

This assignment is designed to give you practice with using the version control system, git.

**NOTE:** The examples in this assignment use the [GitHub](#) website. If you use a different [Git GUI client](#) (such as GitKraken or GitHub Desktop) or an IDE with a git extension (such as [Eclipse](#) or [VS Code](#)), it is your responsibility to find tutorials and other resources to complete the assignment.

No matter which system you use, you must allow access to your repository for grading. *(No access means no points!)*

## Assignment 1 Part 1

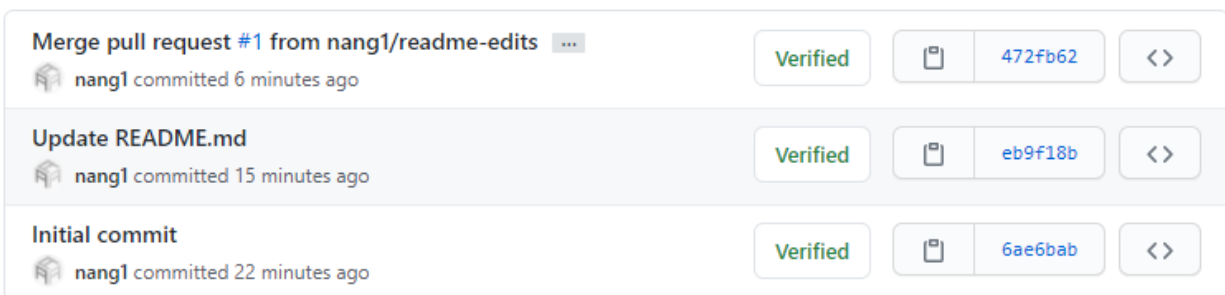
Create an account on [github.com](#) using your @asu.edu email address, which will allow you to request the [GitHub Student Developer Pack](#). This gives students access to various developer tools and the GitHub Pro benefits for free. Benefits include making a code repository private so no one can view your code unless they request permission.

*Since GitHub needs to verify your school email is valid, it may take some time to get the student developer pack. The pack is not required for this assignment, but the tools you get from it may be helpful in the future.*

Follow the steps listed in this [Hello World tutorial](#) to create a new repository on GitHub.

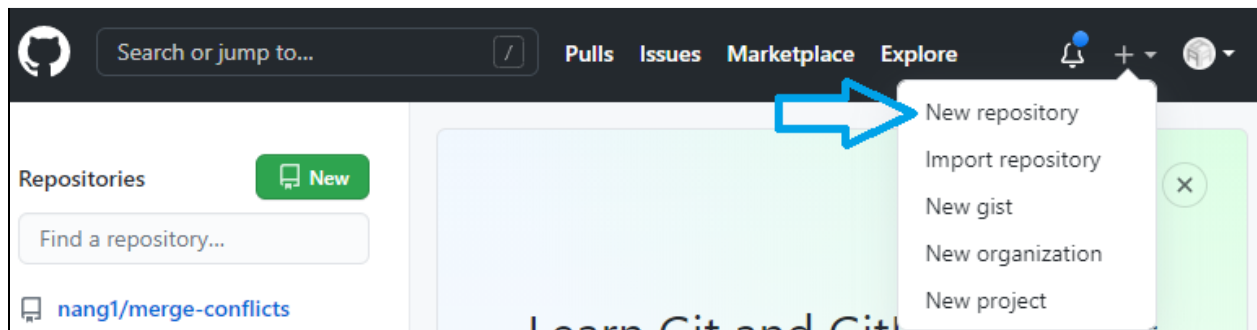
*Some images in the tutorial are a bit dated, so some updated ones are provided in the following pages.*

If you choose to use a different tool, we should be able to see at least three things in your repository's history; an initial commit, a commit updating the README file, and a merge request pulling the commit from a different branch to the "main" branch.

