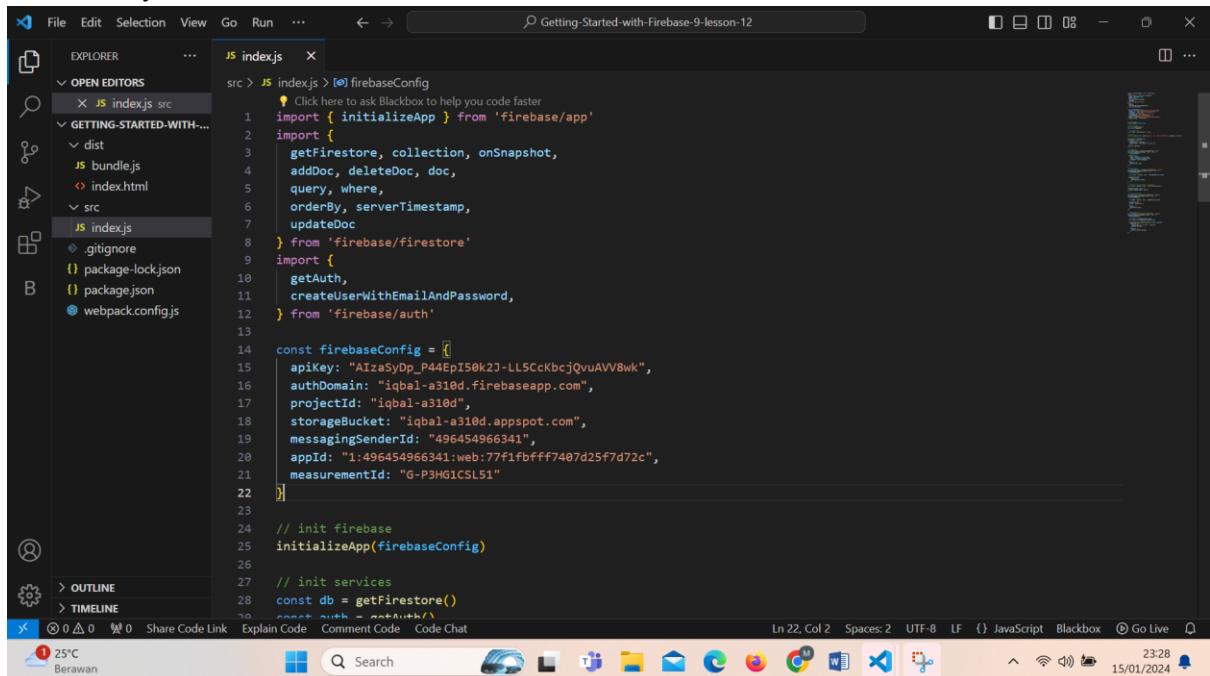
Document id:

Document id:

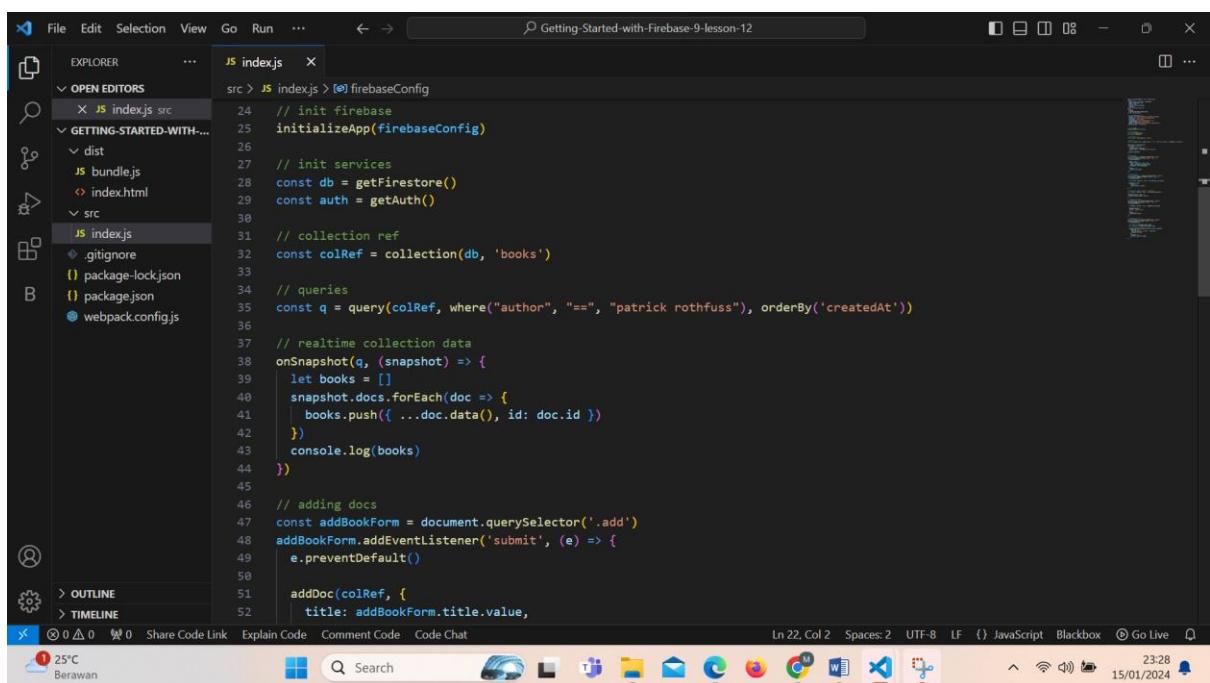
The browser taskbar at the bottom shows "127.0.0.1:58090/dist/index.html" and the date "15/01/2024".

