

Task#2

1. Learning the Version Control System:

- It is important to keep different versions of the project
- It helps in managing the project efficiently.
- It requires the programmer to define a description based on changes.
- It can be easily used in Git through CLI or GUI.
- 'git status' command is used to list the changes made.

2. Setting up Git.

- I had my account setup at the Git previously.
- Choosing an editor I would to write is VS Code.
- I could either use GUI or CLI.
- Some commands to create a global user is: `git config --global user.name "A.Basit"`

3. Starting Your First Commit.

- `git commit -m "First commit"`
- To start in an existing project you will need a url of the running project.
- Just copy that url and `'git clone "url"'`
- SSH will require Public key authentication whilst the HTTPS links will require username & password of the global user.
- No matter an existing repository or a fresh one, you now have a repository on your computer which you can track and work on.

4. Branching and its Advantages.

- For suppose you are developing two versions of the main page on your website whilst you are also updating the FAQ page, This is where branching comes in handy.
- Without Branching system, Large different options can lead to problems of confusion
- Whereas branching keeps track of every part of the program.
- `'git branch -v'` provides current branches and its data.
- `'git checkout 'branch_name' '` command can be used to declare Head of the branches.

5. Merging and why it is used.

- It is used to merge one branch's changes to the other.
- It requires to declare the main branch and the branch that changes are gonna affect.
- For suppose an branch1 is the Head of the branches, then we write 'git merge "check_list"'
- These merging and branching works together to keep track of different parts and topics of the project while maintaining version control.
- These branching and merging helps eliminate inefficiency when a large project is on development.
- Long Branches can have 'development' , 'testing' ,and 'production' state.