Git and Github Assignment

1. **What is Git .**

   Git is a version control system for coordinating work among numerous individuals and tracking changes in computer files.

2. **What do you understand by the term version control system.**

   A version control system (VCS) is a type of software that keeps track of changes made to a set of files over time. It allows multiple users to collaborate on a project by keeping track of different versions of the files and providing a way to merge those changes together. This allows for easy collaboration, rollback to a previous version, and tracking of changes.

3. **What is Github?**

   GitHub, a web-based platform for version control and collaboration, is built on the Git technology. Users may easily maintain and share their code with one another thanks to the online interface it provides for Git repositories. Users can host their own code repositories on GitHub or send pull requests to contribute to other people's projects.

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

   I. Github
   II. Git Lab
   III. Bitbucket
   IV. Azure Devops
   Etc.

5. **Different types of version Control System .**

   I. **Centralized Version Control Systems (CVCS)** : These systems use a central repository where all the files and changes are stored.

II. **Distributed Version Control Systems (DVCS) :** These systems provide a local copy of the entire repository on each user's machine. Users can make changes to their local copies, and then push and pull changes to and from other repositories.

6. What benefits come with using GIT.

I. Collaboration
II. Versioning
III. Branching
IV. Open-Source
V. Widely adopted
VI. Secure
VII. Flexibility

7. What is a Git repository .

All of a project's files and information are kept in a directory called a "Git repository." It includes details on branches, commits, and tags as well as the full history of all file modifications done during the course of the project.

8. How can you initialize a repository in Git .

git init [directory_name]