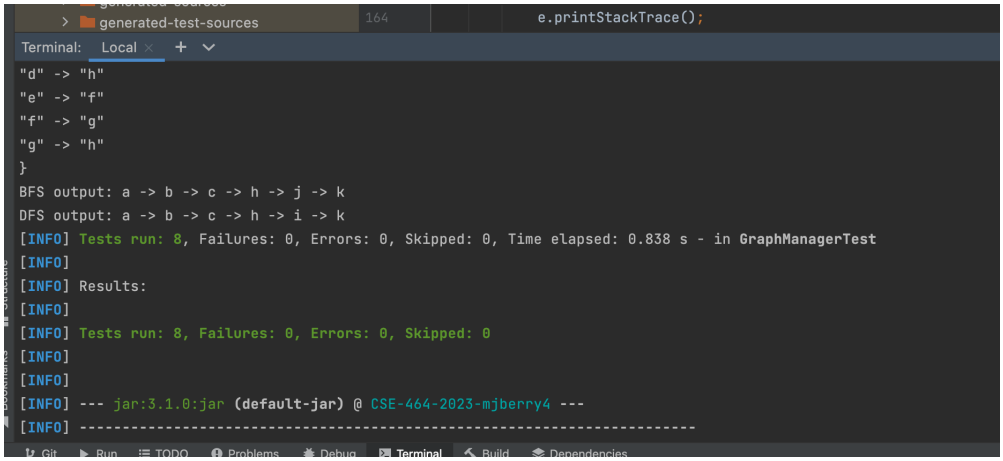
GitHub Repo: https://github.com/accfmax95/CSE-464-2023-mjberry4

How to Run the BFS and DFS Functions -

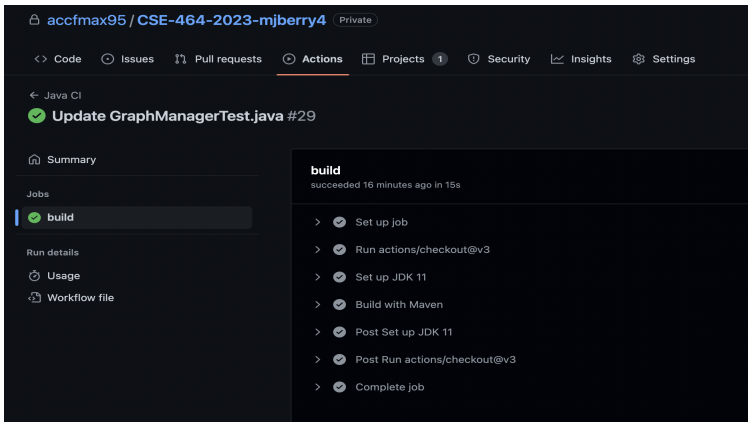
1. Once the code has been downloaded and opened in IntelliJ (or whatever IDE you are using), type 'mvn package' into your IDE's terminal. This will install the necessary libraries onto your project structure. NOTE: If you want to run the program with the .jar file created by maven, type this command: 'mvn clean compile assembly:single'. This will install the .jar file with the necessary dependencies to execute the Part1.java file. This base file has just a few lines to test the GraphManager. You can modify this file for further testing.
2. Once you run 'mvn package', you will notice the test cases run in console. All test cases should pass if the BFS and DFS function is working correctly.
3. If you would like to the test the program manually, you can open the GraphManagerTest.java file and run the testGraphSearch function at the bottom. The inputs I am using for BFS and DFS are as follows:
    a. BFS - GraphSearch(src, dst, Algorithm.BFS)
        i. Output should be "a -> b -> c -> h -> j -> k"
    b. BFS - GraphSearch(src, dst, Algorithm.DFS)
        i. Output should be "a -> b -> c -> h -> i -> k"
    c. NOTE: If you want to test different inputs by modifying the test functions, you will also have to modify what the output should be in order for the new test case to pass. To change the src value and dst value, simply modify the letter of the assigned node for the src and dst variables in the test function (They are "a" and "k" as default).
4. Here is a screenshot of the correct output when running 'mvn package'. As you can see, all the test cases pass, and I have displayed the output of both the DFS and BFS algorithm for the input "a" and "k" as the src and dst.