12. Sign Up user

Pada index.js tambahkan code berikut :



```
src > JS index.js > [e] firebaseConfig
1 import { initializeApp } from 'firebase/app'
2 import {
3   getFirestore, collection, onSnapshot,
4   addDoc, deleteDoc, doc,
5   query, where,
6   orderBy, serverTimestamp,
7   updateDoc
8 } from 'firebase/firestore'
9 import {
10   getAuth,
11   createUserWithEmailAndPassword,
12 } from 'firebase/auth'
13
14 const firebaseConfig = [
15   apiKey: "AIzaSyD_P44EpI50k2J-LL5CcKbcjQvuAVV8wk",
16   authDomain: "iqbal-a310d.firebaseioapp.com",
17   projectId: "iqbal-a310d",
18   storageBucket: "iqbal-a310d.appspot.com",
19   messagingSenderId: "496454966341",
20   appId: "1:496454966341:web:77f1fbfff7407d25f7d72c",
21   measurementId: "G-P3HG1CSL51"
22 ]
23
24 // init firebase
25 initializeApp(firebaseConfig)
26
27 // init services
28 const db = getFirestore()
29 const auth = getAuth()
```



```
src > JS index.js > [e] firebaseConfig
24 // init firebase
25 initializeApp(firebaseConfig)
26
27 // init services
28 const db = getFirestore()
29 const auth = getAuth()
30
31 // collection ref
32 const colRef = collection(db, 'books')
33
34 // queries
35 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
36
37 // realtime collection data
38 onSnapshot(q, (snapshot) => {
39   let books = []
40   snapshot.docs.forEach(doc => {
41     books.push({ ...doc.data(), id: doc.id })
42   })
43   console.log(books)
44 })
45
46 // adding docs
47 const addBookForm = document.querySelector('.add')
48 addBookForm.addEventListener('submit', (e) => {
49   e.preventDefault()
50
51   addDoc(colRef, {
52     title: addBookForm.title.value,
```

