Git and Github

Assignment

1. What is Git?

Ans1. Git is a popular Version Control System used for managing changes to files and directories in a project. It was created by Linus Torvalds in 2005 to help manage the development of the Linux Kernel. Git allows multiple developers to work on a project simultaneously and collaboratively, while keeping track of changes made to the project over time.

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

Ans2. A Version Control System (VCS) is a software tool that allows developers to track and manage changes to a codebase or set of files over time. It helps developers to collaborate on a project, maintain multiple versions of the codebase, and keep track of changes made by individual contributors. VCS provides features such as creating a backup of the code, identifying the author of the change, tracking changes between versions, restoring previous versions of the code, and merging changes made by multiple developers.

3. What is GitHub?

Ans3. GitHub is a web-based platform for version control and collaboration that allows developers to store and manage their code repositories online. It was founded in 2008 and has since become one of the most popular platforms for open-source development, with millions of users worldwide. On GitHub, developers can create repositories to store their code, and they can use Git, a distributed version control system, to manage and track changes to the code over time. GitHub also provides tools for issue tracking, project management, and collaborations, making it easier for teams to work together on coding projects.

4. Mention some popular Git hosting services.

Ans4. Some popular git hosting services are:

(i) GitHub
(ii) GitLab
(iii) Bitbucket
(iv) SourceForge
(v) Codeberg
(vi) Launchpad
(vii) Gitea
(viii) Gogs\

5. Different types of version control systems.

Ans5. There are several types of version control systems, including:

(i) Centralized Version Control Systems(CVCS)

(ii) Distributed Version Control Systems(DVCS)

(iii) Concurrent Version Control Systems(CVCS)

(iv) Visual Version Control Systems(VVCS)

(v) Cloud-Based Version Control Systems

6. What benefits come with using GIT?

Ans6. Git is a widely used version control system that offers numerous benefits to developers and software teams. These include the ability to track changes to code over time, collaborate easily with others on a project, maintain multiple branches of code, and easily roll back changes when necessary. Additionally, Git allows developers to work offline and synchronize changes when they are back online, and it provides a centralized repository where all team members can access the latest code.

7. What is a git repository?

Ans7. A Git repository is a collection of files and version control information managed by Git, a distributed version control system. It contains the complete history of changes of the files, allowing users to view and revert to earlier

versions as needed. Git repositories can be stored locally or remotely, allowing multiple users to collaborate on the same project.They can be created from scratch or cloned from existing repositories, making it easy to share and work on code across multiple devices and environments.

8. How can you initialize a repository in Git?

Ans8. To initialize a Git repository, navigate to the root directory of your project in your terminal or command promp, then type”gitinit” and hit enter. This will create a new Git repository in your current directory. You can then start adding files and making commits to track changes in your project.

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