Git (Global Information Tracker)

1. What is Git and Features of Git, Explain Advantages and disadvantages of Git?

Ans: Git is a version control system used for tracking changes in computer files. it is Generally used for source code Management in software development.

* It allows multiple developers to work together.
* it supports non-linear development through its thousands of parallel Branches

=> Features of Git:

1. Tracks History
2. Free and Open Source
3. Supports non-linear development
4. creates Backups
5. Scalable
6. Supports collaboration
7. Branching is Easier
8. Distributed Development

=> Git workflow is divided into 3 States:

1. working directory: Modify files in your working directory
2. Staging area (Index): Stage the files and add snapshots of them to your staging area.
3. Git directory (Repository): Perform a commit that stores snapshots permanently to your

Git directory.

=> Advantages of Git :-

1) Open source and free : It comes under GPL open source licence. Freely available on Internet. we can obtain its source code & modify it to meet your needs

2) Security :
Git names & identifies things in database using popular cryptographic hash algorithm known as Secure hash function (SHA1).

3) Flexibility :
Git is meant to be adaptable, allowing it to acomodate wide range of Non-linear processes.

4) Git works on all Machines.

5) Small and Quick

6) Branching and Merging

7) Non-linear development

8) Acceptance is widespread

=> Disadvantages :

1) Binary Files : Git does not excel at dealing with Binary Files.

2) Learning curve

3) working in the wrong area

4) Forced Collaboration

5) Permission for users

(2) Write git commands and write down the steps for how to push a files to github?

Ans: Git commands: working with local Repositories

1) git init : command git init is used to create empty Git Repository.

2) Once the repository is initialized, process of creating other file begins.

3) git add : Add command used for checking status of files, to add those files to the staging area.

4) git commit : commit command makes sure that changes are saved to local repository

5) git status : It tells the current state of repository.

6) git config : It is used initially to configure username & user email.

7) git Branch : It is used to determine what Branch the local repository is on.

8) Git merge
9) Git checkout
10) git remote
11) git clone
12) Git Pull : It is used to fetch and merge changes from the remote repository to the

local repository

12) Git push : it is used to transfer commits or pushing content from local repository to remote repository.

git push -u origin master

=> using command line to push to

Step 1 : Create a new repository
Fill up required details, i.e, repository name, description and also make repository public.

Step 2 : Open Git Bash

Step 3 : Create your local project in your desktop directed towards current working directory
cd 'path-name'

Step 4 : Initialize git repository
git init

Step 5 : Add the file to new local repository
* Use git add . in your bash to add all files to the given folder
* Use git status in your bash to view all files which are going to be staged to first commit.

Step 6: commit files staged in your local repository by writing commit message
git commit -m "your message".

Step 7: copy your remote repository's URL from GitHub

Step 8: Add the URL copied, which is your remote repository to where your local content from your repository is pushed.

git remote add origin 'your-url-name'

Step 9: Push the code to your local repository to github
git push -u origin master

Step 10: View your files in your repository Hosted on GitHub.