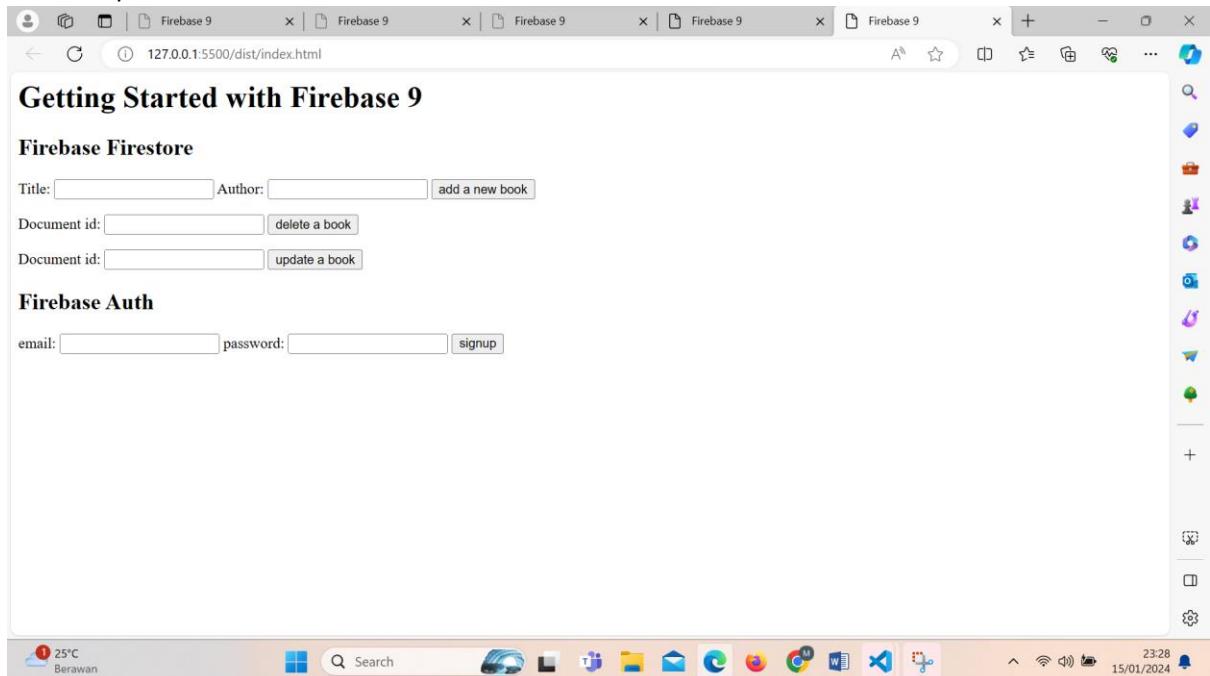
The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-12". The Explorer sidebar on the left shows a file tree with a file named "index.js" selected. The main editor area contains the following JavaScript code:

```
src > JS index.js > [e] firebaseConfig
59
60
61 // deleting docs
62 const deleteBookForm = document.querySelector('.delete')
63 deleteBookForm.addEventListener('submit', (e) => {
64   e.preventDefault()
65
66   const docRef = doc(db, 'books', deleteBookForm.id.value)
67
68   deleteDoc(docRef)
69   .then(() => {
70     deleteBookForm.reset()
71   })
72 })
73
74 // fetching a single document (& realtime)
75 const docRef = doc(db, 'books', 'gGu4P9x0ZHK9SspA1d9j')
76
77 onSnapshot(docRef, (doc) => {
78   console.log(doc.data(), doc.id)
79 })
80
81 // updating a document
82 const updateForm = document.querySelector('.update')
83 updateForm.addEventListener('submit', (e) => {
84   e.preventDefault()
85
86   let docRef = doc(db, 'books', updateForm.id.value)
87
88   updateDoc(docRef, {
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-12". The Explorer sidebar on the left shows a file tree with a file named "index.js" selected. The main editor area contains the following JavaScript code:

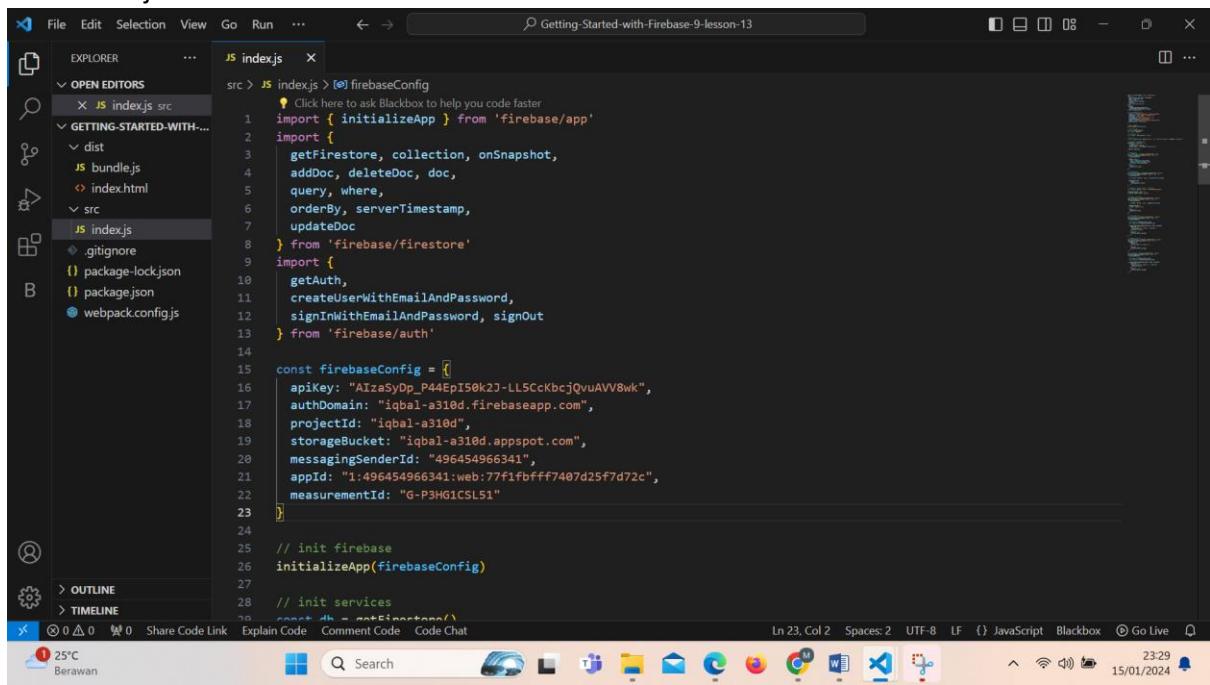
```
src > JS index.js > [e] firebaseConfig
91   .then(() => {
92     updateForm.reset()
93   })
94 }
95
96 // signing users up
97 const signupForm = document.querySelector('.signup')
98 signupForm.addEventListener('submit', (e) => {
99   e.preventDefault()
100
101   const email = signupForm.email.value
102   const password = signupForm.password.value
103
104   createUserWithEmailAndPassword(auth, email, password)
105   .then(cred => {
106     console.log('User created:', cred.user)
107     signupForm.reset()
108   })
109   .catch(err => {
110     console.log(err.message)
111   })
112 })
```

## Hasil Output :



## 13. Login And Logout

Pada index.js tambahkan code berikut :



The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-13". The Explorer sidebar on the left shows a project structure with files like `index.js` in the `src` directory. The main editor area displays the following JavaScript code:

```
src > JS index.js > firebaseConfig
32 // collection ref
33 const colRef = collection(db, 'books')
34
35 // queries
36 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
37
38 // realtime collection data
39 onSnapshot(q, (snapshot) => {
40   let books = []
41   snapshot.docs.forEach(doc => {
42     books.push({ ...doc.data(), id: doc.id })
43   })
44   console.log(books)
45 })
46
47 // adding docs
48 const addBookForm = document.querySelector('.add')
49 addBookForm.addEventListener('submit', (e) => {
50   e.preventDefault()
51
52   addDoc(colRef, {
53     title: addBookForm.title.value,
54     author: addBookForm.author.value,
55     createdAt: serverTimestamp()
56   })
57   .then(() => {
58     addBookForm.reset()
59   })
60 })
```

The status bar at the bottom shows "Ln 23, Col 2" and "JavaScript".

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-13". The Explorer sidebar on the left shows a project structure with files like `index.js` in the `src` directory. The main editor area displays the following JavaScript code:

