

How to Get Started on the Family Map Server

Purpose

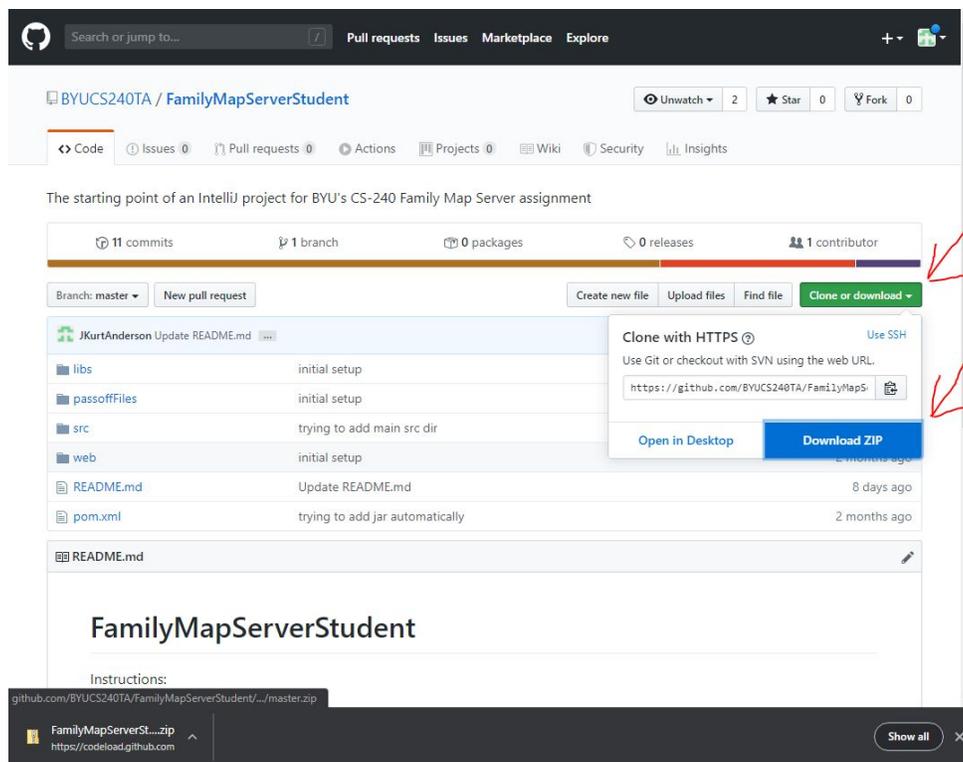
The document will instruct you on how to set up your Server project in IntelliJ so that you can run the test cases from within IntelliJ. This test driver is almost identical to that which will be used by the TA's, so the tests you pass while running it yourself should match those you pass when the TA's run your code. At the bottom of this document, there will be instructions to run the in-terminal pass-off driver. Those instructions are left for students who do not wish to use IntelliJ, but most students should ignore them.

