Git And GitHub-Assignment

Question 1: - What is Git?

Ans: - Git is popular version control system (VCS), it was created by Linus Torvalds in 2005 and has been maintained by Junio Hamano.

It is use for: -

1: -Tracking code change.

2: -Tracking who made changes like history of the file.

3: -Code collaborations.

Question 2: - What do you understand by the term 'Version control System?

Ans: - Version control, also known as source control, is the process of tracking and managing changes to files over time. VCS — version control systems — are software tools designed to help teams work in parallel.

Two types of version control system.

1: -Centralized Version Control System (CVCS).

2: - Distributed Version Control System (DVCS).

Question 3: - What is GitHub?

Ans: - GitHub is a Git repository hosting service .GitHub is a web-based interface that uses Git, the open-source version control software that lets multiple people make separate changes to web pages at the same time. It offers both **distributed version control and source code management (SCM)** functionality of Git.

Question 4: -Mention some popular Git hosting services?

Ans: -This is some popular git hosting services.

1: -GitHub.

2: -GitLab.

3: -GitBucket.

4: -Beanstalk.

5: -Amazon AWS etc.

Question 5: - Different type of version control system?

Ans: - **Types of Version Control Systems:**

- Local Version Control Systems (LVCS).
- Centralized Version Control Systems (CVCS).
- Distributed Version Control Systems (DVCS).

Question 6: - What benefits come with using GIT?

- Ans: - ***performance***: *Git provides the best performance when it comes to version control systems. Committing, branching, merging all are optimized for a better performance than other systems.*
- ***Security***: *Git handles the algorithm manages my versions, files, and directory securely so that we work is not corrupted.*
- ***Branching Model***: *Git branching model lets we have multiple local branches which are independent of each other.*
- ***Staging Area***: *Git has an intermediate stage called "**index**" or "**staging area**" where commits can be formatted and modified before completing the commit.*
- ***Distributed***: *Git is distributed in nature. Distributed means that the repository or the complete code base is mirrored onto the developer's system so that he can work on it only.*
- ***Open Source***: *This is a very important feature of any software present today. Being open source invites the developers from all over the world to contribute to the software and make it more and more powerful through features and additional plugins.*

Question 7: - What is a Git repository?

Ans: - A **Git repository** tracks and saves the history of all changes made to the files in a Git project. It saves this data in a directory called. git, also known as the repository folder.

Types of Git Repository: -

1. Bare Repositories.
2. Non-Bare Repositories.

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

Ans: -First we create a folder in any drive in our computer file manager. Then

Go into a project folder and initialize git.

```
$ cd /Users/PwSkill/JavaDemo
$ git init
```

We have initialized an empty git repository in a. git folder

```
$ cd /Users/PwSkill/JavaDemo(master).
```

- To add a file to the staging area
- `$ git add story1.txt`
- To commit the changes
- `$ git commit -m "Added first story"`