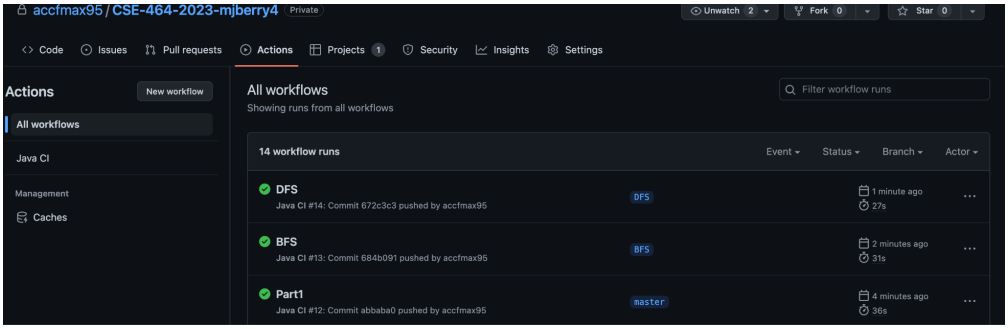
GitHub Commits, Branches, and Merges -

1. Here is a history of my commits, merges and everything else listed in the Actions tab of my GitHub: https://github.com/accfmax95/CSE-464-2023-mjberry4/actions
2. You can view a specific history of my commits here: https://github.com/accfmax95/CSE-464-2023-mjberry4/commits/master

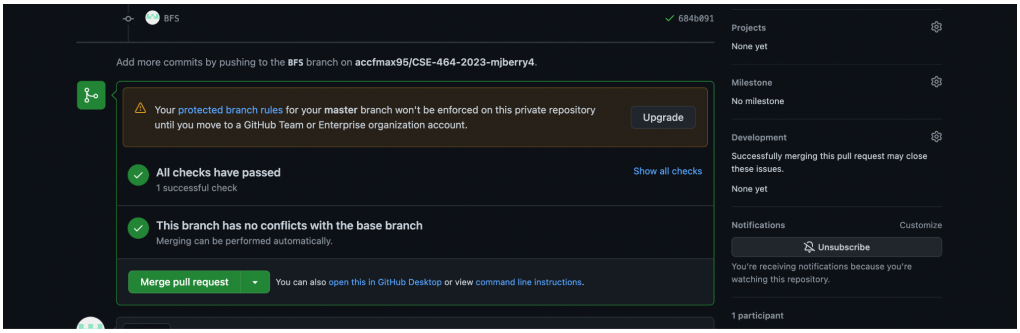
3. In this screenshot, you can see that my Continuous Integration is set up properly. This is one example of the build being complete.



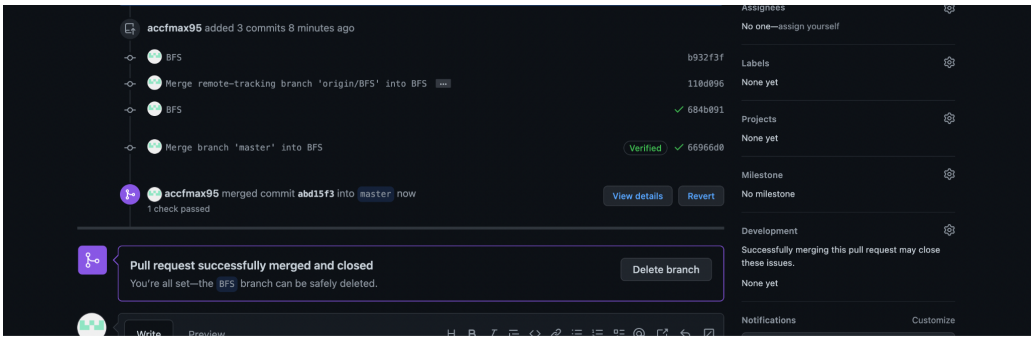
4. Here I will list a series of screenshots that shows each branch being created, committed, and eventually merged into the master branch:
    a. The DFS, BFS, and Part1 being committed separately.
    Commit for BFS, which contains the original GraphSearch for BFS - https://github.com/accfmax95/CSE-464-2023-mjberry4/commit/7b86dc7ce6bf5a37ad6beee21c7cca74bb30e22e#diff-454107ab9f9dec7212c3aee184598948113f9c4b4c6986bf73f0ae80210f6cd2
    Commit for DFS, which contains the GraphSearch for DFS - https://github.com/accfmax95/CSE-464-2023-mjberry4/commit/672c3c3fc3c4adb5902ec6caa28f2d5530c6ae7f



    b. The BFS branch being merged with the main branch.
    https://github.com/accfmax95/CSE-464-2023-mjberry4/actions/runs/4527563758
    https://github.com/accfmax95/CSE-464-2023-mjberry4/commit/66966d05d4f89f1e67ff3bb8ba33a14bca7c9602



c. The DFS branch being merged with the main branch, and my resolution of the merge conflicts.
https://github.com/accfmax95/CSE-464-2023-mjberry4/actions/runs/4527646628
https://github.com/accfmax95/CSE-464-2023-mjberry4/commit/252e8ffb98bdcc0bb30026a06871f75094ff5597



d. The final history of all these merges happening being shown through Continuous Integration.