Assignment – 1 (Day 3)

(Git and GitHub)

Ques 1: - What is Git?

Ans: - Git is a widely used modern version control system in the world nowadays. Git is a mature, actively maintained open-source project originally developed in 2005 by **Linus Torvalds**, the famous Linux operating system kernel creator. A staggering number of software projects rely on Git for version control, including commercial projects as well as open source. Developers who have worked with Git are well-represented in the pool of available software development talent and it works well on a wide range of operating systems and IDEs (Integrated Development Environments).

Ques 2: - What do you understand by the term 'Version Control System'?

Ans: - Version Control System is a category of software tools that helps in recording changes made to files by keeping a track of modifications done in the code.

Ques 3: - What is GitHub?

Ans: - GitHub is a code hosting platform for collaboration and version control. GitHub lets you and others work together on projects. It lets you and others work together on projects from anywhere. GitHub is a Git repository hosting service that provides web-based graphical interfaces. It is the world's largest coding community. Putting a code or project into GitHub increases its widespread exposure.

Ques 4: - Mention some popular Git hosting services.

Ans: - Bitbucket, GitHub, GitLab, Perforce, Beanstalk, Amazon AWS CodeCommit, Codebase, etc.

Ques 5: - Different types of version control systems.

Ans: - There are two types of version control: **Centralized** and **Distributed.** With centralized version control systems, you have a single "central" copy of your project on a server and commit your changes to this central copy. You pull the files that you need, but you never have a full copy of your project locally. Some of the most common version control systems are centralized, including Subversion (SVN) and Perforce.

With distributed version control systems (DVCS), you don't rely on a central server to store all the versions of a project's files. Instead, you clone a copy of a repository locally so that you have the full history of the project. Two common distributed version control systems are Git and Mercurial.

Ques 6: - What benefits come with using Git?

Ans: - Main benefits of Git: -

- Features Branch Workflow
- Distributed Development
- Community Support
- Faster Release Cycle

Ques 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 (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.

Ques 8: - How can you initialize a repository in Git?

Ans: - By using the command – **git init**

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