```
src > JS index.js > firebaseConfig
59 |})
60 })
61
62 // deleting docs
63 const deleteBookForm = document.querySelector('.delete')
64 deleteBookForm.addEventListener('submit', (e) => {
65   e.preventDefault()
66
67   const docRef = doc(db, 'books', deleteBookForm.id.value)
68
69   deleteDoc(docRef)
70   .then(() => {
71     deleteBookForm.reset()
72   })
73 })
74
75 // fetching a single document (& realtime)
76 const docRef = doc(db, 'books', 'gGu4P9x0ZHK95spA1d9j')
77
78 onSnapshot(docRef, (doc) => {
79   console.log(doc.data(), doc.id)
80 })
81
82 // updating a document
83 const updateForm = document.querySelector('.update')
84 updateForm.addEventListener('submit', (e) => {
85   e.preventDefault()
86
87   let docRef = doc(db, 'books', updateForm.id.value)
```

The status bar at the bottom shows "Ln 23, Col 2" and "JavaScript".

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-13". The Explorer sidebar on the left lists files: index.js (selected), index.js src, bundle.js, index.html, dist, .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area displays the following code:

```
src > JS index.js > [e] firebaseConfig
91   })
92   .then(() => {
93     updateForm.reset()
94   })
95 }

// signing users up
96 const signupForm = document.querySelector('.signup')
97 signupForm.addEventListener('submit', (e) => {
98   e.preventDefault()

99   const email = signupForm.email.value
100  const password = signupForm.password.value

101  createUserWithEmailAndPassword(auth, email, password)
102    .then(cred => {
103      console.log('user created:', cred.user)
104      signupForm.reset()
105    })
106    .catch(err => {
107      console.log(err.message)
108    })
109  })

110 // logging in and out
111 const logoutButton = document.querySelector('.logout')
112 logoutButton.addEventListener('click', () => {
113   signOut(auth)
114   .then(() => {
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-13". The Explorer sidebar on the left lists files: index.js (selected), index.js src, bundle.js, index.html, dist, .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area displays the following code:

```
src > JS index.js > [e] firebaseConfig
115 // logging in and out
116 const logoutButton = document.querySelector('.logout')
117 logoutButton.addEventListener('click', () => {
118   signOut(auth)
119   .then(() => {
120     console.log('user signed out')
121   })
122   .catch(err => {
123     console.log(err.message)
124   })
125 }

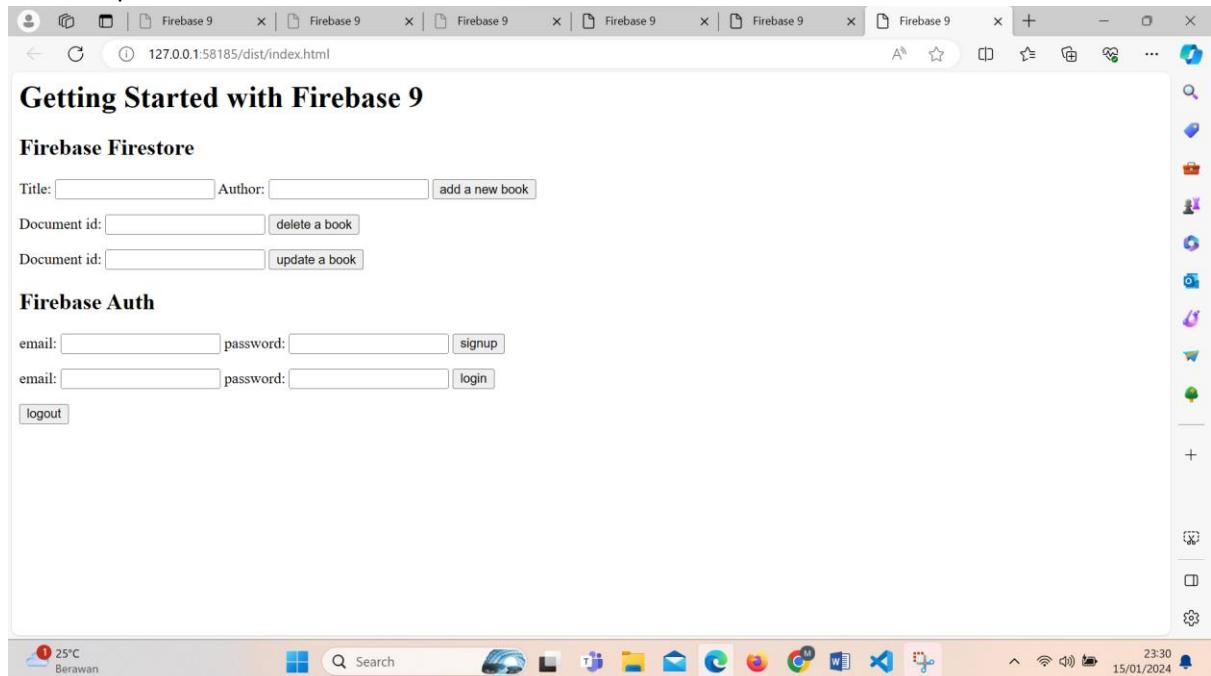
126 const loginForm = document.querySelector('.login')
127 loginForm.addEventListener('submit', (e) => {
128   e.preventDefault()

129   const email = loginForm.email.value
130   const password = loginForm.password.value

131   signInWithEmailAndPassword(auth, email, password)
132     .then(cred => {
133       console.log('user logged in:', cred.user)
134       loginForm.reset()
135     })
136     .catch(err => {
137       console.log(err.message)
138     })
139   })
140 }

141 })
```

