What is git and github?

Ans:

Git:

Git is version control system that is used to track changes of the code and co-ordinates the work among the multiple developers for software development. It helps the developers to work together on same project without any conflicts and manages different versions.

Git used for version control, collaboration, backup & security, branching and merging.

GitHub:

GitHub is a web-based platform that provides hosting for Gitrepositories and adds features for collaboration, tracking, and code management.

GitHub allows developers to store their Git repositories remotely, collaborate with others, and take advantage of features like pull requests, and continuous integration.

What is CVCS and DVCS ?

Create a project of any and push the project

Ans:

Step1: create a folder on your desktop

Step2: open that folder in vs code then take a new file and write a program for example multiplying two numbers.

num1=4

num2=5

print(num1\*num2)

Step3: now open the git, then create a new repository with a name myrepo.

Step4: then preform the commands in vs code.

git init

git remote add origin <remote\_repo\_url>

git add multiply.py

git commit -m “adding multiplication code”

git push -u origin main

step5: now the file got pushed into the remote repository.

Create 3 branches and 5 tags

Ans:

We can create a branch by using the following syntax:

git branch <branchname>

**creating a branch 1:**

* git branch feature1 # branch feature1 got created
* git branch #git branch is used to see in which branch the file is presented in.
* And then we need it push the file into remote repository .
* git push -u origin feature1
* then only we can able to see our new branch(feature1).

**creating branch 2:**

* git branch feature2 # branch feature2 got created here
* git branch #git branch is used to see in which branch the file is presented in. Now the branch is in feature2.

**creating branch 3:**

* git branch feature3 # branch feature3 got created here
* git branch #git branch is used to see in which branch the file is presented in. Now the branch is in feature3.

**Tags:**

In git, tags are used mark a specific commit. There are often used as versions such as (v1, release v1.0, etc ).

Creation of a tag:

git tag <tagname>

git tag v1

Create a Keygen and push using ssh

Create a sub branch in a git and switch from subbranch to mainbranch(hit: use merge concept)

What is the importance of git checkout?

Ans:

git checkout:

git checkout is used change branch in local repository.

If you want use newly created branch then by using git checkout command

We can change the branch

Example:

git branch #here we are having two branches

main\*

feature1

git checkout feature1

git branch #now the branch is in feature1

What is the importance of git merge?

Ans:

git merge:

git merge is used merge one or more file in the repository

In git, by using git merge command we can merge the files.

Example: git merge <filename1> <filename2>

What is Linux and how is it different from other operating systems?

Ans:

Linux:

Linux is an operating system which is free and open-source environment,

fast and provides high security. Whereas other operating systems such as windows, mac os, ubuntu, etc has different kinds of features. Compared with other operating systems linux is much effecticient and free, and open -source

environment.

What are the basic Linux commands for file operations?

Ans:

The basic commands for file operations:

1. touch <filename>

it creates an empty file

1. echo “hello” > <filename>

this creates a file with hello

1. nano <filename>

nano is an text editor we can able write any program or a text with in it.

1. cat <filename>

to read the content in the file, we use this command.

1. rm <filename>

to remove a file , we use rm command.

1. ls

it lists the files present in our directory or a folder

What is the difference between chmod and chown?

Explain the use of grep command.

Ans:

grep command:

grep stands for global regular expression point.

By using grep command , we can identify particular word or a letter from the given file.

How do you schedule a cron job in Linux?

Explain the basic features of the Linux OS.

Ans:

The basic feature of linux:

Free and open-source:

Linux is free and open-source environment, which is accessible by everyone.

Fast and secure:

Linux provides fast and having high security.

**What are the major differences between Linux and Windows?**

**Ans:**

|  |  |
| --- | --- |
| **Linux** | **Windows** |
| **1.linux is free and open-source environment.** | **1.windows is operating system, but it**  **is not available for free.** |
| **2.it provides high security.** | **2.whereas windows doesn’t have an strong anti-viruses.** |
| **3.linux is case-sensetivite** | **3.windows operating system is not a case-sensetivite.** |
| **4.it stores data in tree structure.** | **4.it stores data in files.** |

**Define the basic components of Linux.**

**What is the chmod command in Linux, and how do you use it?**

**What are the most important Linux commands?**

**Ans:**

**The most important linux commands:**

1. **pwd: prints the present working directory**
2. **ls: it shows list of files presents in the folder or directory**
3. **mkdir: it create an directory**
4. **cd : it used to change the directory**
5. **touch: it is used create an empty file**
6. **mv: mv command is used to move or rename one file to another file**
7. **cp: cp command is used to copy a file to another folder**
8. **rm: it used to remove a file**
9. **rmdir: it used to delete a directory**
10. **sort: it used to sort the given file in ascending order**

**How do you create,remove and copy files in linux?**

**Ans:**

**Create: we can create a file in linux by using:**

**touch <filename> #it create an empty file**

**nano <filename> # it is text editor**

**echo “hello” > <filename>**

**remove:**

**remove command is used to remove the file or directory**

**rm <filename>**

**rmdir <directory name>**

**copy:**

**copy command is used to copy the content from file to another**

**cp <filename1><filename2>**

**What is ssh?**

**Ans:**

**Ssh stands for secure shell**

**It is network protocol used to securely connect to remote computers over an encrypted connections.**