GIT AND GITHUB   ASSIGNMENT

Assignment Question

1. What is a Git?

Answer → Git was created by Linus Torvalds in 2005 and has been maintained by Junio Hamano. Git is a free and open source version control system(distributed version control) designed to handle everything from small to very large projects with speed and efficiency.
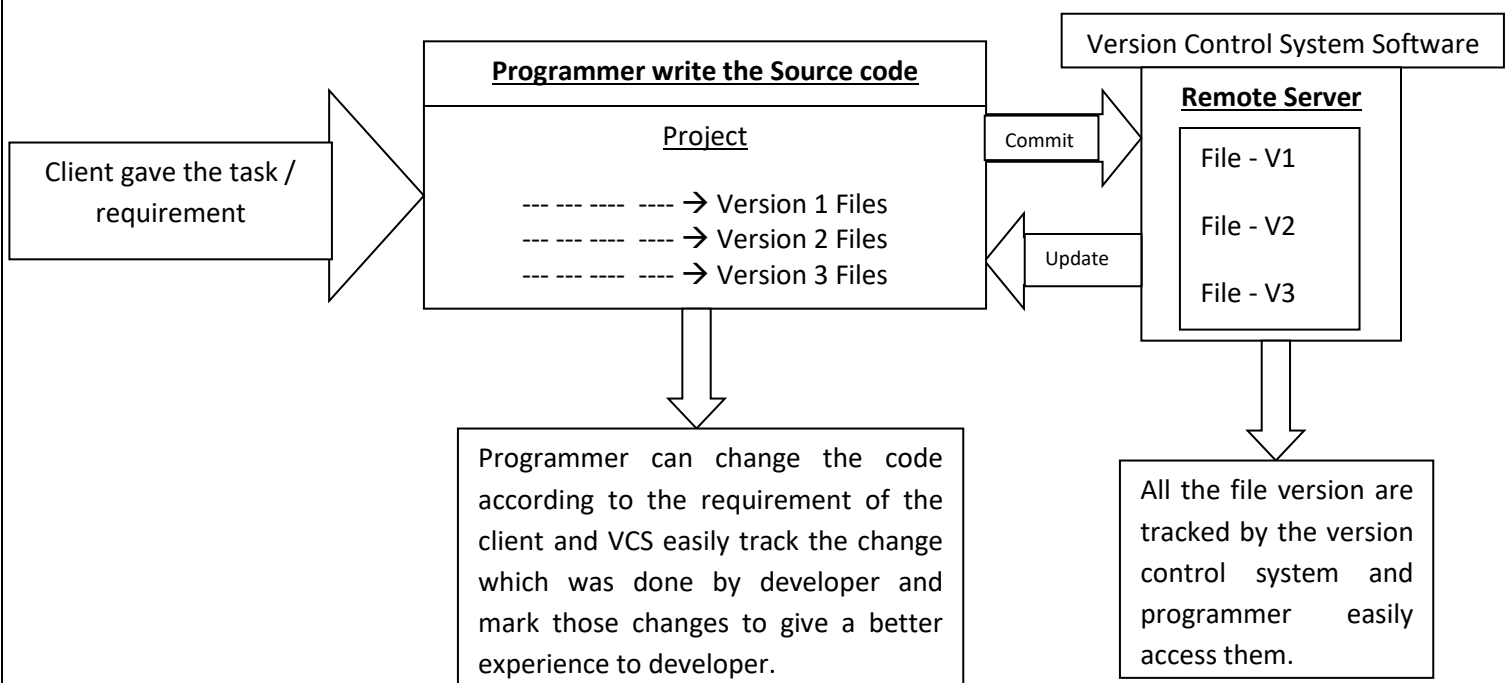
Git is used for :-   1. Tracking code changes
                               2. Tracking who made change like history of the files
                               3. Coding Collaborations

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

Answer → A Version Control System is a software that track changes to a file or set of files over time so that recall specific version later. It allow 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.

This can be Illustrated by diagram which can be shown below :-

Client gave the task / requirement

Programmer write the Source code

Project

--- --- ---- ---- → Version 1 Files
--- --- ---- ---- → Version 2 Files
--- --- ---- ---- → Version 3 Files

Commit

Update

Version Control System Software

Remote Server

File - V1

File - V2

File - V3

Programmer can change the code according to the requirement of the client and VCS easily track the change which was done by developer and mark those changes to give a better experience to developer.