## Hasil Output :



## 14. Subscribing to Auth Changes.

## Source Code :

```
src > index.js > firebaseConfig
    Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3     getFirestore, collection, onSnapshot,
4     addDoc, deleteDoc, doc,
5     query, where,
6     orderBy, serverTimestamp,
7     updateDoc
8 } from 'firebase/firestore'
9 import {
10     getAuth,
11     createUserWithEmailAndPassword,
12     signInWithEmailAndPassword, signOut,
13     onAuthStateChanged
14 } from 'firebase/auth'
15
16 const firebaseConfig = [
17     apiKey: "AIzaSyDp_P44Ep150K2J-LL5CcKbcjQvuAVVBwk",
18     authDomain: "iqbal-a310d.firebaseio.com",
19     projectId: "iqbal-a310d",
20     storageBucket: "iqbal-a310d.appspot.com",
21     messagingSenderId: "49645496341",
22     appId: "1:49645496341:web:77f1fbfff7407d25fd72c",
23     measurementId: "G-P3HG1CSL51"
24 ]
25
26 // init firebase
27.initializeApp(firebaseConfig)
28
29 // init comsicone
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-14". The Explorer sidebar on the left shows a file tree with "index.js" selected. The main editor area contains the following JavaScript code:

```
src > JS index.js > firebaseConfig
24 }
25
26 // init firebase
27 initializeApp(firebaseConfig)
28
29 // init services
30 const db = getFirestore()
31 const auth = getAuth()
32
33 // collection ref
34 const colRef = collection(db, 'books')
35
36 // queries
37 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
38
39 // realtime collection data
40 onSnapshot(q, (snapshot) => {
41   let books = []
42   snapshot.docs.forEach(doc => {
43     books.push({ ...doc.data(), id: doc.id })
44   })
45   console.log(books)
46 }
47
48 // adding docs
49 const addBookForm = document.querySelector('.add')
50 addBookForm.addEventListener('submit', (e) => {
51   e.preventDefault()
```

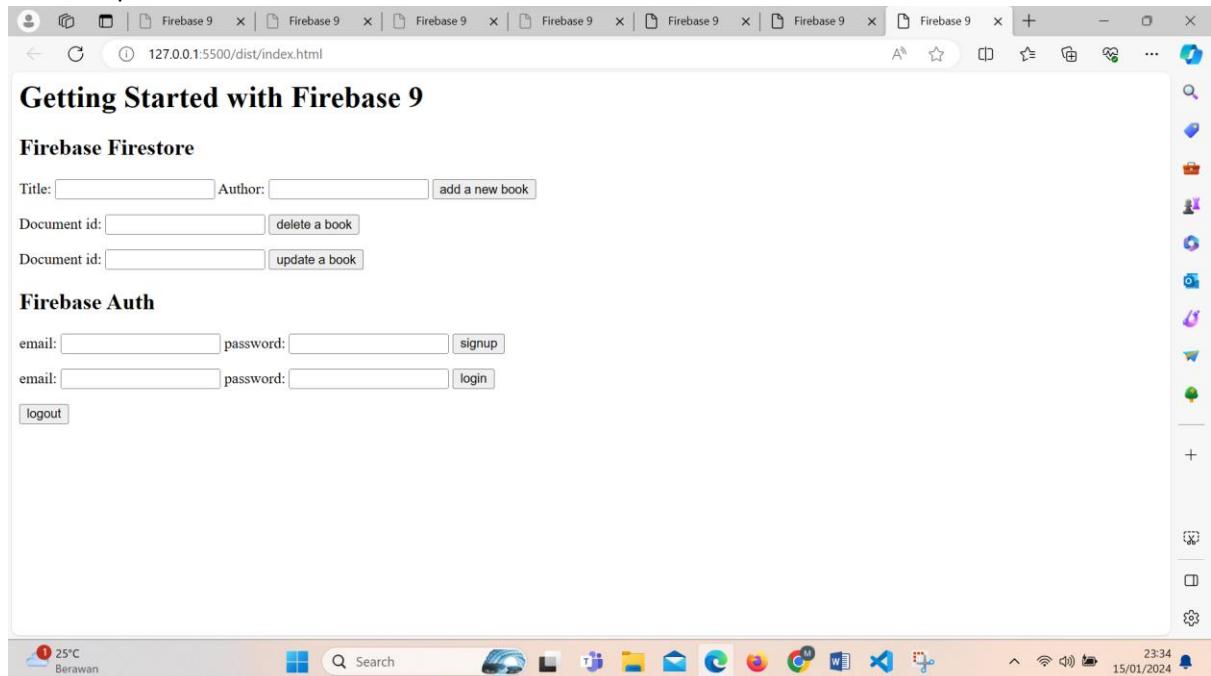
The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-14". The Explorer sidebar on the left shows a file tree with "index.js" selected. The main editor area contains the following JavaScript code, which includes document queries and deletion logic:

