

FLETCHER PROJECT INTERFACE USER MANUAL

**SUHAIL PURKAR
WAJEEH ANWAR**

CS 410



SPRING 2019

INDEX

Cover Page	pg.1
Index	pg.2
Preface	pg.3
Logging In	pg.4
Using Professor Mode	pg.5–6
Adding Projects	pg.7–8
Adding Users	pg.9
Generating Script	pg.10
Delete Projects	pg.11
Changing Application Database	pg.12–14
Choosing Projects (Student Guide)	pg.15

PREFACE

APPLICATION PURPOSE & DESIGN

The Fletcher Project Interface was designed to help Professor Kenneth Fletcher Automate the process by which term projects are assigned to students.

The application uses Google Firebase to store student preferences for each project.

The application generates a Python script that when run, determines project assignment based upon a minimum cost algorithm

LOGGING IN

The Application database is pre populated with the following user.

EMAIL

Kenneth.Fletcher@umb.edu

PASSWORD

Hr6mnPFTBPt7fZRS

USING PROFESSOR MODE

1. Navigate to the Projects page using the navigation bar at the top of the website

Home

Projects

Sign Out

2. Navigate to the Professor Mode prompt

Enter Professor Code Below

TURN ON PROFESSOR MODE

3. Input the Professor Code to begin editing the interface or generate the script cataloging user preferences. A professor code has already been designated, this code be changed through the interface

CODE : CS410

USING PROFESSOR MODE

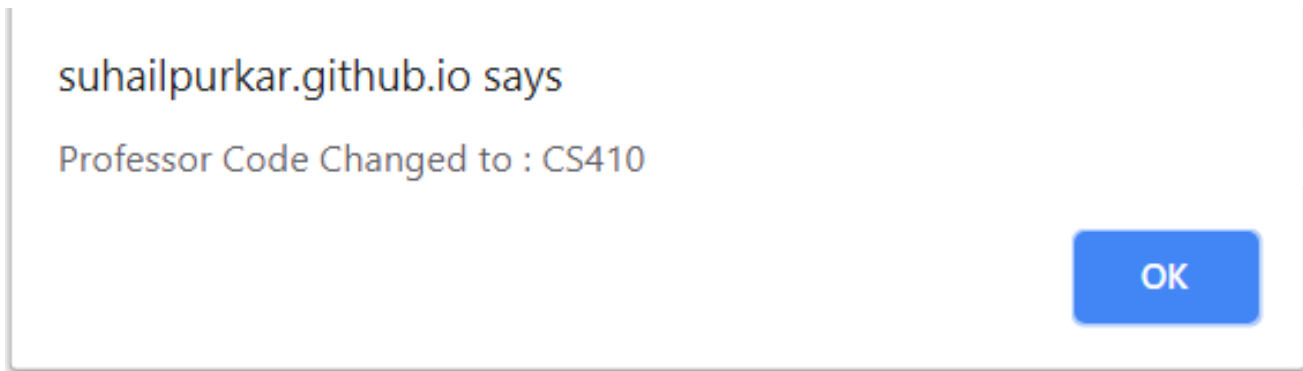
4.. To change the Professor Code, log into Professor Mode and navigate to the Enter A New Professor Code Prompt

A blue rectangular dialog box with the text "Enter A New Professor Code" in white. Below the text is a horizontal line, and at the bottom center is a white button with the text "CHANGE PROFESSOR CODE" in blue.

Enter A New Professor Code

CHANGE PROFESSOR CODE

5. Type a new code into the input field. You will receive an alert notifying you of the change

A white alert box with a light gray border. It contains the text "suhailpurkar.github.io says" and "Professor Code Changed to : CS410". In the bottom right corner is a blue button with the text "OK" in white.

suhailpurkar.github.io says

Professor Code Changed to : CS410

OK

ADDING PROJECTS

1.. To add a project, first log into Professor mode. Navigate to the add project Prompt on the Projects page

Add Projects



2. A new project will be generated. Each project is entirely editable, change the image and description as you please

Project 1



Cynthias Cactus Company

📍 Reno - 1

EDIT ME! Write a project description

Project 2



Los Pollos Hermanos

📍 Albuquerque - 2

EDIT ME! Write a project description

Project 3



Coats for Kids

📍 Stockholm - 3

EDIT ME! Write a project description

ADDING PROJECTS

3. After you have made the desired changes to the project(s), navigate to the Save Project Edits Prompt and click the button

Save Project Edits



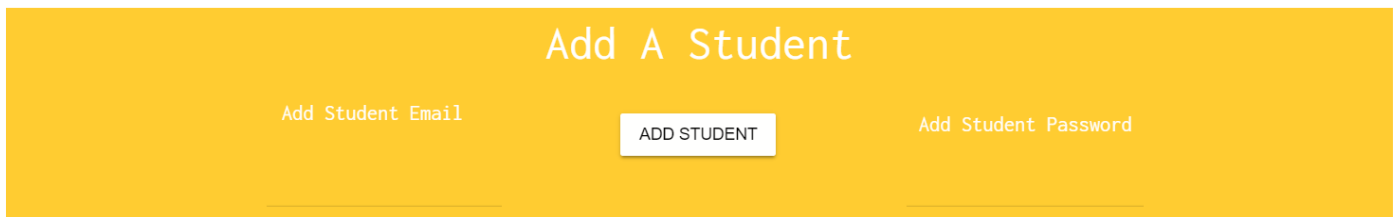
4. Then navigate to the Upload Project Edits Prompt and click the button.

