1. What is Git?

Git is a distributed version control system (VCS) designed to handle everything from small to very large projects efficiently. It helps developers track changes in source code, collaborate on projects, and maintain a history of edits.

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

A Version Control System (VCS) is a tool that helps manage changes to files over time. It records modifications, allowing users to:

- Collaborate with others.
- Revert to previous versions of files.
- Track the history of changes.

Examples include Git, Subversion (SVN), and Mercurial.

3. What is GitHub?

GitHub is a web-based platform that hosts Git repositories. It enables collaboration among developers, offering features like:

- Pull requests.
- Issues tracking.
- Actions for CI/CD.
- Community contributions.

4. Mention some popular Git hosting services:

- GitHub
- GitLab
- Bitbucket
- SourceForge
- Azure DevOps Repos

5. Different types of Version Control Systems:

1. Local Version Control Systems
    - Maintains versions on the local machine.
    - Example: RCS (Revision Control System).
2. Centralized Version Control Systems (CVCS)
    - Stores all files on a central server.
    - Example: Subversion (SVN), Perforce.
3. Distributed Version Control Systems (DVCS)
    - Each developer has a complete copy of the repository.
    - Example: Git, Mercurial.

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6. What benefits come with using Git?

- Distributed system: Work offline with local repositories.
- Efficient branching and merging: Allows easy management of feature branches.
- Track changes: Provides a detailed history of changes.
- Collaboration: Enables multiple developers to work on the same codebase.
- Open source: Free to use and has a large community.

7. What is a Git repository?

A Git repository is the core of Git, storing project files and the entire history of changes. It can be:

- Local: Stored on your system.
- Remote: Hosted on a server or service like GitHub.

8. How can you initialize a repository in Git?

To initialize a repository, use the following command:

bash
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git init
```

- This creates a `.git` folder in the project directory, marking it as a Git repository.