

# **Git and Github**

## **Complete Tutorial**

1. To set up git in our system, we will need vscode and git bash from ["https://git-scm.com/downloads"](https://git-scm.com/downloads).
2. Configure git by: "**git config --global user.name "My Name"**" and "**git config --global user.email "email"**". To Check everything is ok or not use: "**git config --list**".
3. First of all we have to create a repository in github.
4. Then we have to link it with our git using: **git init** //it will make the file as git repo. We can also use cloning to get the projects from github to git using: **git clone <-link->**.
5. Set up git with github: **git remote add origin <-link->**
6. After that to do anything we have to add and commit our work with the commands: "**git add .**" and "**git commit -m "Massage"**"
7. Then to link our work with github we have to push our work using: "**git push origin main**" and to minimise the future work we can use "**git push -u origin main**" this will ensure us that our work will automatically pushed in main just by using "**git push**".
8. Now to create branches we can use: **git checkout -b <- new branch name ->** and to navigate: **git checkout <branch name->**, to delete a branch we can use: **git branch -d <-branch name->**. To check which branch we are in we can use "**git branch**".
9. Now to merge our other features in github we need to do: pull request.
10. Now to pull our work from merged github we can use: **git full origin main**
11. To merge in git we can use: **git merge <branch name>**. If found any conflicts vs code will show.
12. For undoing something: Case\_1: for staged changes: **git reset <file-name>**, git reset. Case\_2: committed changes (for one

commit): **git reset HEAD~1**. Case\_3: committed changes (for many commits): **git reset <commit hash>** or **git reset --hard <commit hash>** (this command will also change in the vscode). [Note: to get the commit hash we have to see the commit history by: **git log**.]

13. Use of fork: rough copy of other's project.

Some additional commands to be remembered:

- To change directory use: **cd <file name>** //simply tab for the proper name and syntax
- To get out of one directory: **cd ..**
- If our compiler stuck enter: **q** //to get it normal or quit the process