

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 install -g firebase-admin**”
4. Create a copy of irb\_data.json and convert it to a txt file (irb\_data.txt).
5. Modify Delim.cpp to target irb\_data.txt to modify and run the program (Changing the name will make it easier to follow. Ex: irb\_update.txt).
  - Compile using **g++ Delim.cpp -o delim**
  - Run using **./delim**

```
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" : {
            ....
        },
        ....
    }
```

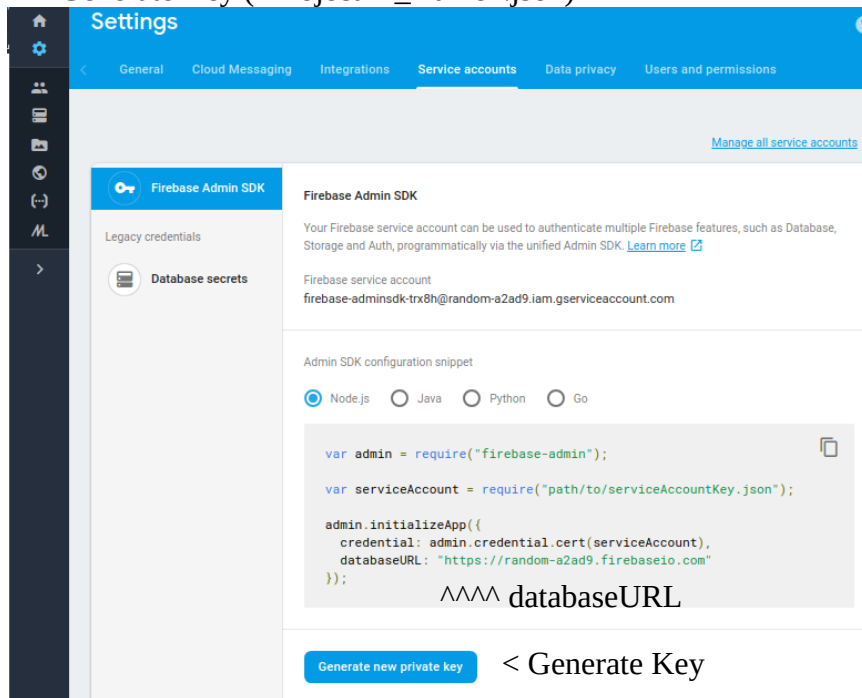
js_script.js	irb_data.json	delim.cpp	irb_update_explanation.json
1 [		1 { << Change bracket I to {	
2 {		2 "CSUSB" : { << Add this collector and close it at end of list	
3 "YEAR": 2017.18,		3 "Document-1" : { << This is created by Delim.cpp	
4 "TERM": "Spring 2018",		4 "YEAR": 2017.18,	
5 "COLLEGE": "Arts and Letters",		5 "TERM": "Spring 2018",	
6 "DEPARTMENT": "Philosophy",		6 "COLLEGE": "Arts and Letters",	
7 "COURSE_LEVEL": "Lower Division",		7 "DEPARTMENT": "Philosophy",	
8 "D_CRS_LAB": "PHIL105",		8 "COURSE_LEVEL": "Lower Division",	
9 "COURSE_PREFIX": "PHIL",		9 "D_CRS_LAB": "PHIL105",	
10 "COURSE_NUMBER": 105,		10 "COURSE_PREFIX": "PHIL",	
11 "GE COURSE": "Y",		11 "COURSE_NUMBER": 105,	
12 "ENROLLED": 146,		12 "GE COURSE": "Y",	
13 "ENROLLED_FIRST_TIME": 139,		13 "ENROLLED": 146,	
14 "ENROLLED_REPEATERS": 7,		14 "ENROLLED_FIRST_TIME": 139,	
15 "PERCENT_REPEATERS": "5%",		15 "ENROLLED_REPEATERS": 7,	
16 },		16 "PERCENT_REPEATERS": "5%",	
17 {		17 },	
18 "YEAR": 2017.18,		18 "Document-2" : {	
19 "TERM": "Fall 2017",		19 "YEAR": 2017.18,	
20 "COLLEGE": "Arts and Letters",		20 "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)



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, and 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>”)

```
1
2  const admin = require('./node_modules/firebase-admin');
3  const serviceAccount = require("./random-a2ad9-firebase-adminsdk-trx8h-133b72951b.json");
4
5  const data = require("./irb_update.json");
6
7  admin.initializeApp({
8    credential: admin.credential.cert(serviceAccount),
9    databaseURL: "https://random-a2ad9.firebaseio.com"
10 });
11
12 data && Object.keys(data).forEach(key => {
13   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.

The image shows two side-by-side screenshots. The left screenshot is a terminal window with the prompt `kryptic@kryptic-opencv:~/firebase_` and a series of 15 lines of output: `Document successfully written!`. The right screenshot is the Firebase console interface. The breadcrumb navigation shows `CSUSB > Document-100`. The left sidebar shows a collection named `CSUSB` with a list of documents: `Document-1`, `Document-10`, `Document-100` (selected), `Document-1000`, `Document-1001`, `Document-1002`, `Document-1003`, `Document-1004`, `Document-1005`, `Document-1006`, `Document-1007`, `Document-1008`, `Document-1009`, `Document-101`, `Document-1010`, `Document-1011`, and `Document-1012`. The right pane shows the details for the selected `Document-100`, displaying a list of fields and their values: `COLLEGE: "Arts and Letters"`, `COURSE_LEVEL: "Upper Division"`, `COURSE_NUMBER: 328`, `COURSE_PREFIX: "HUM"`, `DEPARTMENT: "Humanities"`, `D_CRS_LAB: "HUM328"`, `ENROLLED: 102`, `ENROLLED_FIRST_TIME: 101`, `ENROLLED_REPEATERS: 1`, `GE_COURSE: "Y"`, `PERCENT_REPEATERS: "1%"`, `TERM: "Summer 2018"`, and `YEAR: 2018.19`.