System requirements

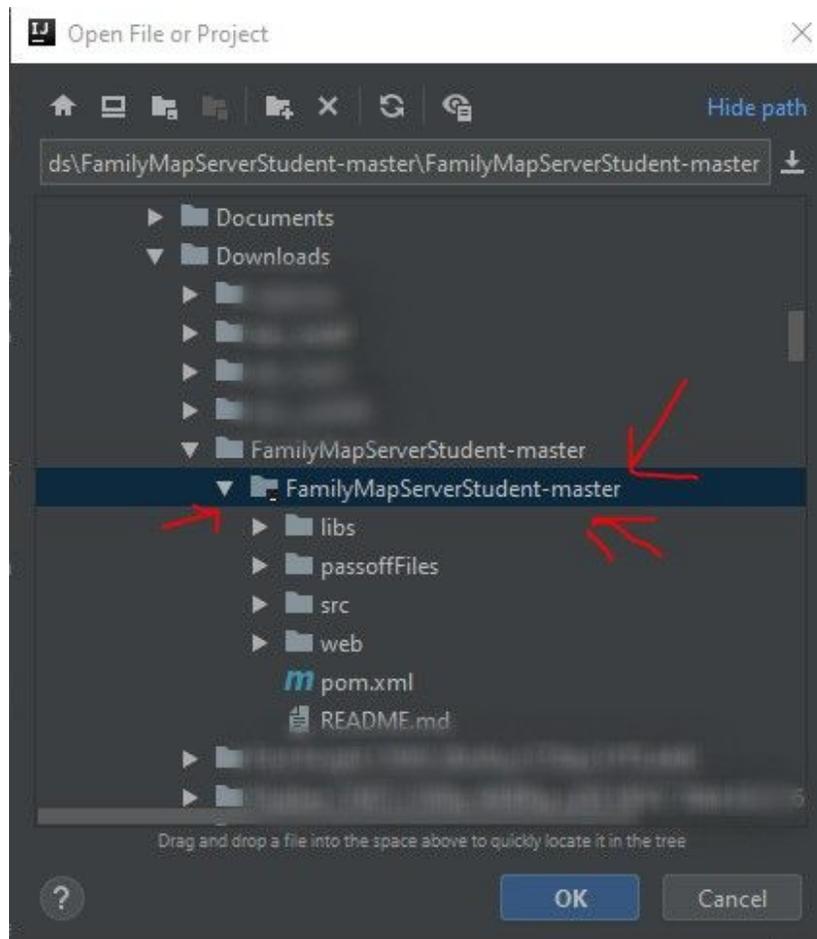
This should work on the lab computers without any additional set up on your part. If you wish to program on a personal computer, any version of IntelliJ should be compatible with these instructions, but we'll update this document if we discover anything to the contrary.

Downloading the Project

This first thing that we are going to do is download the IntelliJ project with our skeleton project. Go to [the project's Github repository](#). Once there, click on "Clone or download" and select "Download zip."



Once downloaded, uncompress the contents of the folder to the directory that you'd like to store the project in. Then open IntelliJ. Select File -> Open... Navigate to the location that you placed the uncompressed folder and select the innermost folder called "FamilyMapServerStudent-master" as pictured below.



- Then click OK.
- Allow IntelliJ a few minutes to download any dependencies and set up the project.
- Once it is done loading, try running the HelloWorld.java's main function. It is found in src/main/java/HelloWorld.java.
- If you get an error message like "release version 12 not supported," select File -> Settings -> Build, Execution, Deployment -> Compiler -> Java Compiler and change the target bytecode version to 8.
- Select Help -> Edit Custom VM Options and add the following line to the end of the file: -Deditable.java.test.console=true
- Select File -> Invalidate Caches / Restart

Once IntelliJ finishes restarting, you should be good to go. You can run the JUnit test cases in the same way that you did for the other projects. They are found in the ServerTest.java found in src/test/java/passoff/ServerTest.java. In this file, you may need to initialize the `host` variable and `port` variable to the host and port of your server, respectively.

All Done!

Great job. You're ready to get started on your project. From here, you can delete the HelloWorld.java file and get to work on your server by creating your first packages in the src/main/java folder.

Make sure to run your server before running the test cases. You can run the test cases now to make sure that they work, but they should all fail do to a "Connection refused" error. If you ever get this error, it's probably because your server isn't running.

Good luck!

Family Map Server In-Terminal Test Driver Tutorial (old method)

