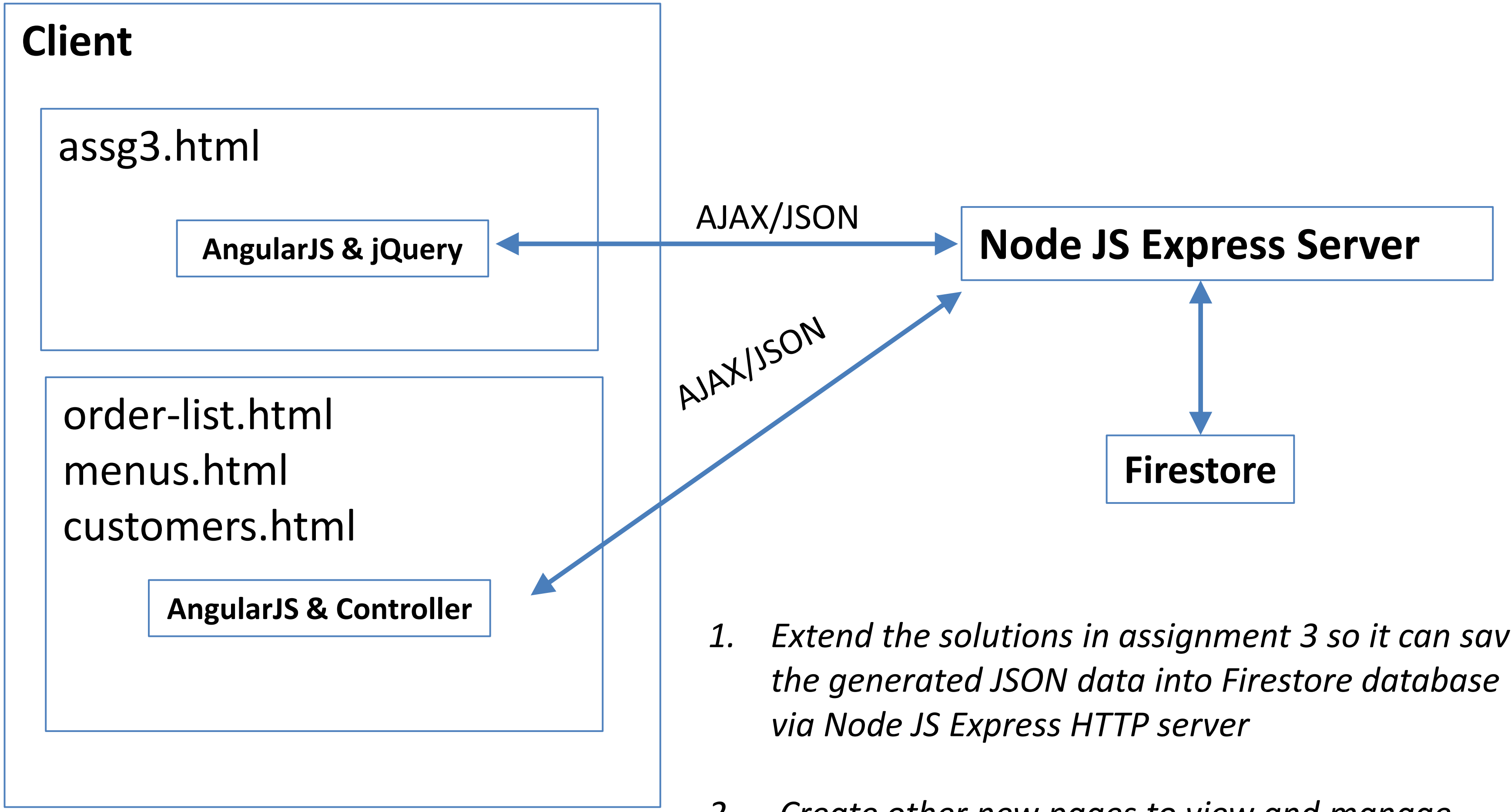
Project
(MB Ordering System)