Update Projects



ADDING STUDENTS

1. To add a student, first log into Professor mode. Navigate to the add a student Prompt on the Projects page

A yellow rectangular form titled "Add A Student". It contains two input fields: "Add Student Email" on the left and "Add Student Password" on the right. Between these fields is a white button with the text "ADD STUDENT".

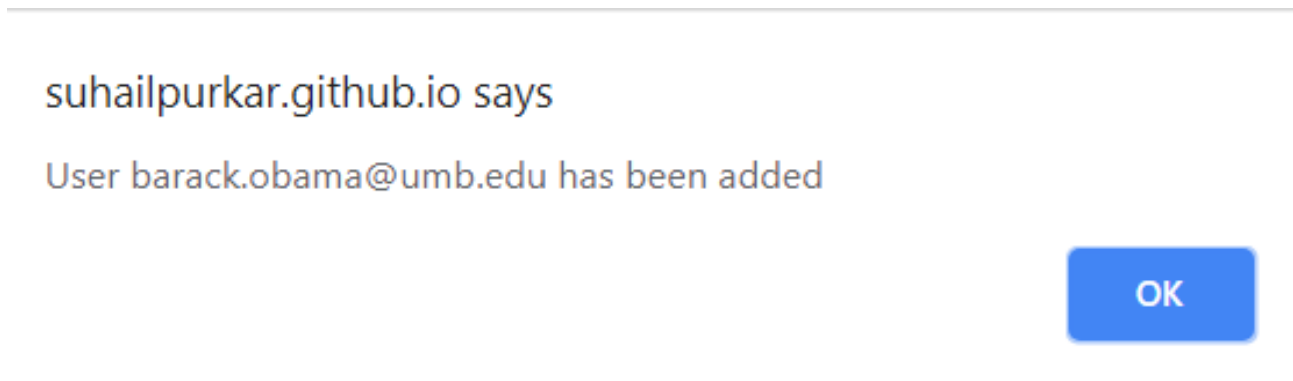
Add A Student

Add Student Email

ADD STUDENT

Add Student Password

2. Input a user email and password of at least six characters, then press the add student button. You will receive an alert notifying you of the entry

A white alert dialog box with a thin grey border. It contains the text "suhailpurkar.github.io says" in a larger font, followed by "User barack.obama@umb.edu has been added" in a smaller font. In the bottom right corner, there is a blue button with the text "OK".

suhailpurkar.github.io says

User barack.obama@umb.edu has been added

OK

GENERATING SCRIPT

1. To generate the script, first log into Professor mode. Navigate to the generate script button on the Projects page. Press the generate script button



GENERATE SCRIPT

2. After pressing on the generate script button the script will appear, press the copy script button to copy the script. Run the Python script to generate the assignment list

```
import networkx as nx G=nx.DiGraph() prefs={'barackobama':['project2','project1','project3'],'michelleobama':
['project2','project1','project3']} capacities=
{'Project1':3,'Project2':3,'Project3':3,'Project4':3,'Project5':3,'Project6':3,'Project7':3,'Project8':3,'Project9':3,'Project10':3}
num_persons=len(prefs) G.add_node('dest',demand=num_persons) A=[] for person,projectlist in prefs.items():
G.add_node(person,demand=-1) for i,project in enumerate(projectlist): if i==0: cost=-100 # happy to assign first choice elif
i==1: cost=-75 # slightly unhappy to assign second choice elif i==2: cost=-50 # ok to assign third choice else: cost=-25 #
very unhappy to assign fourth choice G.add_edge(person,project,capacity=1,weight=cost) # Edge taken if person does this
project for project,c in capacities.items(): G.add_edge(project,'dest',capacity=c,weight=0) flowdict = nx.min_cost_flow(G) for
person in prefs: for project,flow in flowdict[person].items(): if flow: print person,'joins',project
```



COPY SCRIPT

DELETING PROJECTS

1. To generate the script, first log into Professor mode.
Navigate to the delete projects button on the Projects page.
Press the delete button



