Info needed:

- Project name – Project ID of Firestore project
- databaseURL – Found in Firebase > Database > Service Accounts
- private key JSON – same place but click “Generate New Private Key” button
- irb_data.json – data file CSV or JSON
- Delim.cpp – Modifies data file to include “Document” collections
- fs_script.js – Used for putting data into Firestore

1. Install Google Cloud Platform CLI (Follow the instructions and use “gcloud init” to test if it works)
   - https://cloud.google.com/sdk/install

2. Create new folder on home directory and place Delim.cpp, fs_script.js, and irb_data.json into the folder.

3. Inside the folder, install firebase-admin using “**npm -i firebase-admin**”

4. Create a copy of irb_data.json and convert it to a txt file (irb_data.txt or changing the name will make it easier to follow. Ex: irb_update.txt).

5. Modify Delim.cpp to target irb_update.txt to modify and run the program.
   - Compile using **g++ Delim.cpp -o delim**
   - Run using **./delim**

```cpp
int main() {
    std::ofstream out_data("irb_update.txt");

    int i = 0;
    std::ifstream ifs("irb_data.txt");
    std::string inString( (std::istreambuf_iterator<char>(ifs) ),
                          (std::istreambuf_iterator<char>()  ) );
```

6. Edit the compiled txt file with a collector classifier. Ex {

```
“CSUSB” : {
    “Document-1” :  {
        ….
    },
    ….
}
}
```

js_script.js | irb_data.json

```
[
  {
    "YEAR": 2017.18,
    "TERM": "Spring 2018",
    "COLLEGE": "Arts and Letters",
    "DEPARTMENT": "Philosophy",
    "COURSE_LEVEL": "Lower Division",
    "D_CRS_LAB": "PHIL105",
    "COURSE_PREFIX": "PHIL",
    "COURSE_NUMBER": 105,
    "GE_COURSE": "Y",
    "ENROLLED": 146,
    "ENROLLED_FIRST_TIME": 139,
    "ENROLLED_REPEATERS": 7,
    "PERCENT_REPEATERS": "5%"
  },
  {
    "YEAR": 2017.18,
    "TERM": "Fall 2017",
    "COLLEGE": "Arts and Letters",
```

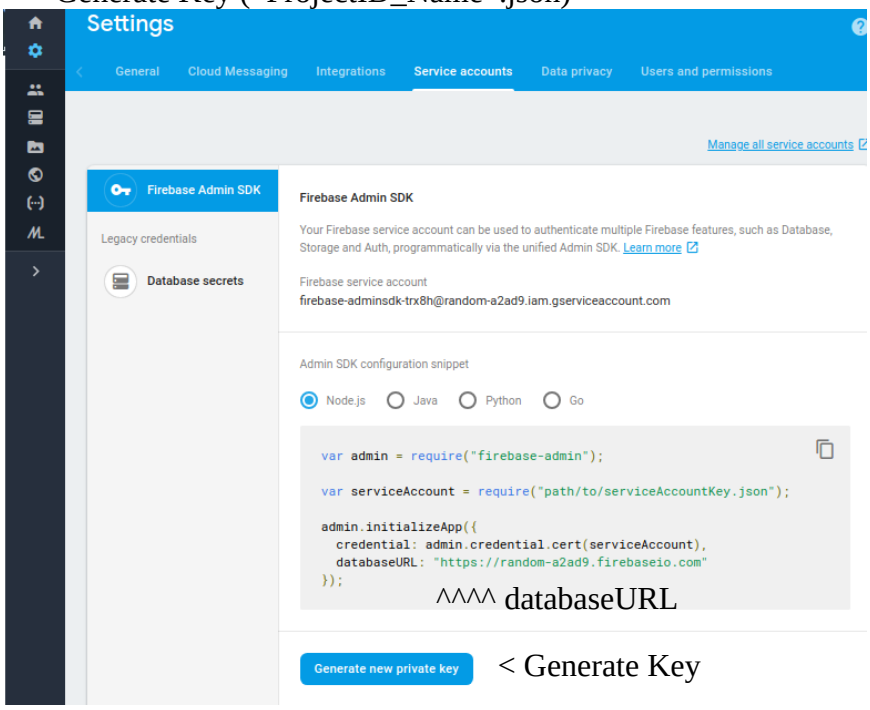
delim.cpp | irb_update_explanation.json

```
{ << Change bracket [ to {
"CSUSB" : { << Add this collector and close it at end of list
    "Document-1" : { << This is created by Delim.cpp
      "YEAR": 2017.18,
      "TERM": "Spring 2018",
      "COLLEGE": "Arts and Letters",
      "DEPARTMENT": "Philosophy",
      "COURSE_LEVEL": "Lower Division",
      "D_CRS_LAB": "PHIL105",
      "COURSE_PREFIX": "PHIL",
      "COURSE_NUMBER": 105,
      "GE_COURSE": "Y",
      "ENROLLED": 146,
      "ENROLLED_FIRST_TIME": 139,
      "ENROLLED_REPEATERS": 7,
      "PERCENT_REPEATERS": "5%"
    },
    "Document-2" : {
      "YEAR": 2017.18,
      "TERM": "Fall 2017",
```

7. Convert the txt file back into a json file.

8. Create a firestore project.

9. Get project information from Project Settings > Service Accounts
   - DatabaseURL
   - Generate Key (*ProjectID_Name*.json)



^^^^ databaseURL

< Generate Key

10. Place the generated key json into the created folder, but DO NOT change the name (It's a long name).

11. Modify admin, serviceAccount, data, ad databaseURL in the fs_script.js file.
    - admin = The location to firebase-admin file (“./node_modules/firebase-admin”)
    - serviceAccount = Location to Generated Key (“./*LongName*.json”)
    - data = Location to the modified irb_data.json file (“./irb_data.json”)
    - databaseURL = Url to project (“https://BLAH.firebaseio.com”)

```
const admin = require('./node_modules/firebase-admin');
const serviceAccount = require("./random-a2ad9-firebase-adminsdk-trx8h-133b72951b.json");

const data = require("./irb_update.json");

admin.initializeApp({
    credential: admin.credential.cert(serviceAccount),
    databaseURL: "https://random-a2ad9.firebaseio.com"
});

data && Object.keys(data).forEach(key => {
    const nestedContent = data[key];
```

12. Make sure to check if gcloud is on the correct project.
    - If not, run “**gcloud projects list**”.
    - Find the correct project in the list and run “**gcloud config set project *PROJECT_ID***”

```
kryptic@kryptic-opencv:~/firebase_project$ gcloud projects list
PROJECT_ID          NAME             PROJECT_NUMBER
calm-aegis-232815   My First Project  509893235744
random-a2ad9        Random           899662180438
test-project-9f4a4  Test Project     739059374275
```

13. Run fs_script.js using “**node fs_script.js**”.

If fs_script is configured correctly, it should show a list of Documents being uploaded.

```
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
Document successfully written!
kryptic@kryptic-opencv:~/firebase_
```