**Assignment 2**

**1. What is Git?**

**Ans:-** Git is a modern and widely used **distributed version control** system in the world. It is developed to manage projects with high speed and efficiency. The version control system allows us to monitor and work together with our team members at the same workspace.

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

**Ans:-** A version control system is a software that tracks changes to a file or set of files over time so that you can recall specific versions later. It also allows you to work together with other programmers.The version control system is a collection of software tools that help a team to manage changes in a source code. It uses a special kind of database to keep track of every modification to the code.

**3. What is GitHub?**

**Ans:-** GitHub is a Git repository hosting service. GitHub also facilitates with many of its features, such as access control and collaboration. It provides a Web-based graphical interface. GitHub is an American company. It hosts source code of your project in the form of different programming languages and keeps track of the various changes made by programmers.

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

**Ans:-**

1. Bitbucket
2. GitHub
3. GitLab
4. Perforce
5. Beanstalk
6. Amazon AWS CodeCommit
7. Codebase
8. Microsoft Azure DevOps
9. SourceForge
10. Gserrit

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

**Ans:-**

* Localized version Control System
* Centralized version control systems
* Distributed version control systems

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

**Ans:-** A version control application allows us to **keep track** of all the changes that we make in the files of our project. Every time we make changes in files of an existing project, we can push those changes to a repository. Other developers are allowed to pull your changes from the repository and continue to work with the updates that you added to the project files.

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

**Ans:-** Repositories in GIT contain a collection of files of various different versions of a Project. These files are imported from the repository into the local server of the user for further updations and modifications in the content of the file. A VCS or the Version Control System is used to create these versions and store them in a specific place termed a repository. The process of copying the content from an existing Git Repository with the help of various Git Tools is termed cloning.

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

**Ans:-** 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.