SCSV3263

2020/2021-2

Overall Architecture

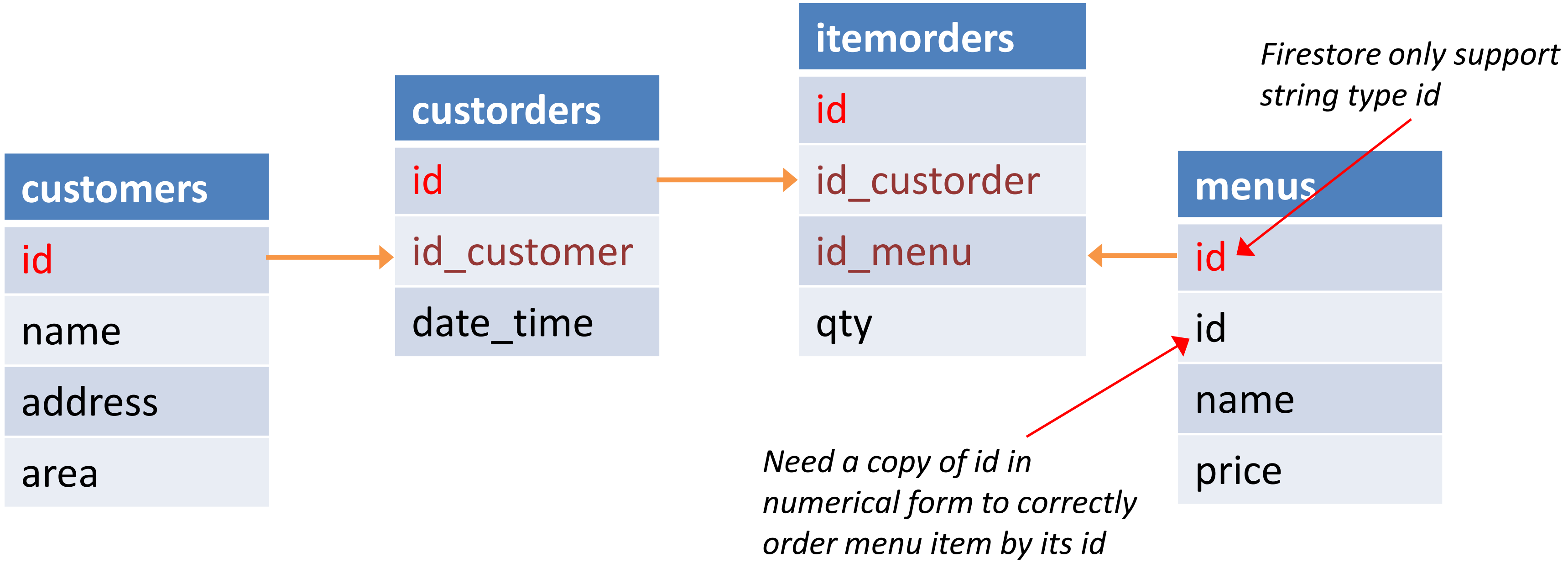


1. *Extend the solutions in assignment 3 so it can save the generated JSON data into Firestore database via Node JS Express HTTP server*

2. *Create other new pages to view and manage order list, menus and customers' information stored inside the Firestore database*

Database Design

The save order operation should record the order info into four (4) Firestore database collections with structure and relationship are as follows:



