

Assignment -2

Q1. what is GIT?

Ans.1 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.

Q2. What is GitHub?

Ans.2 GitHub is a **code hosting platform for version control and collaboration**. It lets you and others work together on projects from anywhere.

Q3. Where do you understand by the term “version control system?”

Ans.3 Version control, also known as source control, is the practice of tracking and managing changes to software code. Version control systems are **software tools that help software teams manage changes to source code over time**.

Q4. Mention some popular Git Hosting services?

Ans.4 These are the some popular Git Hosting services are:-

- Bitbucket.
- GitLab.
- Perforce.
- Beanstalk.
- Amazon AWS CodeCommit.
- Codebase.
- Microsoft Azure DevOps.
- SourceForge.

Q.5 What is a Git repository?

Ans.5 Repositories in **GIT** contain a collection of files of various different versions of a Project.

Q.6 Different Type of version control system

Ans.6 There are two types of version control: centralized and distributed.

Centralized version control

With centralized version control systems, you have a single “central” copy of your project on a server and commit your changes to this central copy. You pull the files that you need, but you never have a full copy of your project locally. Some of the most common version control systems are centralized, including Subversion (SVN) and Perforce.

Distributed version control

With distributed version control systems (DVCS), you don't rely on a central server to store all the versions of a project's files. Instead, you clone a copy of a repository locally so that you have the full history of the project. Two common distributed version control systems are Git and Mercurial.

Q.7 What benefits come with using Git?

Ans. One of the biggest advantages of Git is its **branching capabilities**. Unlike centralized version control systems, Git branches are cheap and easy to merge. This facilitates the feature branch workflow popular with many Git users. Feature branches provide an isolated environment for every change to your codebase.

Q.8 How can you initialize a repository in Git?

Ans.8 To create a new repo, you'll use the git init command. git init is a one-time command you use during the initial setup of a new repo. Executing this command will create a new .git subdirectory in your current working directory.