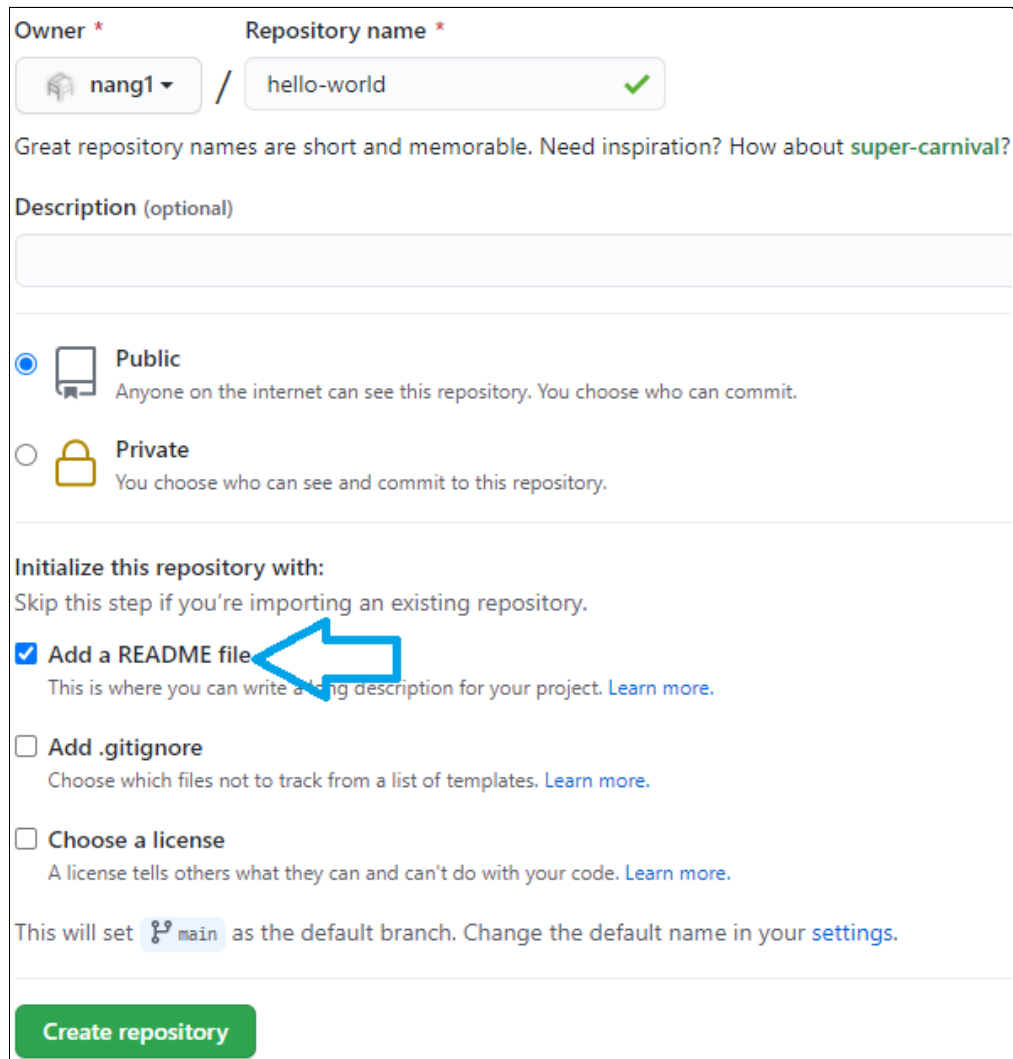


### **Step 1. Create a Repository**

1. Visual clarification for where the '+' and "New repository" buttons are.

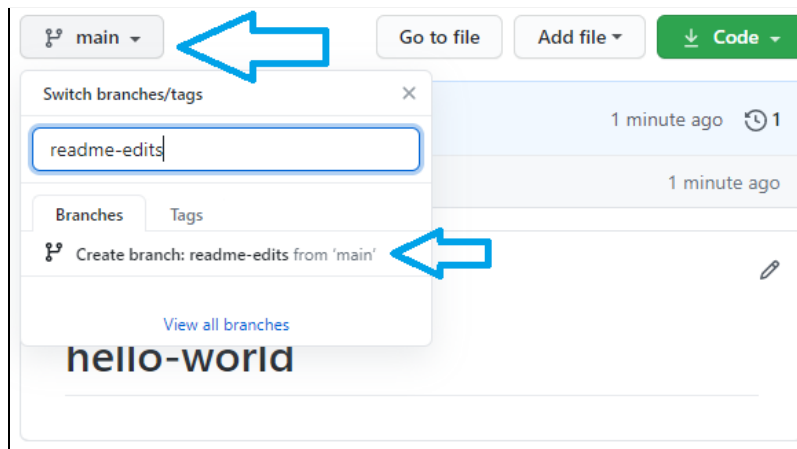


4. The option to add a README file is formatted a little differently now.

A screenshot of the 'Create a new repository' form on GitHub. The form has two main sections: 'Owner' and 'Repository name'. The 'Owner' is set to 'nang1' and the 'Repository name' is 'hello-world', which is marked with a green checkmark. Below these fields is a text input for 'Description (optional)'. Underneath the description field are two radio buttons for 'Public' (selected) and 'Private'. Below these are three checkboxes under the heading 'Initialize this repository with:'. The first checkbox, 'Add a README file', is checked and highlighted with a blue arrow. The other two checkboxes, 'Add .gitignore' and 'Choose a license', are unchecked. At the bottom of the form is a green 'Create repository' button.