Purpose

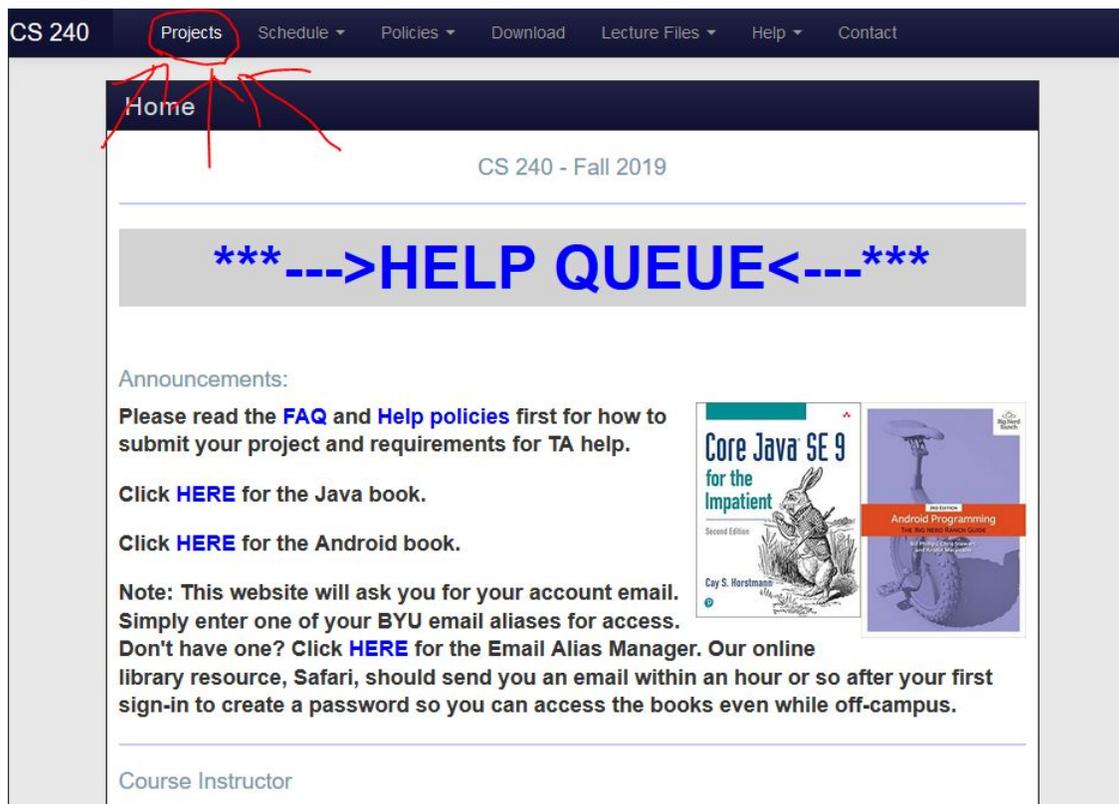
This document will instruct you on how to download and run the test driver for the Family Map Server test driver. This test driver is almost identical to that which will be used by the TA's, so the tests you pass while running it yourself should match those you pass when the TA's run your code. **You should ignore this if you're running the tests in IntelliJ.**

System Requirements

This should work on the lab computers without any additional set up on your part. If you wish to run the test driver on your own windows machine, simply install java on your computer and use the Windows command prompt instead of the Linux terminal. To run it on your own linux machine, you should run "sudo apt install openjdk-8-jre" in your terminal to install java.

Downloading the Drivers

Go to the [CS 240 class website](#) and navigate to the Projects page by clicking "Projects at the top of the page.



The screenshot shows the CS 240 class website. The navigation menu at the top includes 'Projects', 'Schedule', 'Policies', 'Download', 'Lecture Files', 'Help', and 'Contact'. The 'Projects' link is circled in red with arrows pointing to it. Below the navigation menu is a 'Home' link. The main content area displays 'CS 240 - Fall 2019' and a large blue banner that reads '*** --->HELP QUEUE<---***'. Below the banner, there are announcements: 'Please read the [FAQ](#) and [Help policies](#) first for how to submit your project and requirements for TA help. Click [HERE](#) for the Java book. Click [HERE](#) for the Android book. Note: This website will ask you for your account email. Simply enter one of your BYU email aliases for access. Don't have one? Click [HERE](#) for the Email Alias Manager. Our online library resource, Safari, should send you an email within an hour or so after your first sign-in to create a password so you can access the books even while off-campus.' To the right of the announcements are two book covers: 'Core Java SE 9 for the Impatient' and 'Android Programming: The Big Nerd Drip'.

