Basic Git knowledge

A version control system allows someone to track down the changes made to a file. It allows a user to keep different versions of a file and easily revert to any version they choose. It can also serve as a file history so that changes and who made the changes can be easily found.

### **Git Overview**

Git is a version control system that lets you track changes you make to your files over time. It is the most popular version control system and it’s open source. You can make changes to a file, track the changes and revert changes to any file.

Git can also be defined as a source code management(SCM) tool that allows developers to track changes made to a source code repo.

It allows developers to collaborate by working on the same file from different locations while tracking the changes made by everyone and allowing them to merge all the work they do.

To make use of Git, it has to be installed on your computer.

### **Git and GitHub**

Not to be confused with GitHub. Git is an open-source version control system while GitHub is an online store for Git repository which allows collaboration between developers and other users online from any location.

### **Basic Git commands**

| **Git Commands** | **Functions** |
| --- | --- |
| git config --global user.name “[name]” | sets the name of the owner |
| git config –global user.email “[email address]” | sets owner email |
| git init [repository name] | start new repository |
| git clone [url] | obtain a repository from an existing URL |
| git add [file] | adds a file to the staging area |
| git commit -m “[ Type in the commit message]” | confirms the addition of the new files permanently |
| git commit -am | adds and commits any files that are already modified |
| git diff | shows the file differences which are not yet staged. |
| git status | lists all the files that have to be committed |
| git branch | lists all the local branches in the current repository. |
| git branch [branch name] | creates a new branch |
| git branch -d [branch name] | deletes the branch identified |
| git checkout [branch name] | switch from one branch to another |
| git checkout -b [branch name] | creates a new branch and also switches to it |
| git merge [branch name] | merges the specified branch into the current branch |
| git remote add [variable name] [Remote Server Link] | used to connect the local repository to the remote server |
| git push [variable name] main | sends the committed changes of the main branch to the remote repository |
| git push [variable name] [branch] | sends the branch commits to your remote repository |
| git push –all [variable name] | pushes all branches to your remote repository. |
| git pull [Repository Link] | fetches changes on the remote server to your working directory |