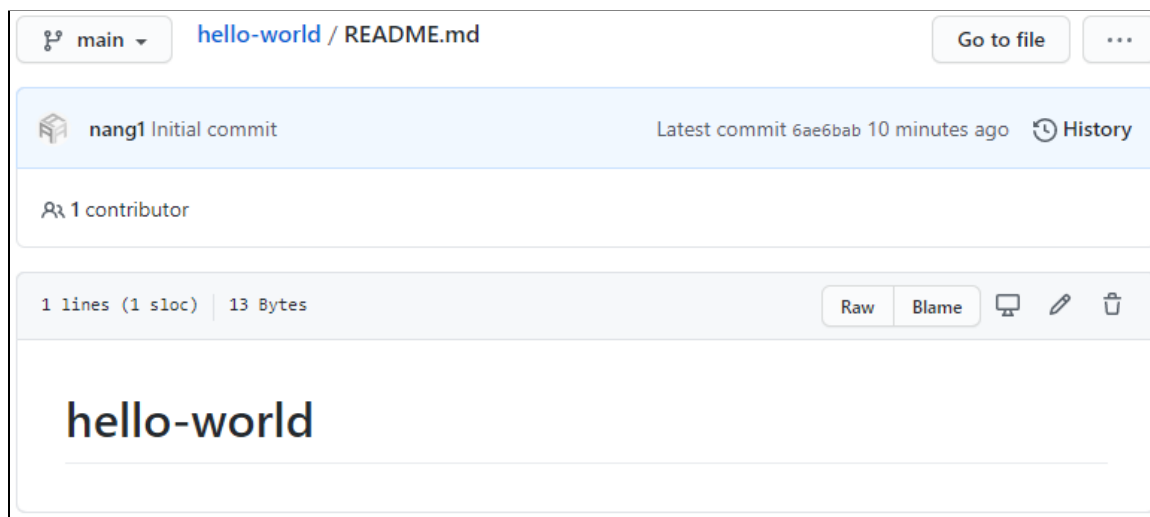
## **Step 2. Create a Branch**

2. The dropdown only says “main” now and the “Create branch” no longer turns blue.

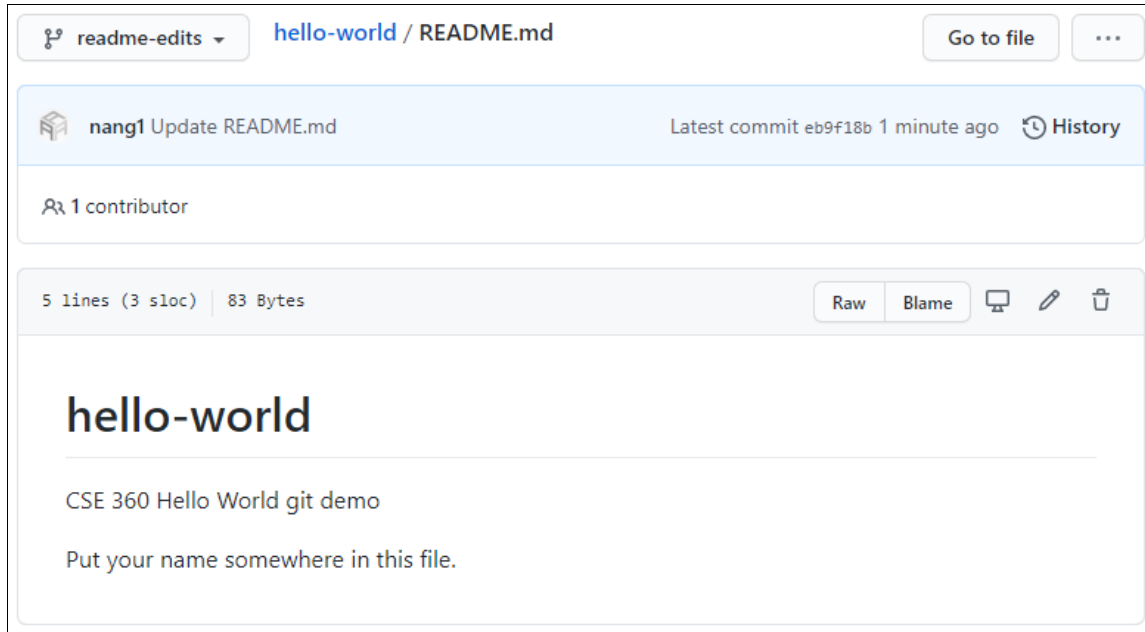


## **Step 3. Make and commit changes**

After completing all the steps in this section, the README.md file in your main branch should be different than the README.md in your readme-edits branch.

