Assignment Questions

**1.What is Git?**

**Ans)** Git is a version control system that tracks changes in files, allowing multiple people to work on a project simultaneously and manage its history.

**2.What do you understand by the term ‘Version Control System’?**

**Ans)** A Version Control System (VCS) is a tool that manages changes to files over time, allowing multiple users to collaborate, track, and revert to previous versions of a project.

**3.What is GitHub?**

**Ans)** GitHub is a web-based platform for hosting and sharing Git repositories, enabling collaboration on code projects, version control, and project management.

**4.Mention some popular Git hosting services.**

**Ans)** Popular Git hosting services include GitHub, GitLab, Bitbucket, and AWS CodeCommit.

**5.Different types of version control system.**

**Ans)** The different types of version control systems are:

1. Local Version Control System: Tracks changes on a single computer.

2. Centralized Version Control System (CVCS): Stores versions on a central server, with clients accessing it (e.g., Subversion).

3. Distributed Version Control System (DVCS): Each user has a complete copy of the repository, allowing for local commits and branching (e.g., Git).

**6.What benefits come with using GIT ?**

**Ans)** Benefits of using Git include:

1. Distributed System: Every user has a complete copy of the repository.

2. Efficient Collaboration: Multiple users can work on the same project simultaneously.

3. Branching and Merging: Easy to create branches and merge changes.

4. Tracking History: Detailed history of changes for each file.

5. Speed: Fast performance for local operations.

6. Open Source: Free to use and widely supported.

**7.What is a Git repository ?**

**Ans)** A Git repository is a storage location where the entire history of a project's files, including all versions and branches, is tracked and managed by Git. It can be local (on your computer) or remote (on a hosting service like GitHub).

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

**Ans)** You can initialize a Git repository by running the command `git init` in your project's directory. This creates a new `.git` folder, setting up Git tracking for that directory.