```
src > JS index.js > firebaseConfig
24
25
26 addDoc(colRef, {
27   title: addBookForm.title.value,
28   author: addBookForm.author.value,
29   createdAt: serverTimestamp()
30 })
31 .then(() => {
32   addBookForm.reset()
33 })
34
35 // deleting docs
36 const deleteBookForm = document.querySelector('.delete')
37 deleteBookForm.addEventListener('submit', (e) => {
38   e.preventDefault()
39
40   const docRef = doc(db, 'books', deleteBookForm.id.value)
41
42   deleteDoc(docRef)
43   .then(() => {
44     deleteBookForm.reset()
45   })
46 })
47
48 // fetching a single document (& realtime)
49 const docRef = doc(db, 'books', 'gGu4P9x0ZHK95spAld9j')
50
51 onSnapshot(docRef, (doc) => {
52   console.log(doc.data(), doc.id)
```

```
src > JS indexjs > [firebaseConfig]
83 // updating a document
84 const updateForm = document.querySelector('.update')
85 updateForm.addEventListener('submit', (e) => {
86   e.preventDefault()
87
88   let docRef = doc(db, 'books', updateForm.id.value)
89
90   updateDoc(docRef, {
91     title: 'updated title'
92   })
93   .then(() => {
94     updateForm.reset()
95   })
96 })
97
98 // signing users up
99 const signupForm = document.querySelector('.signup')
100 signupForm.addEventListener('submit', (e) => {
101   e.preventDefault()
102
103   const email = signupForm.email.value
104   const password = signupForm.password.value
105
106   createUserWithEmailAndPassword(auth, email, password)
107   .then(cred => {
108     console.log('user created:', cred.user)
109     signupForm.reset()
110   })
111   .catch(err => {
112     console.log(err.message)
113   })
114 })
115
116 // logging in and out
117 const logoutButton = document.querySelector('.logout')
118 logoutButton.addEventListener('click', () => {
119   signOut(auth)
120   .then(() => {
121     console.log('user signed out')
122   })
123   .catch(err => {
124     console.log(err.message)
125   })
126 })
127
```

```
src > JS indexjs > [firebaseConfig]
99 const signupForm = document.querySelector('.signup')
100 signupForm.addEventListener('submit', (e) => {
101   e.preventDefault()
102
103   const email = signupForm.email.value
104   const password = signupForm.password.value
105
106   createUserWithEmailAndPassword(auth, email, password)
107   .then(cred => {
108     console.log('user created:', cred.user)
109     signupForm.reset()
110   })
111   .catch(err => {
112     console.log(err.message)
113   })
114 })
115
116 // logging in and out
117 const logoutButton = document.querySelector('.logout')
118 logoutButton.addEventListener('click', () => {
119   signOut(auth)
120   .then(() => {
121     console.log('user signed out')
122   })
123   .catch(err => {
124     console.log(err.message)
125   })
126 })
127
```

## Hasil Output :



## 15. Unsubscribes To Changes.

### Source Code :

```
src > JS index.js > firebaseConfig
  Click here to ask Blackbox to help you code faster
1 import { initializeApp } from 'firebase/app'
2 import {
3   getFirestore, collection, onSnapshot,
4   addDoc, deleteDoc, doc,
5   query, where,
6   orderBy, serverTimestamp,
7   updateDoc
8 } from 'firebase/firestore'
9 import {
10   getAuth,
11   createUserWithEmailAndPassword,
12   signInWithEmailAndPassword, signOut,
13   onAuthStateChanged
14 } from 'firebase/auth'
15
16 const firebaseConfig = [
17   apiKey: "AIzaSyDp_P44EpIS0k2J-LL5CcKbcjQvuAVV8wk",
18   authDomain: "iqbal-a310d.firebaseio.com",
19   projectId: "iqbal-a310d",
20   storageBucket: "iqbal-a310d.appspot.com",
21   messagingSenderId: "496454966341",
22   appId: "1:496454966341:web:77f1fbffff7407d25f7d72c",
23   measurementId: "G-P3HG01CSL51"
24 ]
25
26 // init firebase
27 initializeApp(firebaseConfig)
28
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting Started with Firebase 9-lesson-15". The Explorer sidebar on the left shows a project structure with files like `index.js` in the `src` directory. The main editor window displays the following code:

```
src > JS index.js > [e] firebaseConfig
28 // init services
29 const db = getFirestore()
30 const auth = getAuth()
31
32 // collection ref
33 const colRef = collection(db, 'books')
34
35 // queries
36 const q = query(colRef, where("author", "==", "patrick rothfuss"), orderBy('createdAt'))
37
38 // realtime collection data
39 const unsubCol = onSnapshot(q, (snapshot) => {
40     let books = []
41     snapshot.docs.forEach(doc => {
42         books.push({ ...doc.data(), id: doc.id })
43     })
44     console.log(books)
45 })
46
47 // adding docs
48 const addBookForm = document.querySelector('.add')
49 addBookForm.addEventListener('submit', (e) => {
50     e.preventDefault()
51
52     addDoc(colRef, {
53         title: addBookForm.title.value,
54         author: addBookForm.author.value,
55         createdat: serverTimestamp()
56     })
57     .then(() => {
58         addBookForm.reset()
59     })
60 })
61
62 // deleting docs
63 const deleteBookForm = document.querySelector('.delete')
64 deleteBookForm.addEventListener('submit', (e) => {
65     e.preventDefault()
66
67     const docRef = doc(db, 'books', deleteBookForm.id.value)
68
69     deleteDoc(docRef)
70     .then(() => {
71         deleteBookForm.reset()
72     })
73 })
74
75 // fetching a single document (& realtime)
76
```

