

CS 308: Large Applications Practicum
In-Class Activity 8.5: Introduction to GitHub, 25th April, 2016

In this activity, we will learn to use GitHub, which is an alternative to CVS. Each group will be working on a different project, so make sure you know your group number or ask the TAs.

Note: Use your notebook to record your observations wherever possible.

Step-1: Please create an account on GitHub, if you already don't have one. For this purpose, you may go to this website: <https://github.com/> (It is requested that all team members create their accounts so that they can work on the project together.)

Step-2: Create a repository with a name of your choice. Furthermore, once the repository is created, please upload the .cpp and .h files to the "master" repository (For this purpose, you may use "upload files"). Also, please add your team members to the repository by clicking the "+" symbol and then choosing "New Collaborator".

Step-3: Now, create a branch from the main repository copying the .cpp and .h files into the branch. Next, change the 'cout' statement with an equivalent 'printf' statement in the branch. Commit the changes made and report the status of the file on the branch and whether it is different from the one on the "master" trunk.

Step-4: Now, make following changes to the code in the branch: Add a check for -ve numbers within the function. The function simply returns '-1' for -ve arguments. Commit the changes.

Step-5: Now that you have changes in a branch, you can open a pull request. Observe the differences between the code on the branch and that on the master trunk while creating the pull request. Now, by using GitHub's @mention system in your pull request message, please ask for feedback from specific members in your team or other members in other teams (for the latter, you'd need to invite these members as well using "new collaborator" functionality above).

Step-6: Now, our application requires factorial of |num| but current code returns '-1' for -ve numbers. Fix this problem in the branch by stating that factorial of a negative number is "undefined". Commit the changes in the branch.

Step-7: Create another pull-request to the changes in Step 6.

Step-8: Now, merge your Pull Requests. Click the green Merge pull request button to merge the changes into master. Click Confirm merge. Go ahead and delete the branch, since its changes have been incorporated, with the Delete branch button in the purple box.

Step-9: Now, document changes made to repository in the README file on the "master" trunk.

Congrats! Now, you know how to work with GitHub.