Git

GIT

- Git is a popular version control system. It was created by Linus Torvalds in 2005.

It is used for:

- Tracking code changes
- Tracking who made changes
- Coding collaboration

Working

- Manage projects with **Repositories**
- **Clone** a project to work on a local copy
- Control and track changes with **Staging** and **Committing**
- **Branch** and **Merge** to allow for work on different parts and versions of a project
- **Pull** the latest version of the project to a local copy
- **Push** local updates to the main project

Basic Git Terminology

- **Repository (Repo):** A project containing the history of changes.
- **Commit:** A snapshot of repository at a specific point in time.
- **Branch:** A parallel version of a repository.
- **Merge:** Combining branches together.
- **Clone:** Copying a repository to local machine.
- **Fork:** Creating copy of someone else's repository.

Git commands

- To check the version

    -> git --version

- Initialize a repo

    -> git init

- To change the name

    -> git config user.name "your name"

- To check status of git

    -> git status

- Clone an Existing Repository

    -> git clone[url]

- Adding Files to Staging

    -> git add [file]

    ->git add –all   (It will stage all changes)

    ->git add --p   (each change in your directory)

- Committing Changes

    -> git commit -m "Commit message"

    ->git commit --interactive   (step-by-step process to stage changes)

- Viewing Commit History

    -> git log

- Pushing Changes to Remote

    -> git push origin [branch]

- Pulling Changes from Remote

    - > git pull origin [branch]

- Creating a Branch

    -> git branch [branch-name]

- Switching Branches

    -> git checkout [branch-name]

- Merging Branches

    -> git merge [branch-name]

- Reverting a Commit

    -> git revert [commit]

- Resetting to a Previous Commit

    -> git reset --hard [commit]

- Adding a Remote Repositories

    ->git remote add origin [URL]

- Viewing Remote Repositories

    -> git remote -v

Record commit to local and remote repository

- git add <filename> # Stages a specific file
- git commit -m " commit message"
- git push origin <branch-name>