Once there click on "Test Driver" on in the Family Map Server section.

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Projects

Projects :: Fall 2019

Programming Exam Projects

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Spelling Corrector

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Server Projects

Family Map Server DAO/Junit Assignment

Specification (pdf) Example (zip)

Family Map Server

Specification (pdf) Files (zip) Task Estimates Design Instructions Pass Off Tips File Handler **Test Driver**

Android Client Projects

Family Map Login

Specification (pdf)

Family Map Client

Specification (pdf) Task Estimates Grading Rubric (pdf) Google Maps Help (pdf)

Notes

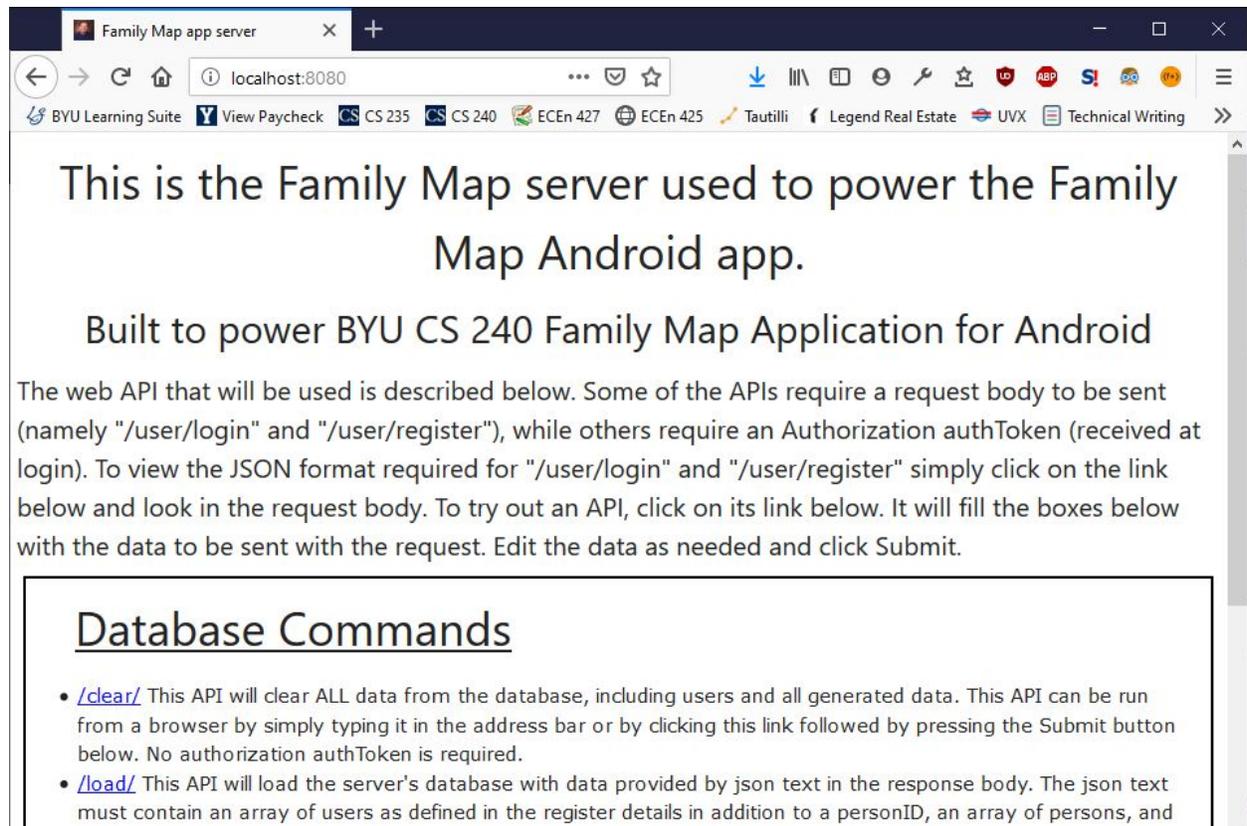
You should then be prompted for where to save the FMSTestDriver.zip file. Save it wherever you'd like. Then extract its content to wherever you'd like. After the extraction, you should have a new folder named "FMSTestDriver". Open a terminal and navigate to FMSTestDriver/driver.

```
Terminal
File Edit View Search Terminal Help
jka21495@ta-24:~/Desktop$ ls
CS235TA  CS240      MidtermExamFiles      'VM Instructions.ogv'
CS236TA  FMSTestDriver  MidtermExamFiles.tar.gz  'Windows VM.desktop'
jka21495@ta-24:~/Desktop$ cd FMSTestDriver/driver/
jka21495@ta-24:~/Desktop/FMSTestDriver/driver$ ls
FMSTesting.jar  LoadData.json  README  web
jka21495@ta-24:~/Desktop/FMSTestDriver/driver$
```