DELETE PROJECTS

2. You will receive asking you to confirm your choice, press
OK to delete

su hailpurkar.github.io says

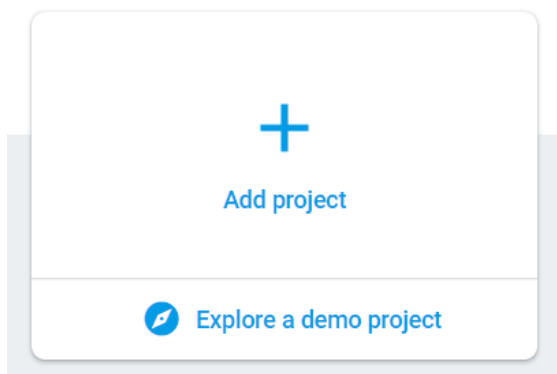
Are you sure you want to Delete all Projects and user prefrencec?

OK

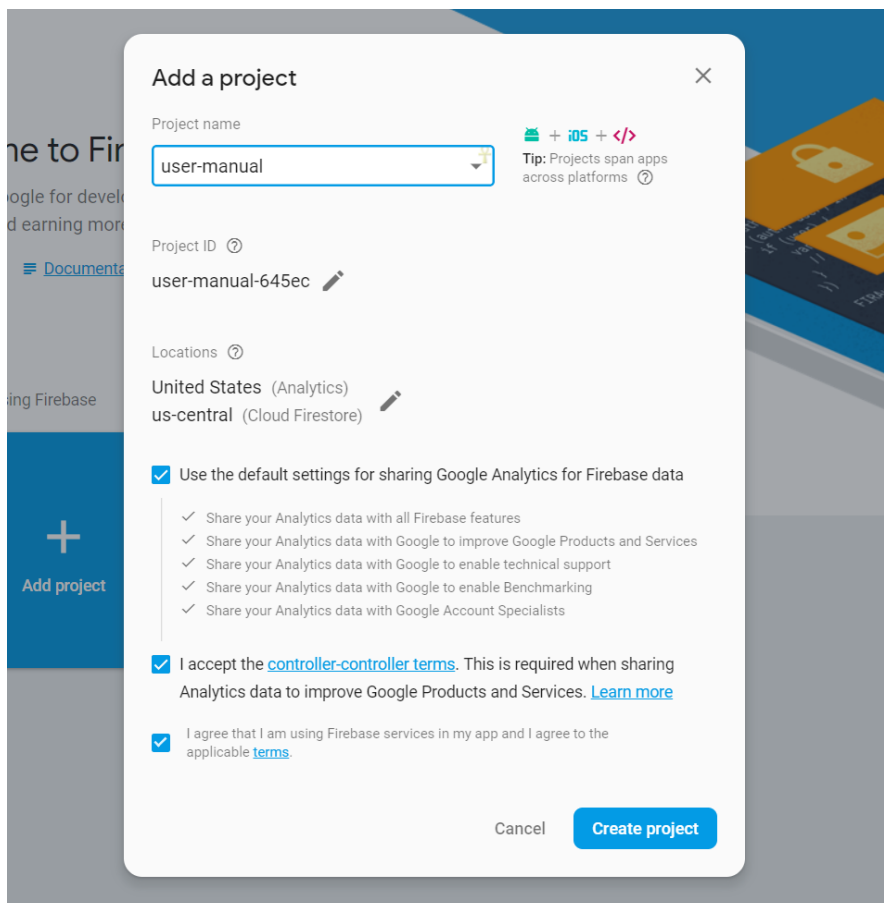
Cancel

CHANGE APPLICATION DATABASE

1. Go to console.firebase.google.com
2. Click on Add Project

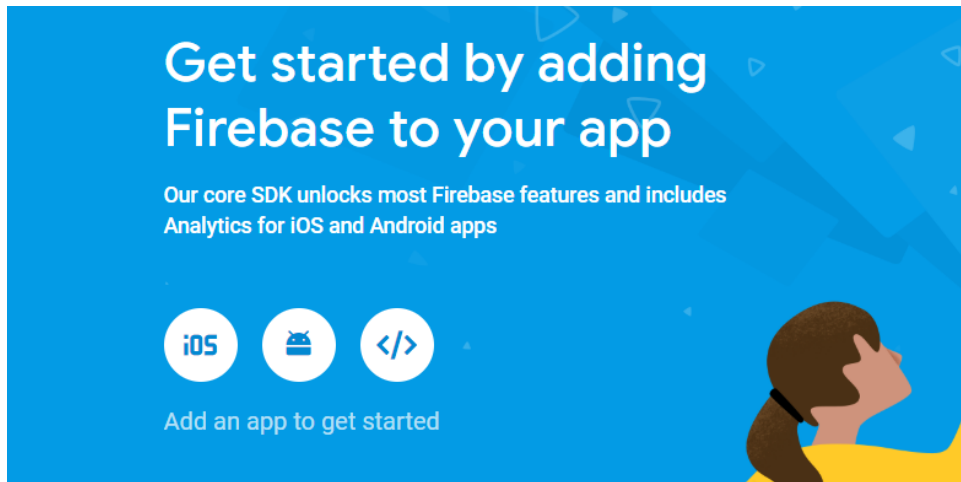


2. Name your project and Click on Create Project

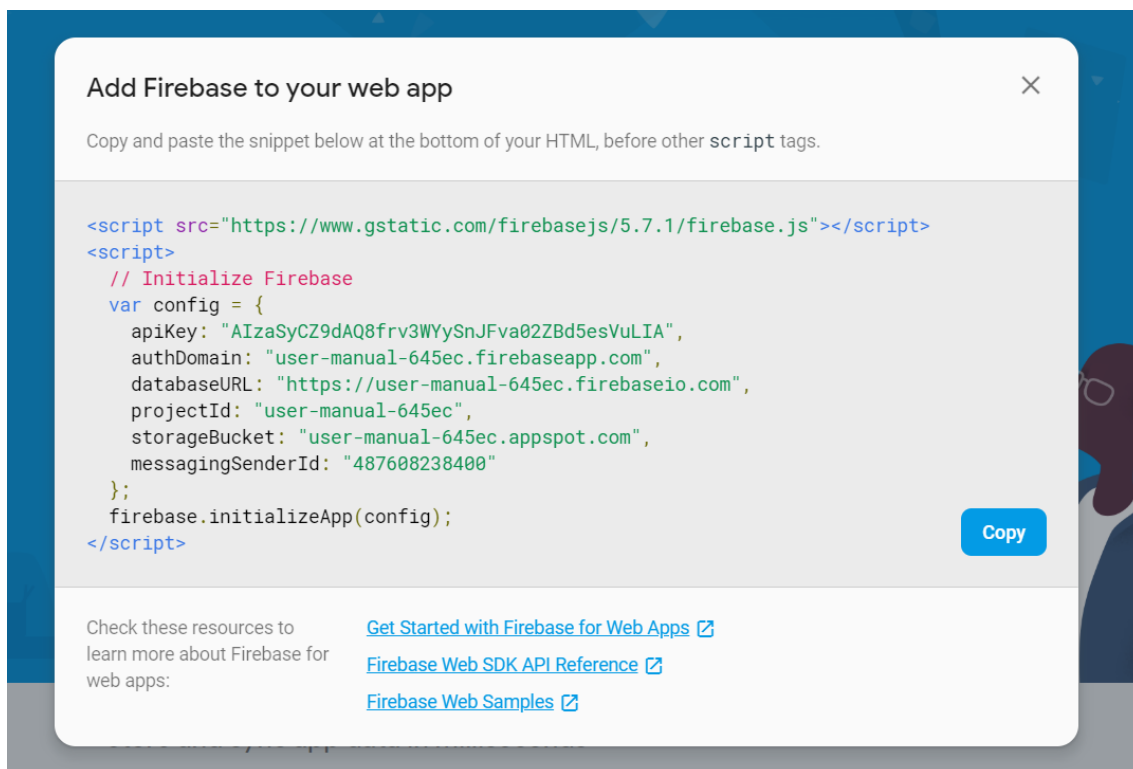


CHANGE APPLICATION DATABASE

3. Click on the angle brackets button



4. Click the copy button to copy the code snippet



CHANGE APPLICATION DATABASE

5. Navigate to the FIREBASE CONNECTION in the projects.html file and replace the code snippet with the one just generated from Firebase

```
441 <!-- FIREBASE CONNECTION
442
443     ADD YOUR OWN DATABASE HERE
444
445     -->
446 <script src="https://www.gstatic.com/firebasejs/5.5.8/firebase.js"></script>
447 <script>
448     // Initialize Firebase
449     var config = {
450         apiKey: "AIzaSyCeF7Sp3Yt-sd4psVBB5HCwmj3X5j8HRtQ",
451         authDomain: "fire-base-web-learn-1998.firebaseio.com",
452         databaseURL: "https://fire-base-web-learn-1998.firebaseio.com",
453         projectId: "fire-base-web-learn-1998",
454         storageBucket: "fire-base-web-learn-1998.appspot.com",
455         messagingSenderId: "854567164829"
456     };
457     firebase.initializeApp(config);
458 </script>
459
```

CHOOSING PROJECTS (GUIDE FOR STUDENT)

1. Navigate to the Projects page using the navigation bar at the top of the website

Home

Projects

Sign Out

2. Navigate to the project selection prompts. Use the buttons to change your project selections as indicated

Your current selections :

Project 1: 2

Project 2: 3

Project 3: 1

Project 1 : Use the Buttons to rank this project



Project 2 : Use the Buttons to rank this project



Project 3 : Use the Buttons to rank this project