customers
id
name
address
area

custorders
id
id_customer
date_time

itemorders
id
id_custorder
id_menu
qty

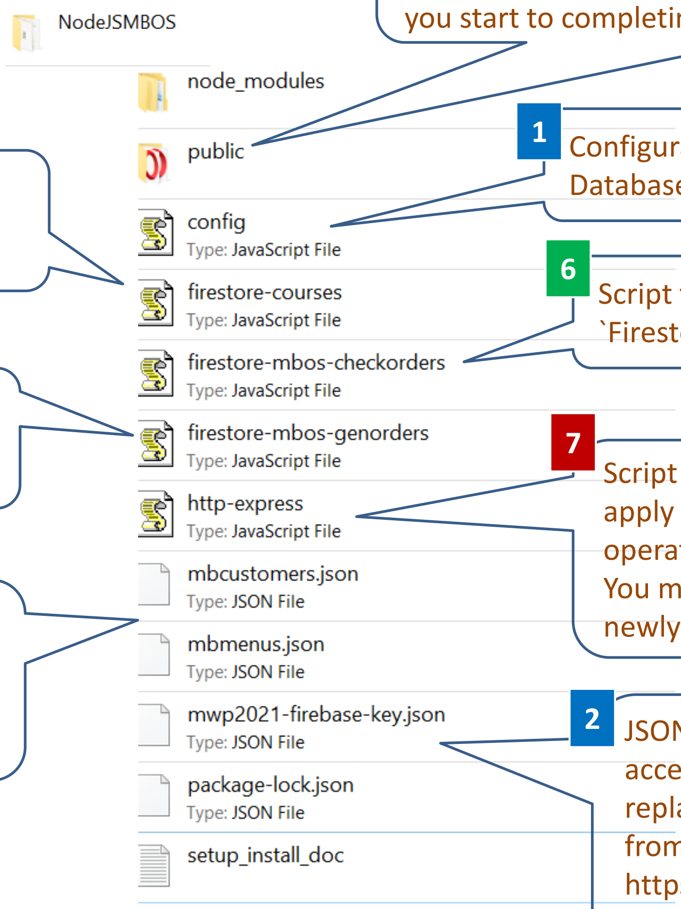
menus
id
id
name
price

Firestore only support string type id

Need a copy of id in numerical form to correctly order menu item by its id

Project Resource Files

Download project archive file (NodeJSMBOS.zip) from eLearning and extract it in your local computer drive. The archive file provide you the directory structure and related files as follows:



NodeJSMBOS

node_modules

public

config
Type: JavaScript File

firestore-courses
Type: JavaScript File

firestore-mbos-checkorders
Type: JavaScript File

firestore-mbos-genorders
Type: JavaScript File

http-express
Type: JavaScript File

mbcustomers.json
Type: JSON File

mbmenus.json
Type: JSON File

mwp2021-firebase-key.json
Type: JSON File

package-lock.json
Type: JSON File

setup_install_doc

1 Configuration file to access Firestore Database account.

2 JSON credential file used by `config.js` to access Firestore Database account. Need to replace this file with yours by downloading it from Firebase console page- https://console.firebase.google.com/ (see next slide for a quick guide)

3 Script that provides basic examples to access and control Firestore Database account (add, update, delete)

4 The `mbcustomers.json` and `mbmenus.json` are raw JSON files to be used by `Firestore-mbos-genordes.js` script to generate menus and customers data

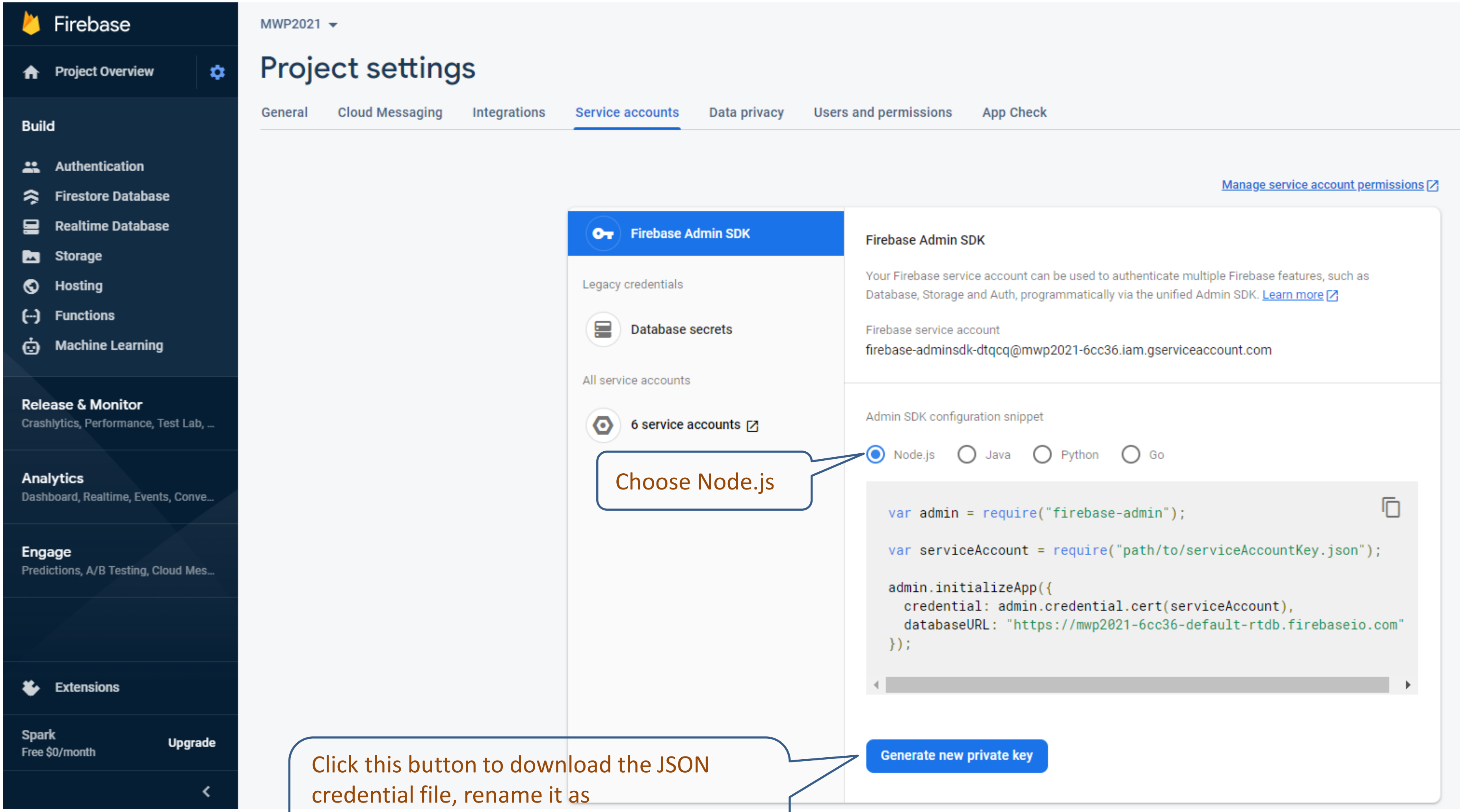
5 Script to generate menus, customers' basic info and customer orders data inside your Firebase Database account