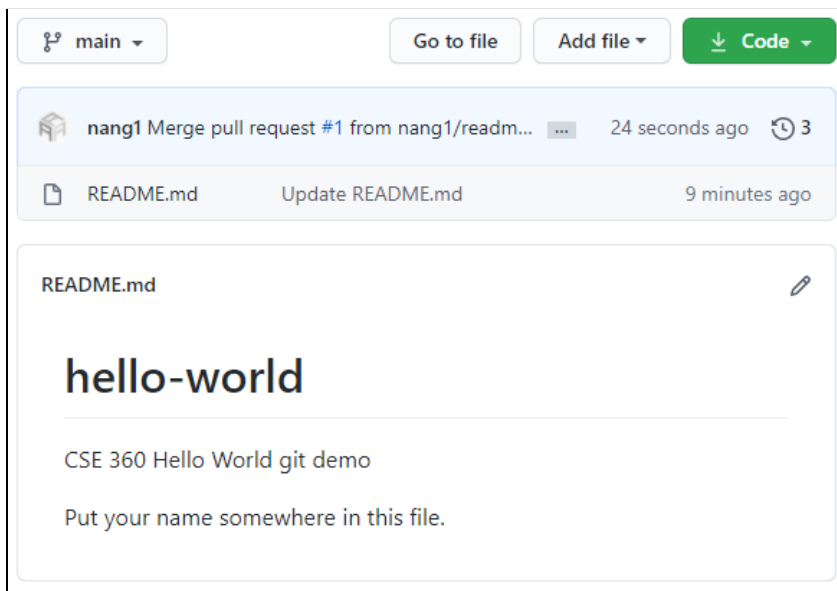


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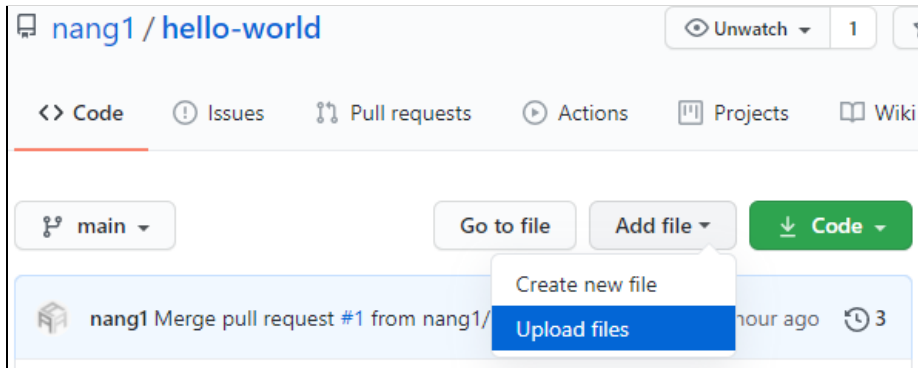
**Step 5. Merge your Pull Request**

After completing all the steps in this section, you should only have one branch, “main”, in your repository. The README.md file in this branch should have all the comments you had previously added in the “readme-edits” branch.



## Assignment 1 Part 2

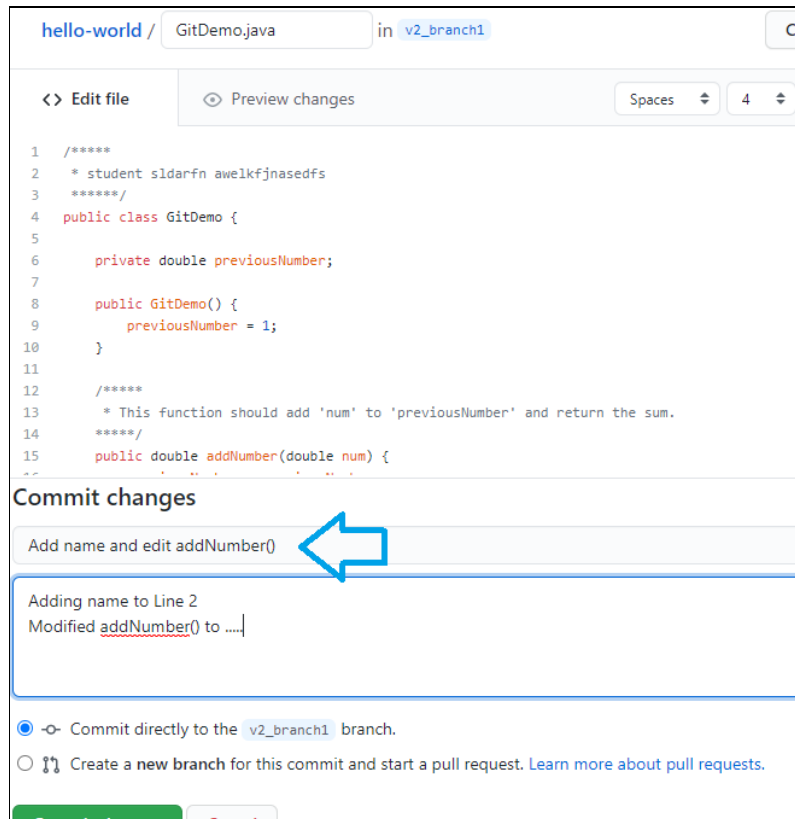
Add the GitDemo.java file to your project.



