

## ❖ GIT CLONE Vs GIT FORK:

- Any public Git repository can be forked or cloned.

### **GIT CLONE:**

- Git clone creates a linked copy that will continue to synchronize with the target repository.
- When you clone a repository, you are creating a local copy on your computer that you can sync with the remote on GitHub.

### **GIT FORK:**

- Forking creates a new repository under your account on the hosting service, allowing you to work independently of the original project.
- A fork is a copy of a repository that allows you to make your own changes without impacting the original project.

Fork → clone → make changes → create pull request.

## ❖ GIT FETCH & PULL:

### **GIT FETCH:**

- Download objects and refs from another repository.
- Git fetch downloads only latest changes into the local repository. It downloads fresh changes that other developers have pushed to the remote repository
- since the last fetch and allows you to review and merge manually at a later time using git merge. Because it doesn't change your working directory or the staging area, it is entirely safe, and you can run it as often as you want.

### **GIT PULL:**

- It downloads latest changes into the local repository and it also automatically merges change in your working directory.
- One important thing to keep in mind is that it will merge only into the current working branch.

git pull = git fetch + git merge

## ❖ MERGING VS. REBASING

- Rebasing and merging are both designed to integrate changes from one branch into another branch in Git, but they accomplish this in different ways.

### **GIT MERGE:**

- It combines changes from one branch into another, creating a unified history of commits.
- It allows developers to merge Git branches while the logs of commits on branches remain intact.

### **GIT REBASE:**

- It is a command that lets users integrate changes from one branch to another. Once the action is complete, the logs are modified.
- Rebasing in Git integrates a change from the base of the feature branch to the master branch's endpoint. It's useful for streamlining complex histories.