PW ASSIGNMENT GIT and GITHUB

Q.1 What is GiT?
Ans. Git is basically a free open source version control system, used to record   changes to a file and coordination of work among programmers and recording versions of the project on which we are working. It was developed by Linus Trovalds in 2005 for development of the Linux kernel so that other developers who are working on the same technology can contribute to it.

Q2. What do you understand by the term Version Control System?
Ans. It is a system that is used to collaborate users to contribute, track changes to a file or project, it plays an important role in development of large projects, websites etc. which require a collaborative work of various teams of a company.

Q3. What is Github?
Ans. Github is a cost hosting for software development and Version control using git, It comes under Microsoft, we can also host our static websites on Github using github pages, it provides several features such as access control, bug tracking, project development and has huge community support, next to stack overflow github is most important and useful piece of software used by software developer.

Q4. Mention some popular Git hosting services.
Ans. Github , Gitlab, Code Bucket, AWS Code Commit, Microsoft Azure Devops Etc

Q.5 Different types of Version control system.
Ans LOCAL VCS: A local version control system is a local database located on your local computer, in which every file change is stored as a patch, If system gets corrupted it may cause all data loss

        CENTRALISED VCS: In this type of vcs we have a central repository, admins have full control, the main repository/server is on other and various developers have to commit and update the central repo through a computer network.

DISTRIBUTED VCS: Distributed version control systems contain multiple repositories. Each user has their own repository on their local machine. Various changes are done in the local repo and then pushed in the central repository.

Q.6 What are the benefits of using GIT?
Ans Collaborative environment
  Access control
  Project hosting
  Task management etc.

Q.6 What is a git repository?
Ans. Git Repository is the collection of files which originate from a certain version of the repository. It helps in tracking the changes done by a specific user on one version of the repository. One of the biggest advantages of Git is its branching capabilities. Unlike centralised version control systems, Git branches are cheap and easy to merge.

Q7. How can you initialise a repository on GIT?
Ans. In the command line, navigate to the root directory of your project.

```
kumar@LAPTOP-9B6C5HG4 MINGW64 ~
$ git init -b main
Initialized empty Git repository in C:/Users/kumar/.git/
```

Make a readme file

```
kumar@LAPTOP-9B6C5HG4 MINGW64 ~ (main)
$ git add README.md

kumar@LAPTOP-9B6C5HG4 MINGW64 ~ (main)
$ |
```

Commit 1st commit after configuring

```
kumar@LAPTOP-9B6C5HG4 MINGW64 ~ (main)
$ git commit -m "First commit"
[main (root-commit) 5d0bc55] First commit
 1 file changed, 45 insertions(+)
 create mode 100644 README.md
```