Name: - Aryan thakur Reg no. 12007461

Q1 Sol. It is a software that helps to manage changes to the source code over time.

Q2 Sol. Version control system developed so that we can manage and protect the source code.

The necessities of version control system are:

To ensure that everyone has access to the latest code and modifications are tracked.

Q3 Sol.

Local

It is one of the simplest forms and has a database that kept all the changes to files under revision control. RCS is one of the most common VCS tools

Distributed

A distributed version control system allows users to access a repository from multiple locations.

Centralized

A centralized version control system is a type of version control system where all users are working with the same central repository.

Q4 Sol. 1 Centralized version control systems store all the files in a central repository, while distributed version control systems store files across multiple repositories.

2. Distributed version control systems is faster than Centralized version control systems.

Q5 Sol. Git is a used for source code management. It is a free and open-source version control system used to handle small to very large projects very efficiently.

Q6 Sol. Features of git: 1. Keep tracking history. 2. Free and open source. 3. Branching is easier.

Q7 Sol. 1. git add . – Save all the changes that we have done in a file or from the working directory to the staging area

2. git checkout - to checking out old commits and old file

3. git clean - Removes untracked files from the working directory

Q8 Sol. No, because git is a version control system that lets you manage and keep track of your source code history while github is a cloud-based hosting service that lets you manage git repositories.

Q9 Sol. git –version

Q10 Sol. git add -A

Q11 Sol. The git log command displays committed steps or list us the project history while git status lets you inspect the working directory and the staging area.

Q12 Sol. git init

Q13 Sol. Different states of a file in Git are:

Modified - Modify files in your working directory

Staged - Stage the files and add snapshots of them to your staging area.

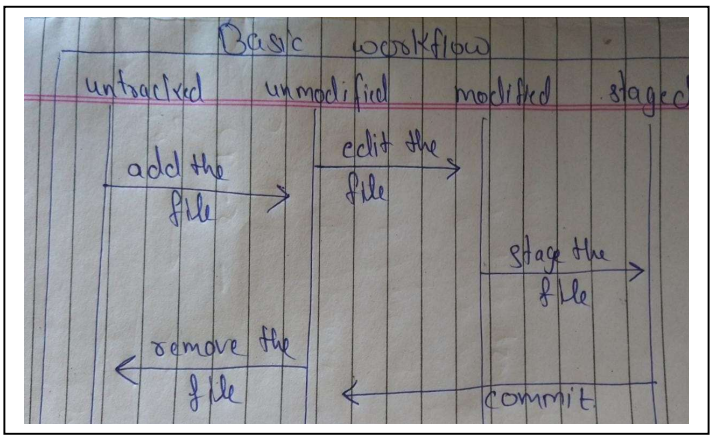
Committed - means that the data is safely stored in your local database.

Q14 Sol. False

Q15 Sol. git commit -m “added the name in file.md”

Q16 Sol. git config --global user.email
aryan@gmail.com

Q17 Sol.



Add files to be committed with git add (file.pdf)

Puts the file in the "staging area"

Create a commit of added files with git commit, followed by a commit message.

Use git status to see the current status of your working tree.

Q18 Sol. Branches allow you to develop features, fix bugs, and safely experiment for new ideas.

Q19 Sol. git branch new-email

Q20 Sol. git checkout new-email

Q21 Sol. git checkout Branch-name

Q22 Sol. git init command creates a new git repository. It can be used to convert an existing project to a Git repository

Q23 Sol. fork creates a completely independent copy of Git repository.

1. Forking creates your own copy of a repository in a remote location.

2. Git clone creates a linked copy that will continue to synchronize with the target repository.

Steps:

In any github profile, Select a repository then in the right side corner click on fork button.

Rename the repository name and click on commit.

Then copy the link or on github gui and paste in git bash

Then make some changes in file and commit the file

Now in the browser after 4-5 sec refersh the page and click om compare and create pull request for the file.

Q24 Sol. git push command is used to upload local repository content to a remote repository

E.g. git push origin main

Q25 Sol.

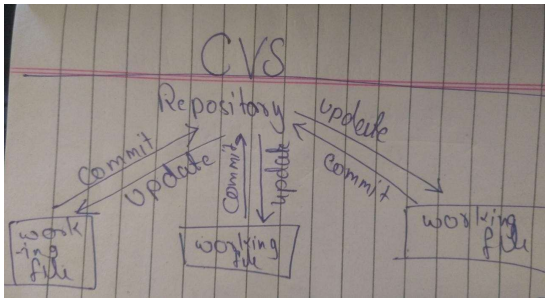
CVS:

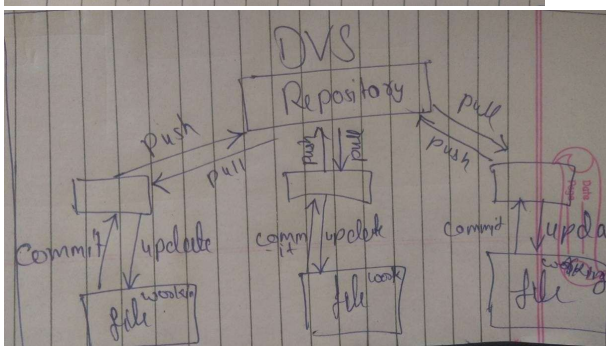
Centralized Version Control Systems makes collaboration amongst developers along with providing an insight to a certain extent on what everyone else is doing on the project

Two things are required to make your changes visible to others which are:

You commit

They update





DVS:

Multiple people can work simultaneously on a single project. Everyone works on and edits their own copy of the files

To make your changes visible to others, 4 things are required:

You commit

You push

They pull

They update