

### **1. What is Git?**

=> Git is a distributed version control system that helps manage and track changes in source code during software development. It allows multiple developers to collaborate on a project by keeping track of different versions of the codebase.

### **2. What do you understand by the term 'Version Control System'?**

=> A Version Control System (VCS) is a software tool that helps manage and track changes to files over time, particularly in the context of software development. It provides a systematic way to keep track of different versions of files, enabling collaboration among multiple developers while maintaining a history of changes.

### **3. What is GitHub?**

=> GitHub is a web-based platform and service that provides a hosting repository for version control using Git. It is widely used for collaborative software development and offers features beyond basic version control.

- Some key aspects of GitHub include Git Repository Hosting, Collaboration, Pull Requests, Forks, GitHub Actions, Social Coding, and Issues and Projects.

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

- => - GitHub
- GitLab
- Bitbucket
- GitKraken Glo Boards
- Azure DevOps Services
- SourceForge
- Gitea

### **5. What benefits come with using GIT?**

- => - Version Tracking
- Collaboration
- Branching and Merging
- Distributed Development
- Undo Changes (Rollback)
- Pull Requests
- Open Source Collaboration
- Security and Integrity
- Speed and Efficiency
- Backup and Recovery

## **6. What is a Git repository?**

=> A Git repository is a data structure that stores metadata and a set of files, representing a collection of versions or snapshots of a project over time. It is the core component of a version control system, specifically Git, used for tracking changes in source code and other project files.

In simple terms, a Git repository is a directory or folder managed by Git to keep track of the history and changes made to the files within that directory.

## **7. How can you initialize a repository in Git?**

=> - Open a terminal or command prompt.

- Navigate to your project directory using `cd``.

- Type `git init`` and press Enter.

- Optionally, create a `.gitignore`` file to specify files Git should ignore.

- If you have files to commit initially, use `git add .`` and `git commit -m "Initial commit."`

- Now, your Git repository is initialized in the project directory.