SOFTWARE SYSTEM DEVELOPMENT

LAB ACTIVITY 2

INTRO TO GIT

If you don't have a GitHub account, create a new GitHub account from here.

Create a Repository:

1. Create a New Repository named SSD Lab Activity 2 using GUI.

Clone the Repository:

1. Clone that Repository to your local machine and confirm it is properly connected to your GitHub remote with the following command:
   git clone URL, git remote -v

Git Workflow:

1. Create a new folder Lab Activity 2 and inside this folder create a new file named README.md with the command line.
1. Type git status in your terminal. In the output, notice that your README.md file is shown in red, which means that this file is not staged.
2. Type git add README.md. This command adds your README.md file to the staging area in Git. Now, type git status again. In the output, notice that your file is now shown in green, which means that this file is now in the staging area.
3. Type git commit -m "Add README.md" and then type git status once more. The output should now say, "*nothing to commit*", indicating that your changes have been committed.
4. Type git log and look at the output. You should see an entry for your "Add README.md" commit. You will also see details on the author who made the commit and the date and time for when the commit was made.

Add Another file:

1. Create a new file in the Lab Activity 2 folder called hello_world.txt. In the terminal, type git status, and notice hello_world.txt is not staged.

2. Open README.md in your text editor of choice and add the text “This is my first git project!” and then save the file.
3. Back in your terminal, type git status, and notice that README.md is now shown as modified, and not staged or committed. This is because you made a change to it, and it is already a tracked file.
4. Add README.md to the staging area with git add README.md.
5. Can you guess what git status will output now?

   README.md will be displayed in green text, while hello_world.txt will still be in red. This means that only README.md has been added to the staging area.

6. Now, add hello_world.txt to the staging area with a slightly different command: git add . where the full stop means to add all files that are not staged. Then, type git status once more, and everything should now be in the staging area.
7. Finally, let’s commit all the files that are in the staging area and add a descriptive commit message git commit -m "Add hello_world.txt and edit README.md". Then, type git status once again, which will output “*nothing to commit*”.
8. Take one last look at your commit history by typing git log. You should now see two entries.

Push Your Work to GitHub:

1. Type git push origin master.
2. Type git status one final time. It should output “*nothing to commit, working tree clean*”.
3. When you reload the repository on GitHub, you should see the README.md and hello_world.txt files that you just pushed there from your local machine.

Create a Pull Request and Merge a new Branch:

1. Create a new branch named “New Branch” on your local machine using git checkout –b BRANCHNAME
2. Create a new file named test.txt in that branch.
3. Commit your changes and push test.txt to remote using git push –set upstream origin BRANCHNAME
4. Create a Pull Request and Merge this branch into your master branch.
5. Delete your local branch using command line.