6 Script to try access sample data generated by `Firestore-mbos-genorders.js` script.

7 Script to provide HTTP-REST type service to apply CRUD (create, read, update and delete) operations to your Firebase Database account. You may need to extend the service to support newly identified project requirements.

8 Complete the implementation of `assg3.html`, `order-list.html` and `customers.html` pages inside this directory. Study `menus.html` page for basic CRUD operation examples before you start to completing them.

Firebase console page (Project settings > Service accounts) to download JSON credential file.



Firebase Admin SDK

Your Firebase service account can be used to authenticate multiple Firebase features, such as Database, Storage and Auth, programmatically via the unified Admin SDK. Learn more

Firebase service account
firebase-adminsdk-dtqcq@mwp2021-6cc36.iam.gserviceaccount.com

Admin SDK configuration snippet

● Node.js ○ Java ○ Python ○ Go

```
var admin = require("firebase-admin");

var serviceAccount = require("path/to/serviceAccountKey.json");

admin.initializeApp({
  credential: admin.credential.cert(serviceAccount),
  databaseURL: "https://mwp2021-6cc36-default-rtdb.firebaseio.com"
});
```

Choose Node.js

Click this button to download the JSON credential file, rename it as `mwp2021-firebase-key.json` and save it into your project directory `NodeJSMBOS`.

Example of REST paths (CRUD) implemented by http-express.js (menus)

No.	Method	REST Path	Descriptions
1	GET	/mbos/menus	Provides redirection to path no. 2
2	GET	/mbos/menus/id/asc	List menus ordered by \`id\` field in ascending order. This also an example of how path and parameter structure in no. 3 should be used.
3	GET	/mbos/menus/:orderby/:sequence	Path and parameter structure to list menus: :orderby => \`id\`, \`name\`, \`price\` :sequence => \`asc\`, \`desc\`
4	GET	/mbos/menu/:id	Get single menu item by its \`id\`
5	POST	/mbos/menu/create	Create/add new menu
6	PUT	/mbos/menu/update/:id	Update menu
7	DELETE	/mbos/menu/delete/:id	Delete menu

Project Submission

- Please archive (zip) the NodeJSMBOS directory and submit it via UTM eLearning.
- Project is due on 14 July 2021.
- Only group leader need to submit the project archive/zip file (NodeJSMBOS.zip)