**Git and GitHub**

1. What is Git?

* distributed version control system SCM—software configuration management/Source code management
* Git-- is a distributed version control tool that can manage a development project's source code history. It is an open-source tool developer install locally to manage source code. It allows you to perform all kinds of operations to fetch data from the central server or push data to it
* GitHub-- is a cloud-based platform built around the Git tool. GitHub is an online service to which developers who use Git can connect and upload or download resources. It is a core hosting platform for version control collaboration. It is a company that allows you to host a central repository in a remote server.

1. Why we need Git?

* Git simplifies the process of working with other people and makes it easy to collaborate on projects. Team members can work on files and easily merge their changes in with the master branch of the project. This allows multiple people to work on the same files at the same time.

1. Difference between git and GitHub?

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| GIT | GITHUB |
| 1. Git is a revision control system, a tool to manage your source code history. 2. **Git** is the **tool/ software** 3. Git is a free and open source distributed **version control system** designed to handle everything from small to very large projects with speed and efficiency 4. Git is installed and maintained on your local system (rather than in cloud) 5. It is a tool to manage different versions of edits, made to files in a git repository 6. It provides functionalities like Version Control System Source Code Management | 1. **GitHub** is a hosting service for Git repositories. 2. **GitHub** is the **service for projects that use Git**. 3. GitHub is a **web-based** Git repository **hosting service**, which offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features. 4. It is a cloud-based hosting that lets you manage git repositories 5. It is a space to upload a copy of the Git repository 6. It provides functionalities of Git like VCS, Source Code Management as well as adding few of its own features |

1. How to create repository on GitHub?

* Step1: login in GitHub.
* Step2: Type of name of your Repository and give discerption.
* Step3: Click on public or private according to you.
* Step4: If you want readme file click on checkbox otherwise don’t click.
* Step5: Now click on Crete Repository.

1. How to clone repository from GitHub?

* Type-1: step1: git clone URL.
* Type-1: step2: On GitHub, navigate to the main page of the repository.
* Under the repository name, click **Clone or download**.

1. How to add file to git?

* git add filename
* git add filename--type file name which you want to add
* git add .---from this we can add all the file in git
* note- file should be on this folder.

1. What is a commit in git?

* Commit is basically to save the file in git with a message so that git can store is into a version form. So that now git can handle all this file. It also shows the state of our repository.

1. How to commit changes in git?

* $ git commit -m "comments"

1. How to push your changes to GitHub in some repo?

* git push origin master

1. How to pull changes from the GitHub?

* git remote add origin
* git pull origin master

1. How to resolve conflicts when two people modified the same file?

* When conflicts problem comes during pull command. At that time, it returns a file in which all modification is available which done at the same time. Then you can manually solve the modification according to their requirement