Ans 1:- Version control systems are a type of software tools that helps in recording and keeping track of the changes and modifications made to the files and directories in it.

Ans 2 :- A version control system allows multiple developers, designers or other team members to share and work on the same project. It helps in smarter and faster working. It also ensures that everyone has access to the latest changes in codes and modifications are tracked.

Ans 3 :- The two types of version control systems are centralized and distributed version control systems.

Ans 4 :- The difference between the two version control types are that :- Centralized version control systems store all the files in a central repository and distributed version control systems store files across multiple repositories.

Ans 5 :- Git is a mature and actively maintained open source project developed by Linus Torvalds the creator of Linux OS kernel.

Ans 6 :- Few features of git are:-

a) It's free and open source
b) It tracks history
c) Supports non-linear development
d) Creates backups

Ans 7 :- Commands used in git are:-

a) Git add - This command helps move changes from the working directory to the staging area. This gives you the opportunity to prepare and check an overview of a snapshot before committing it to the official history.
b) Git branch - This command is your general-purpose branch administration tool. It lets you create isolated development environments within a single repository.
c) Git checkout - Git checkout means to navigate existing branches. Combined with the basic Git commands, it's a way to work on a particular line of development.

Ans 8 :- Git is a tool used to manage multiple versions of source code edits and more which can be transferred to files in a git repository whereas Github acts as a location for uploading copies of a Git repository and more. So we can say that they are completely different in terms of their purpose.

Ans 9 :- The git – version command is used to get the installed version of git.

Ans 10 :- The **git add** command adds new or changed files in your working directory to the Git staging area.

Ans 11 :- The git log command displays committed snapshots. It lets you list the project history, filter it, and search for specific changes. While git status lets you inspect the working directory

and the staging area while the git log only works in the committed history.

Ans 12 :- The git init command is used to initialize the git on the current repository.

Ans 13 :- The three types of states in git are modified, staged and committed. Modified means that you have changed the file but have not committed it to your database yet.Staged means that you have marked a modified file in its current version to go into your next commit snapshot.Committed means that the data is safely stored in your local database.

Ans 14 :- Yes git automatically adds files to the repository and starts tracking them after the git add command is used. Until that it won't track the files.

Ans 15 :- The git commit command is the command to commit the staged changes for the Git repository.

Ans 16 :- The git config command is used to commit with the message "New email".

*Ans 17 :- Ans is a picture which will be added in the end.

Ans 18 :- A branch represents an independent line of development. Branches serve as an abstraction for the edit/stage/commit process.

Ans 19 :- The git branch new email command is used to create a new email in a branch in git.

Ans 20 :- The git checkout new-email command to move to the branch new email.

Ans 21 :- The proper and quick way of switching branch on Git is to use the git switch command and specify the name of the branch you want to switch to. If the destination branch does not exist, you have to specify the "-c" option to create the branch.

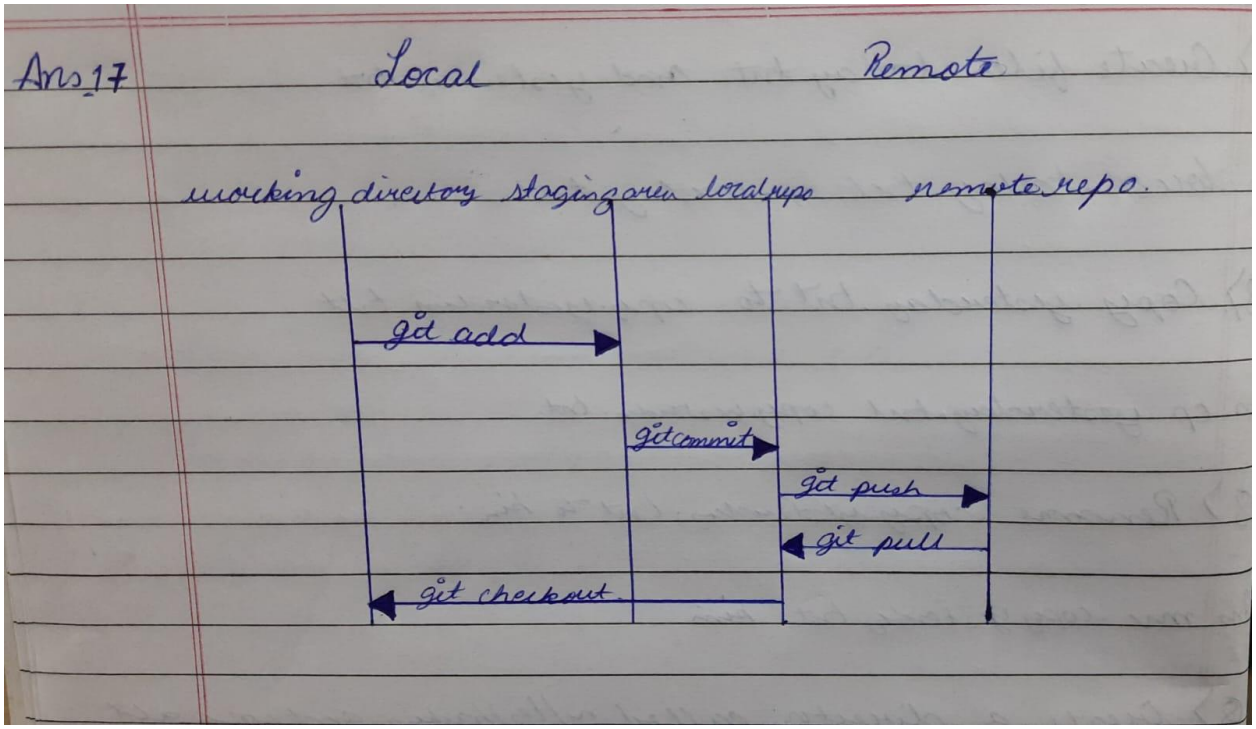
Ans 22 :- The git init command is used to create a new git repository.

Ans 23 :- A fork creates a completely independent copy of Git repository. In contrast to a fork, a Git clone creates a linked copy that will continue to synchronize with the target repository.

Ans 24 :- The **git push** command is used to upload local repository content to a remote repository. Pushing is how you transfer commits from your local repository to a remote repo.

*Ans 25 :- Ans is a picture which will be added next.

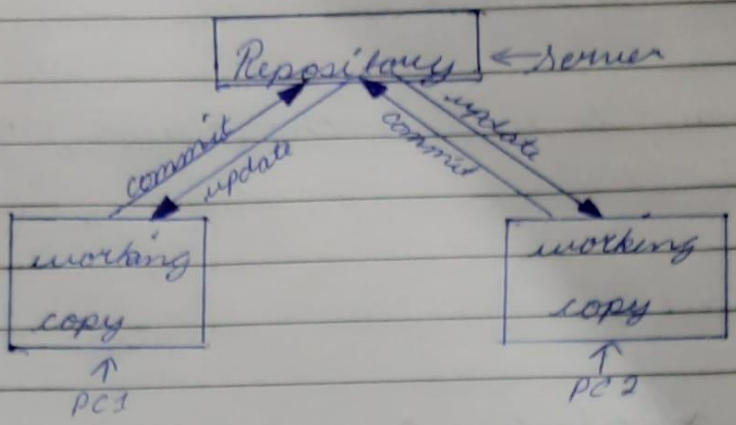
And 17 :-


Ans_17
Local
Remote
working directory
Staging area
local repo
remote repo.
git add
git commit
git push
git pull
git checkout

Ans 25 :-

Ans 25.) Types of version control :-

(i) Centralized version control -



(ii) Distributed version control -