All the file version are tracked by the version control system and programmer easily access them.

3. What is Github?

<u>Answer</u> ➔ Github is a largest (Collection of Source code)code hosting platform for collaboration and version control. Github is an increasingly programming resource code used for sharing. It's Social networking site for programmers that many companies and organization use to facilitate project management and collaborations.

4. Mention some popular Git hosting services?

<u>Answer</u> ➔ The popular Git hosting services Examples are :- Bitbucket , GitHub , GitLab , Beanstalk and etc.

5. Different types of version control system?

<u>Answer</u> ➔ There are mainly three types of version control system are :-

1. <u>Local Version Control System</u> :- A local version control system is a simplest forms database which is a local database located on your local computer in which every file changes is record and save them with a specific version which a programmer can recall a specific version later.

2. <u>Centralised Version Control System</u> :- A centralized version control system also known as centralized source control or revision control system and Centralised version control system is based on the idea that there is a server (central/single copy of your project store somewhere) acts as the main server (Repository) which store every version of source code.

3. <u>Distributed Version Control System</u> :- A distributed version control system is a type of version control where we can bring a local copy of the complete repository to every team member's computer including its full version history.

6. What benefits come with using Git?

<u>Answer</u> ➔ Git allows larger teams to work on complex software while still being able to quickly fix bugs in production. It's used for storing , tracking and collaborating on software projects. It make it easy for developers to share code files and collaborate with fellow developers on open source projects. Github also serves as a social networking site where developers can openly network, Collaborate and pitch their work.

7. What is a Git repository?

<u>Answer</u> ➔ A Git repository is a collection of files of various different versions of a project. These files are imported from the repository into local server of the user for further updations and modifications in the content of the file and 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.

8. How can you initialize a repository in Git?

Answer → To initialize a git repository follow these step which are given below :-

Step 1 :- First of all identify your location address in your system by using command [pwd]
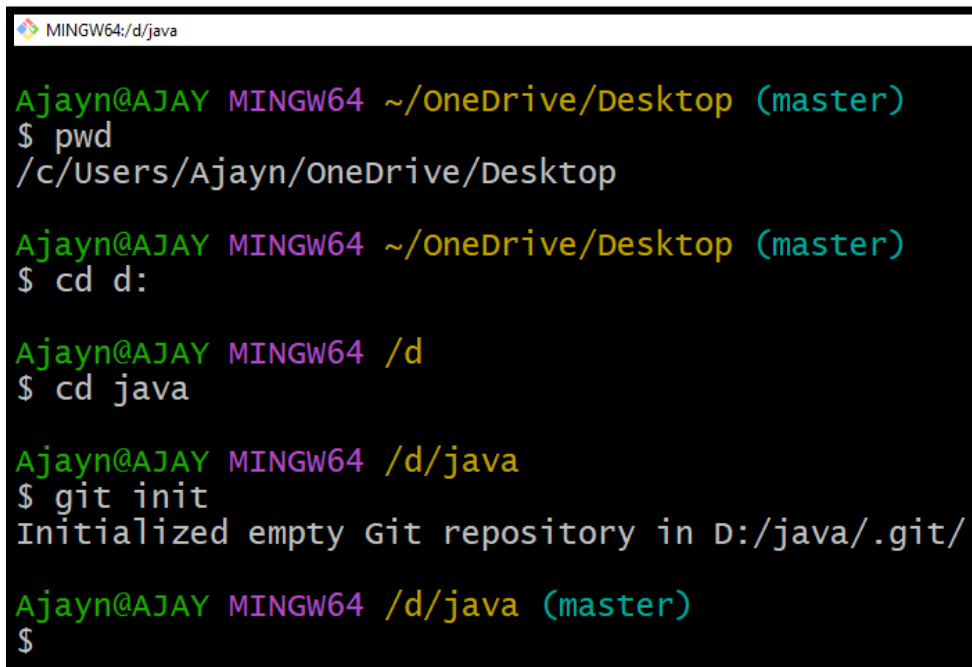
Step 2 :- select your drive on your local computer system.

Step 3 :- select your folder where you want to initialize git repository.

Step 4 :- After you select where you want to set your repository then simple write the

Command [git init] then git automatically setup a empty repository there for your work.

<u>" Screenshot how to initialize git repository "</u>