Git and GitHub Tutorial

Name: Shailendra Suman
Regd_no: 2141019394

What is Git?

Git is a tool that helps you keep track of changes in your code. It lets you go back to older versions, work with teammates, and stay organized.

What is GitHub?

GitHub is a website where you can store your Git projects online. It makes it easy to share your code and collaborate with others.

Basic Git Commands and Their Uses :

1. git config

This command is used to set your user name and email so Git knows who is making the changes.

```
git config --global user.name "Your Name"
```

```
git config --global user.email "youremail@example.com"
```

2. git init

This command turns your folder into a Git project (repository).

```
git init
```

3. git status

It shows you the status of your files—like which files are changed, staged, or not tracked yet.

```
git status
```

4. git add

This adds files to the staging area, getting them ready to be committed.

```
git add filename or git add .
```

5. git commit

It saves the changes in your project with a short message.

```
git commit -m "Your message here"
```

6. git log

It shows you a history of all the commits made in the project.

```
git log
```

7. git ls-files

It lists all the files being tracked by Git in the current repo.

```
git ls-files
```

8. git mv

This command is used to rename or move a file in your repo.

```
git mv oldname.txt newname.txt
```

9. git rm

It removes a file from your Git project.

```
git rm filename
```

10. touch

This creates a new empty file in your directory. It is not a Git command, but it is often used with Git.

```
touch filename.txt
```

11. git clone

It copies a project from GitHub (or any remote) to your computer.

```
git clone https://github.com/username/repository.git
```

12. git remote add origin

It connects your local project with the GitHub repository.

```
git remote add origin https://github.com/username/repo-name.git
```

13. git push

This uploads your committed changes to GitHub.

```
git push -u origin main
```

14. git branch

It shows the current branches or lets you create a new one.

```
git branch or git branch new-branch-name
```

15. git checkout

This lets you switch between different branches.

```
git checkout branch-name
```

16. git merge

It joins the changes from one branch into another (usually into main).

```
git checkout main

git merge branch-name
```

17. git branch -d

This command deletes a branch safely, but only if it has already been merged into the main branch or another branch.

```
git branch -d branch-name
```

18. echo message >>

This command adds the message to the end of a file without erasing the existing content.

```
echo message >> filename
```