Create two branches before beginning the following changes to the GitDemo.java file.

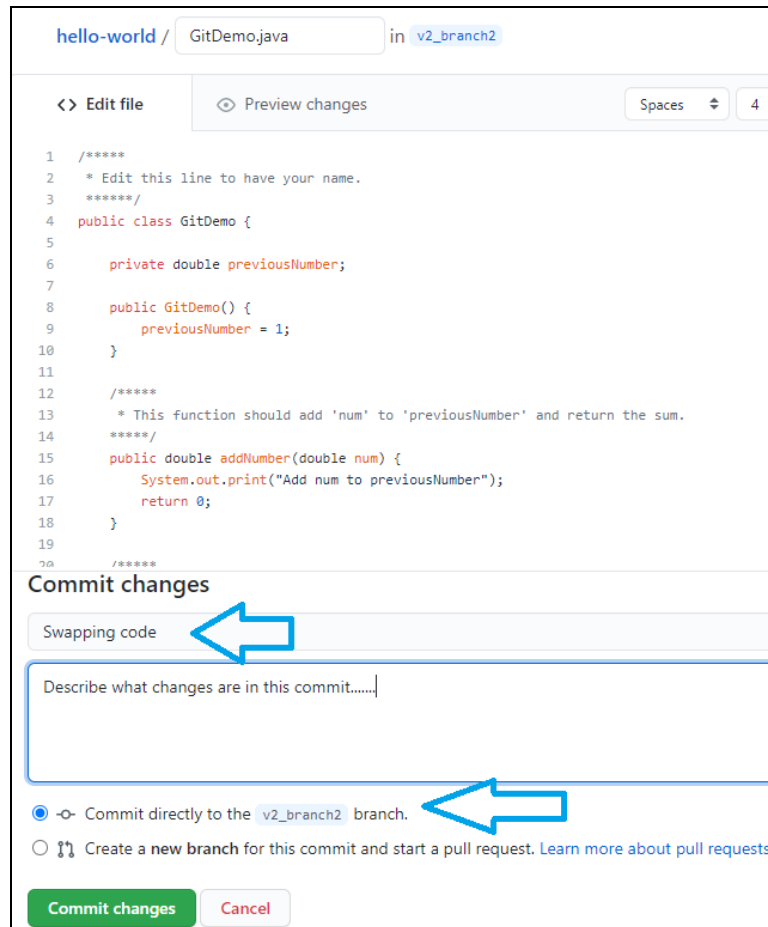
1. In the first branch,
  - a. Edit line 2 to have your name.
  - b. addNumber()
    - i. This function needs to be modified to add the argument variable 'num' to GitDemo's 'previousNumber' variable.
  - c. reverseNumber()
    - i. Add a new "private double reverseNum;" variable to the GitDemo class.
    - ii. Add the statement,  
reverseNum = newNumber;  
in the reverseNumber() function.
  - d. Commit the changes to the first branch. Be sure to write a commit message to briefly describe what changes have been made.

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2. In the second branch,
  - a. findFactorial() and reverseNumber()
    - i. The code for these two functions have been swapped!
    - ii. Move the code to their intended function.
    - iii. Commit the change to your second branch.

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3. Use “Pull Requests” to merge the changes from both branches into the main branch.
  - a. Upon merging your second branch, you should get a message saying there is a [merge conflict](#).
  - b. [This guide](#) can help you resolve the conflict. You will need to edit the conflicting area in such a way that changes from both branches will exist in the ‘main’ branch.

## Submission

Submit the final version of your GitDemo.java file to the Canvas assignment link. In your assignment comment, include a URL to your code repository. The repository will be checked as part of the grading.