The screenshot shows the Visual Studio Code interface with the same title bar and project structure. The main editor window now contains the completed code from the previous screenshot, with additional logic added for document creation, deletion, and fetching.

```
File Edit Selection View Go Run ...
Getting-Started-with-Firebase-9-lesson-15
EXPLORER ...
OPEN EDITORS ...
GETTING-STARTED-WITH-...
src > JS index.js > deleteBookForm.addEventListener('submit') callback
  .then(() => {
    | deleteBookForm.reset()
  })
}
// fetching a single document (& realtime)
const docRef = doc(db, 'books', 'gGu4P9x0ZHk9SspAld9j')
const unsubDoc = onSnapshot(docRef, (doc) => {
  | console.log(doc.data(), doc.id)
})
// updating a document
const updateForm = document.querySelector('.update')
updateForm.addEventListener('submit', (e) => {
  e.preventDefault()

  let docRef = doc(db, 'books', updateForm.id.value)

  updateDoc(docRef, {
    title: 'updated title'
  })
  .then(() => {
    | updateForm.reset()
  })
})
// signing users up
const signupForm = document.querySelector('.signup')
signupForm.addEventListener('submit', (e) => {
  e.preventDefault()
  ...
})
In 66, Col 11 Spaces: 2 UTF-8 {} JavaScript Blackbox Go Live
23:35 15/01/2024
```

```
File Edit Selection View Go Run ...
Getting-Started-with-Firebase-9-lesson-15
EXPLORER OPEN EDITORS
src > index.js > updateForm.addEventListener('submit') callback
  99 const signupForm = document.querySelector('.signup')
100 signupForm.addEventListener('submit', (e) => {
101   e.preventDefault()
102
103   const email = signupForm.email.value
104   const password = signupForm.password.value
105
106   createUserWithEmailAndPassword(auth, email, password)
107     .then(cred => {
108       console.log('user created:', cred.user)
109       signupForm.reset()
110     })
111     .catch(err => {
112       console.log(err.message)
113     })
114   })
115
116 // logging in and out
117 const logoutButton = document.querySelector('.logout')
118 logoutButton.addEventListener('click', () => {
119   signOut(auth)
120     .then(() => {
121       console.log('user signed out')
122     })
123     .catch(err => {
124       console.log(err.message)
125     })
126   })
127
```

The screenshot shows the Visual Studio Code interface with the title bar "Getting-Started-with-Firebase-9-lesson-15". The Explorer sidebar on the left lists files: index.js (selected), index.js src, .gitignore, package-lock.json, package.json, and webpack.config.js. The main editor area displays the following code:

```
src > JS indexjs > updateForm.addEventListener('submit') callback
  .catch(err => {
    console.log(err.message)
  })

const loginForm = document.querySelector('.login')
loginForm.addEventListener('submit', (e) => {
  e.preventDefault()

  const email = loginForm.email.value
  const password = loginForm.password.value

  signInWithEmailAndPassword(auth, email, password)
    .then(cred => {
      console.log('user logged in:', cred.user)
      loginForm.reset()
    })
    .catch(err => {
      console.log(err.message)
    })
})

// subscribing to auth changes
const unsubAuth = onAuthStateChanged(auth, (user) => {
  console.log('user status changed:', user)
})

// unsubscribing from changes (auth & db)
const unsubButton = document.querySelector('.unsub')
unsubButton.addEventListener('click', () => {
  loginForm.reset()
  console.log('unsubscribing')
  unsubCol()
  unsubDoc()
  unsubAuth()
})
```

