1)it is the practice of tracking and managing changes to software code. Version control system are software tools that help software teams manage changes to source code over time.

2) Version control is essential to track, organize and control changes over source code and avoid confusion, especially for large, fast-changing projects. Version control systems are essential tools when integrated with a well-defined version management process. Free version control systems are commonplace so there’s no reason to not use one.

3)1) centralized version control system

2)distributed version control system

4)1) centralized version control system: In this approach, all the changes in the files are tracked under the centralized server. The centralized server includes all the information of versioned files, and list of clients that check out files from that central place.

2) distributed version control system:

Distributed version control systems come into picture to overcome the drawback of centralized version control system. The clients completely clone the repository including its full history. If any server dies, any of the client repositories can be copied on to the server which help restore the server.

5) [Git](https://www.simplilearn.com/tutorials/git-tutorial/git-tutorial-for-beginner) is a [DevOps tool](https://www.simplilearn.com/tutorials/devops-tutorial/devops-tools) used for source code management. It is a free and open-source version control system used to handle small to very large projects efficiently. Git is used to tracking changes in the source code, enabling multiple developers to work together on non-linear development. Linus Torvalds created Git in 2005 for the development of the [Linux](https://www.simplilearn.com/linux-programming-for-beginners-article) kernel.

6) List a few features of Git. Ans: Tracks history, Free and open source, Supports non-linear development, Creates backups, Scalable, Supports collaboration, Branching is easier, Distributed development.

7) Git config command This command configures the user. The Git config command is the first and necessary command used on the Git command line. This command sets the author name and email address to be used with your commits. Git config is also used in other scenarios. Git Init command This command is used to create a local repository. Git clone command This command is used to make a copy of a repository from an existing URL. If I want a local copy of my repository from GitHub, this command allows creating a local copy of that repository on your local directory from the repository URL.

8) Is Git the same as Github? Why or Why not?

Ans: No, Git and Github are two separate entities. Git was invented by Linus Torvalds the creator of Linux. Git is open source and free to use.

9) What is the command to get the installed version of Git?

Ans: Git –version

10) What is the command to add all files and changes of the current Ans: Git add . adds all the files in the current directory.

11) git status :The git status command is used to display the state of the repository and staging area. It allows us to see the tracked, untracked files and changes. This command will not show any commit records or information. Mostly, it is used to display the state between [Git Add](https://www.javatpoint.com/git-add) and [Git commit](https://www.javatpoint.com/git-commit) command. We can check whether the changes and files are tracked or not.Let's understand the different states of status command.

Git log: List commits that are reachable by following the links of parent from the given commit(s), but exclude commits that are reachable from the one(s) given with a ^ in front of them. The output is given in reverse chronological order by default.

12) git init

git add .

git commit -m "Initial commit"

# New remote repository

# Create remote repository (likely on github), then:

git remote add origin https://github.com/username/new\_repo #https

git remote add origin git@github.com:username/new\_repo #ssh

# Now push

git push -u origin master