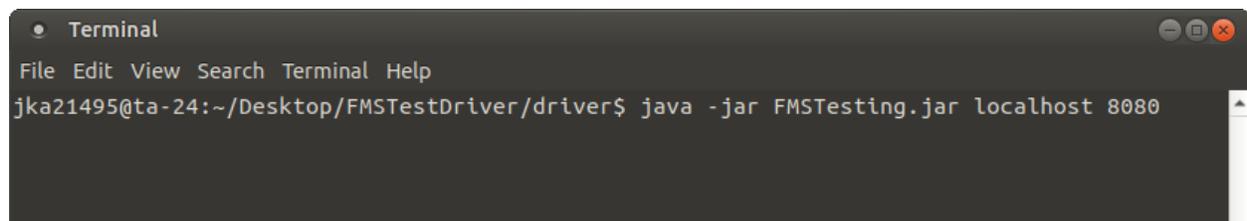
Inside this folder you should see FMSTesting.jar, LoadData.json, README, and web, as shown above. Don't modify LoadData.json or web. If you forget how to run the driver, you can read the README file. We will now discuss how to run the driver.

Running the Test Driver

First, make sure that your server is running. You can do this by opening a web browser and typing “`http://localhost:<port>`” in the address. You should see the `index.html` displayed as shown below.