This screenshot is identical to the one above, but it shows two lines of code removed from the bottom of the file:

```
src > JS indexjs > updateForm.addEventListener('submit') callback
  .catch(err => {
    console.log(err.message)
  })

const loginForm = document.querySelector('.login')
loginForm.addEventListener('submit', (e) => {
  e.preventDefault()

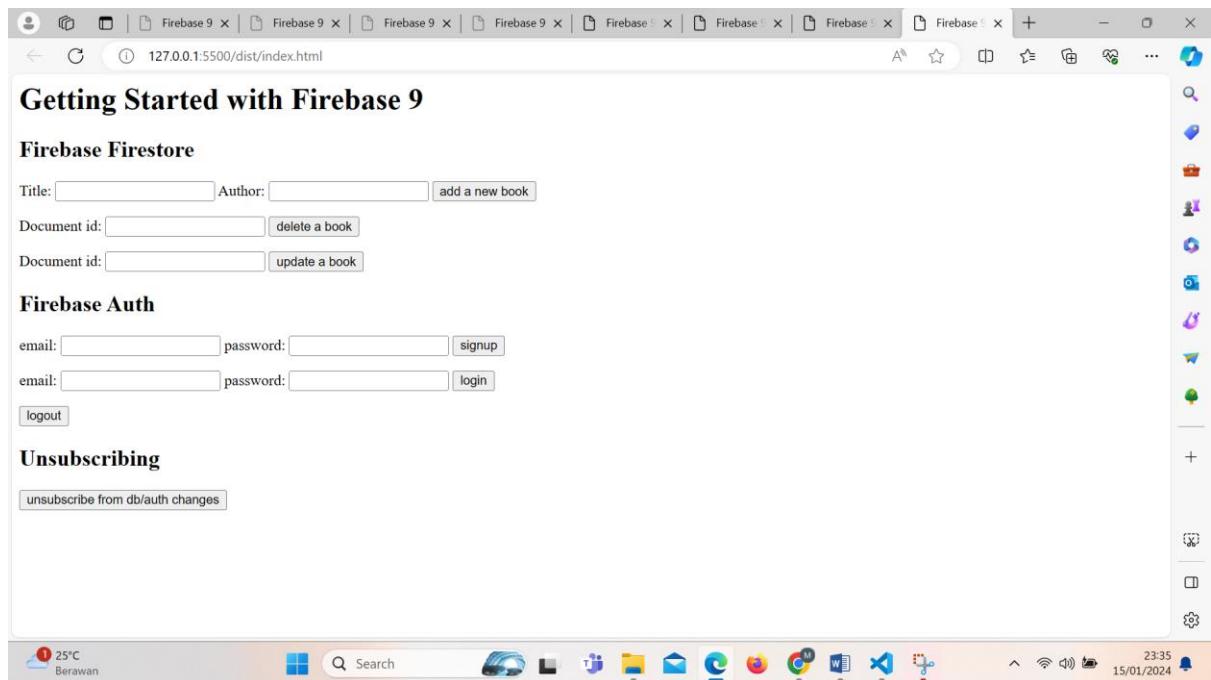
  const email = loginForm.email.value
  const password = loginForm.password.value

  signInWithEmailAndPassword(auth, email, password)
    .then(cred => {
      console.log('user logged in:', cred.user)
      loginForm.reset()
    })
    .catch(err => {
      console.log(err.message)
    })
})

// subscribing to auth changes
const unsubAuth = onAuthStateChanged(auth, (user) => {
  console.log('user status changed:', user)
})

// unsubscribing from changes (auth & db)
const unsubButton = document.querySelector('.unsub')
unsubButton.addEventListener('click', () => {
  console.log('unsubscribing')
  unsubCol()
  unsubDoc()
  unsubAuth()
```

Hasil Output :



## **Kesimpulan**

Dalam proyek Firebase yang telah diinisialisasi, fokus utama adalah penggunaan layanan Firestore sebagai basis data NoSQL. Firestore memungkinkan penyimpanan dan pengambilan data yang fleksibel dalam bentuk dokumen, dengan operasi dasar melibatkan pembuatan dan pengambilan data dari koleksi.

Inisialisasi Firebase melibatkan konfigurasi proyek yang diperoleh dari Firebase Console, memungkinkan aplikasi terhubung dengan proyek Firebase tertentu. Penting untuk mengimpor modul Firebase yang diperlukan, seperti `firebase/app` dan `firebase/firestore`, untuk mengakses fungsi Firebase dan Firestore di dalam kode JavaScript dengan bantuan Node Package Manager (`npm`).

Dalam aplikasi, konfigurasi Firebase harus benar dan sesuai dengan proyek Firebase yang digunakan untuk menghindari kesalahan akses atau komunikasi ke server Firebase. Fleksibilitas Firestore dalam manajemen data, terutama ketika data memiliki struktur yang bervariasi, memberikan keuntungan tambahan.

Dengan menggunakan Firebase, pengembang dapat membangun aplikasi responsif dengan cepat, dengan fitur-fitur dasar seperti otentikasi pengguna, penyimpanan data, dan analisis performa, sementara Firestore memberikan solusi basis data yang kuat dengan dukungan untuk fitur real-time, mempermudah pengembangan aplikasi yang efisien dan dapat diandalkan.

## **Saran**

Untuk memaksimalkan efektivitas proyek Firebase, disarankan untuk memastikan konfigurasi Firebase secara akurat mencerminkan proyek yang digunakan dan memperhatikan kebenaran nilai-nilai kunci API dan parameter proyek. Selain itu, dalam manajemen data dengan Firestore, dianjurkan untuk memanfaatkan fleksibilitas struktur data dokumen guna menyesuaikan dengan kebutuhan aplikasi dan memastikan efisiensi dalam operasi basis data.

Penting juga untuk memonitor penggunaan data dan lalu lintas aplikasi menggunakan layanan analisis yang disediakan oleh Firebase untuk mendapatkan wawasan yang berharga terkait performa dan perilaku pengguna. Penerapan praktik keamanan, termasuk otentikasi pengguna yang kuat dan pengaturan izin akses yang tepat, akan meningkatkan keamanan aplikasi secara keseluruhan.

Selanjutnya, menjaga SDK Firebase selalu terbaru dan melakukan pengujian secara berkala dapat membantu memastikan keberlanjutan dan kehandalan aplikasi. Dengan mengikuti saran ini, pengembang dapat mengoptimalkan penggunaan Firebase dan meningkatkan kualitas serta keamanan proyek aplikasi mereka.