

Week 1: Introduction to tools e.g. Git and Github

Learning materials:

1. Git : <https://git-scm.com/videos>
2. Github : <https://lab.github.com/githubtraining/introduction-to-github>

1. What is version control?

2. Basics of Git.

- a. Single person development
 - i. Adding new features
 - ii. Committing it to the repository for future review.
- b. Multiple persons development

3. Get going with Git.

- a. Install git <https://git-scm.com/download>
- b. Configure username and email (not a credential to be used in central repo rather credit by whom the changes occur in local repository).
 - i. **git config -- global user.name "faisalhussain-cse12"**
 - ii. **git config -- global user.email "faisalhussain@iut-dhaka.edu"**

<Donot use global keyword if you want to change it only for one repository. >

c. Initializing local git repo

- i. **git init "<Full Student ID> CSE 4302"**
- ii. **cd "<Full Student ID> CSE 4302"**
- iii. Create readme.txt file
- iv. For tracking add the required file in the staging area by following the command
git add readme.txt
- v. **git commit -m"This is new."**
- vi. Create .gitignore file [you may read documentation for details <https://git-scm.com/docs/gitignore>] and add following two lines
***.o**
***.exe**
- vii. **git commit -m"added .gitignore file"**
- viii. Open a repository in github.
- ix. Copy the remote url and use the following command to add remote url
git remote add origin <url>

[You may read documentation to understand adding remote
<https://docs.github.com/en/github/getting-started-with-github/managing-remote-repositories>]

What is github?

Ans: GitHub is a collaboration platform. GitHub is also a powerful version control tool.

GitHub uses Git, the most popular open source version control software, to track every contribution and contributor to your project--so you know exactly where every line of code came from.

Useful Commands:

```
git status
git log
git add .
git commit -m"Hello"
git push
```

For any lab task:

- Create a folder in the parent folder (where **.git** folder is present) with the name of lab example : **Lab 1**
- For each of the lab tasks you need to have a separate cpp file. The name of the file should be **<Last 3 digit of your Student ID> task <task no>**
Example 101 task 1
- Commit after each task is recommended.
- Push the code to remote repo
- Upload task in google classroom assignment section also for safety.
- Be ready for the viva session.