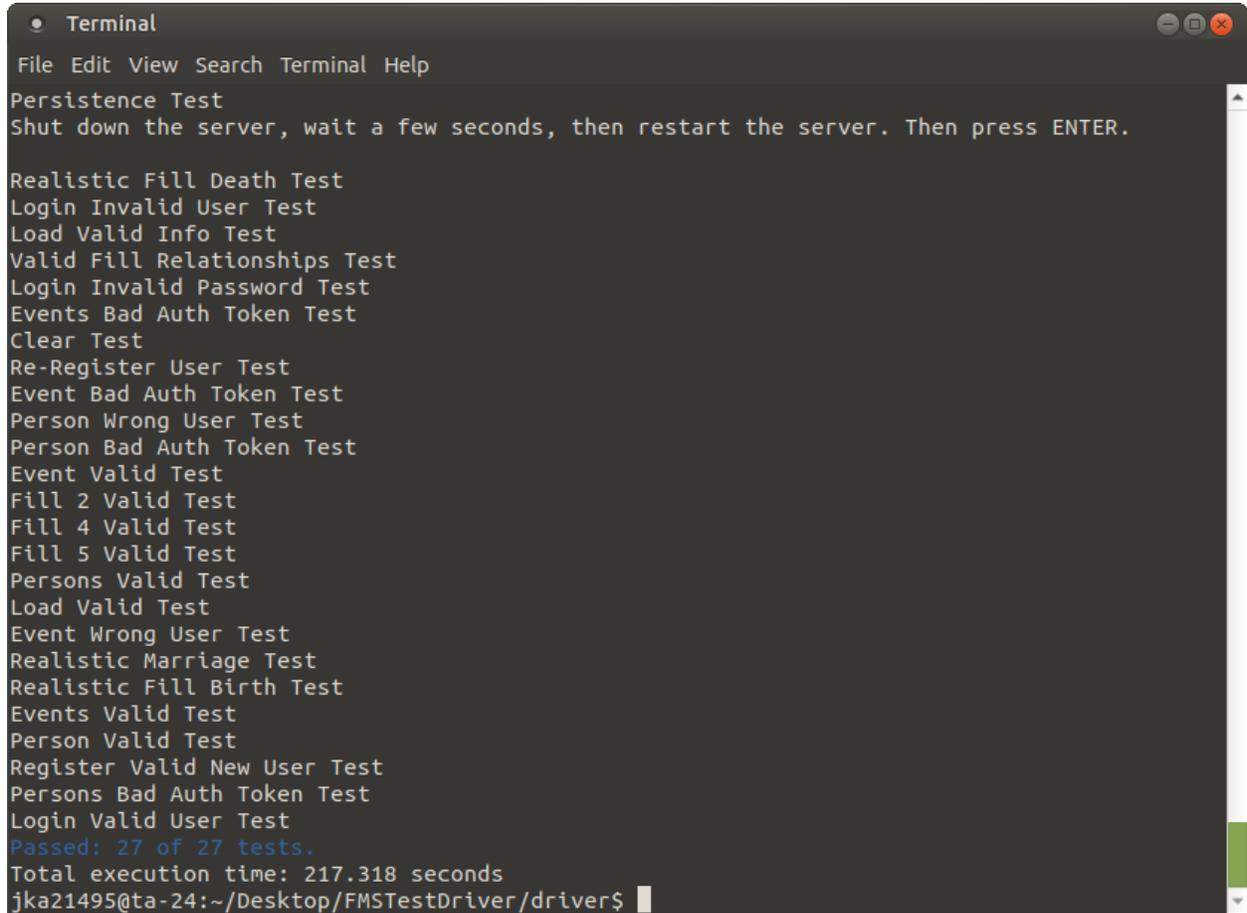


Once you have your server running and a terminal open to the `FMSTestDriver/driver` folder, you are ready to run the test driver. To run the test driver, run the following command: “`java -jar FMSTesting.jar <host> <port>`”. The test driver has been compiled to a jar file with a main function. It accepts as parameters the host and port of your server. If you’re running the test driver on the same machine as your server, you can replace “`<host>`” with “`localhost`”. It might be good to try it with your actual ip address because that is what you will need to enter when you pass off with the TA’s. You should replace “`<port>`” with the port that your server is running on (usually 8080). The command you run might look like the image below.



Usually the first test to run is the Persistence Test. When this test runs, it will prompt you to turn you server off and back on. Once you have done this, press enter to finish the test. The rest of the tests will run without any user interaction. It normally takes one to five minutes to run the

tests. If you pass all the tests, you should see an output similar to the below image. Congratulations, you've run the pass off driver.

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and window control buttons. The terminal displays a list of 27 tests, followed by a summary line indicating that all tests passed. The total execution time is 217.318 seconds. The prompt shows the user is at the directory ~/Desktop/FMSTestDriver/driver.

```
Terminal
File Edit View Search Terminal Help
Persistence Test
Shut down the server, wait a few seconds, then restart the server. Then press ENTER.

Realistic Fill Death Test
Login Invalid User Test
Load Valid Info Test
Valid Fill Relationships Test
Login Invalid Password Test
Events Bad Auth Token Test
Clear Test
Re-Register User Test
Event Bad Auth Token Test
Person Wrong User Test
Person Bad Auth Token Test
Event Valid Test
Fill 2 Valid Test
Fill 4 Valid Test
Fill 5 Valid Test
Persons Valid Test
Load Valid Test
Event Wrong User Test
Realistic Marriage Test
Realistic Fill Birth Test
Events Valid Test
Person Valid Test
Register Valid New User Test
Persons Bad Auth Token Test
Login Valid User Test
Passed: 27 of 27 tests.
Total execution time: 217.318 seconds
jka21495@ta-24:~/Desktop/FMSTestDriver/driver$
```