**GIT AND GITHUB**

**GIT:** Git stands for Global Information Tracker. It is a free open-source Version Control System (VCS). Git is used to track the changes in the project and allows multiple developers work on same project simultaneously without any disturbances.

**GITHUB:** Github is a cloud-based platform which uses the git tools. It is used to store the data, share the data and allows work together.

We have 3 stages in git:

1. Working directory- Here files created in the local machine by initiating the local repository in the local machine.
2. Staging area- Here we can stage the code and commit the files.
3. Remote area- Here we push the committed files to the main repository.

**Features of Git & Github:**

* **Tracking-** Developers can easily track the history of the code.
* **VCS-** Developers can easily switch to the different versions of the code without any loss of code.
* **Collaboration-** Developers work on same project anywhere in the world simultaneously and also share the code.
* **Push request-** Allows the developers to discuss about the changes made in the code.
* **Branches-** Different branches can be created for codebase that can be worked independently.
* **Review, Revert and Merge**- Developers review the code and revert the code if needed and also easily merge the changes to the project.

**Working of Git:**

* **Creating a Repository-** Create a repository in the github**.**
* **Clone the Repository-** Copy that repository in the local machine.
* **Stage-** Stage the changed code.
* **Commit-** Save the changes to the local repository.
* **Push-** Push the changes to the main repository.

**Git commands:**

* **git init**- Initiating the empty repository in local machine.
* **git add-** Adding files to the local repository.
* **git status-** Show the status of the file or working repository.
* **git commit –m “msg”-** Accepting the changes in the code.
* **git push-** Pushing the local repository to the main machine.
* **git push –u origin main-** Pushingthe local repository to the main machine.
* **git remote add origin main-** Changing the branching to the main branch.