About Author

Narasimha Reddy K is a Full Stack Developer, working as "Tech Lead" and loves programming. He possesses over a decade of experience working on Open Source technologies, open source softwares, cloud, databases etc.

He uses technology to solve business problems and make someone's life "easy".
He contributes back to the community, i.e., to help other developers, share knowledge via different medium articles, speaking etc.

https://www.linkedin.com/in/narasimhareddyk/

Narasimha Reddy K
Full Stack Developer & Trainer

#Git

GIT is a Version Control System mechanism

Git is a **version control system** and allows you to manage your source code history efficiently. Whenever you work on your code, changes can be saved with Git and you can jump back to any previously saved versions.

Git is a Distributed Version Control System. It lets you track changes made to a file and allows you to revert back to any particular change that you wish.

#GutHub

GITHUB - implementation software of GIT mechanism

There is no monitoring mechanism; it will lead to a number of problems.
What is monitoring?

- Who is opening the file?
- Who is modifying the file?
- How conflicts are coming.
- Who is overridden whose content?
- When a file is added.

If there is no monitoring system, it leads to a lot of problems.

These monitoring system mechanism - we called as Version Control System
or
The process of monitoring team members' works and activities in the project development is called VCS (Version Control System).

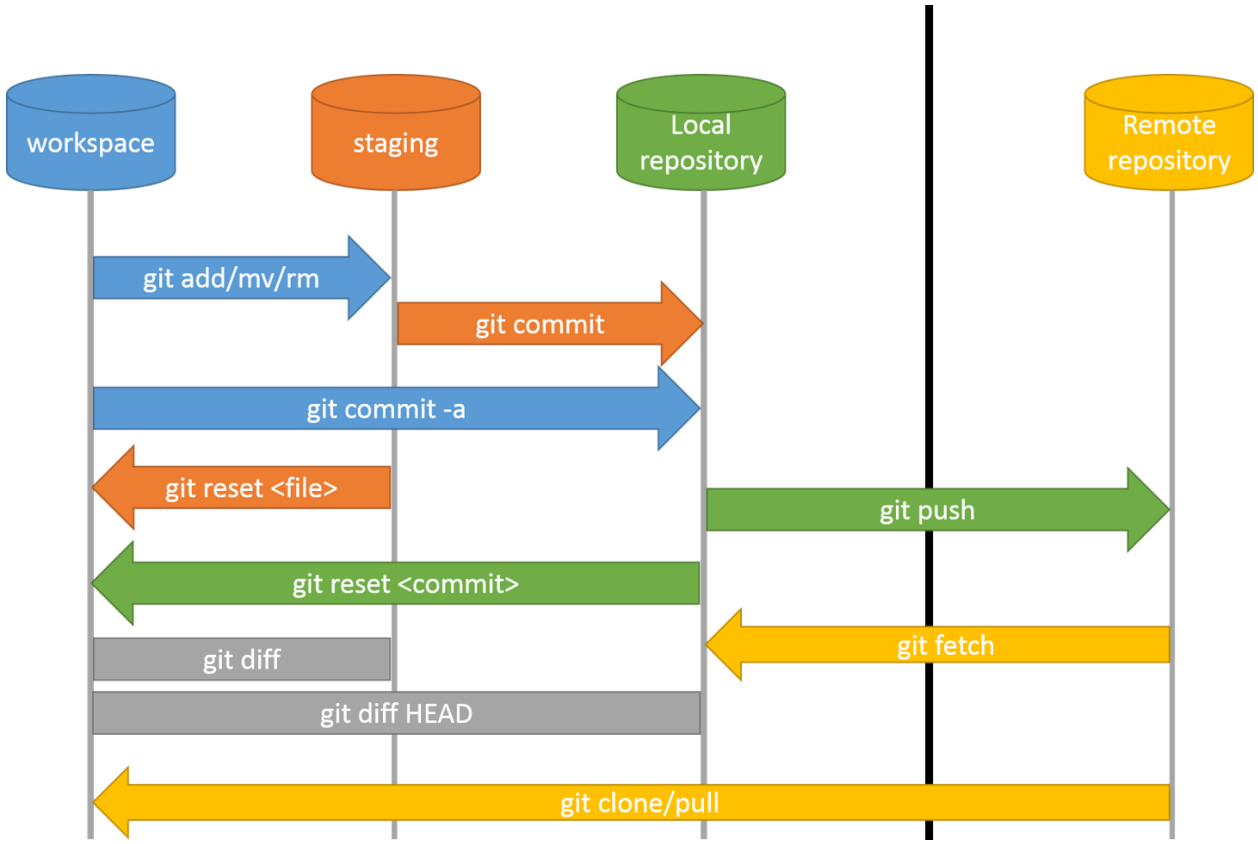
 # Git vs Github

Git is a version control system which you can download to your computer, GitHub is a hosting & collaboration provider which hosts your Git projects. It is a web based solution allowing you to upload your Git Repositories to it.

GitHub is a Git repository hosting service, plus it adds many of its own features.

GitHub provides a Web-based graphical interface. It also provides access control and several collaboration features, basic task management tools for every project.

Git Flow



Git & Github setup

Step 1: Create Github Account / and Create Github Repository

Create a Github account using your Gmail Id, and create your Github profile. And create a public repository. Copy List of Git commands

Step 2: Download and Install Git software. (Google it)

https://git-scm.com/downloads

Step 3: Create a new Project Folder. And Open in VS code editor

Step 4: Open Terminal Execute Github New Repository - Git commands @ VS Code terminal

```
echo "# javafullstack-oct" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/narasimhareddyprostack/javafullstack-oct.git
git push -u origin main
```

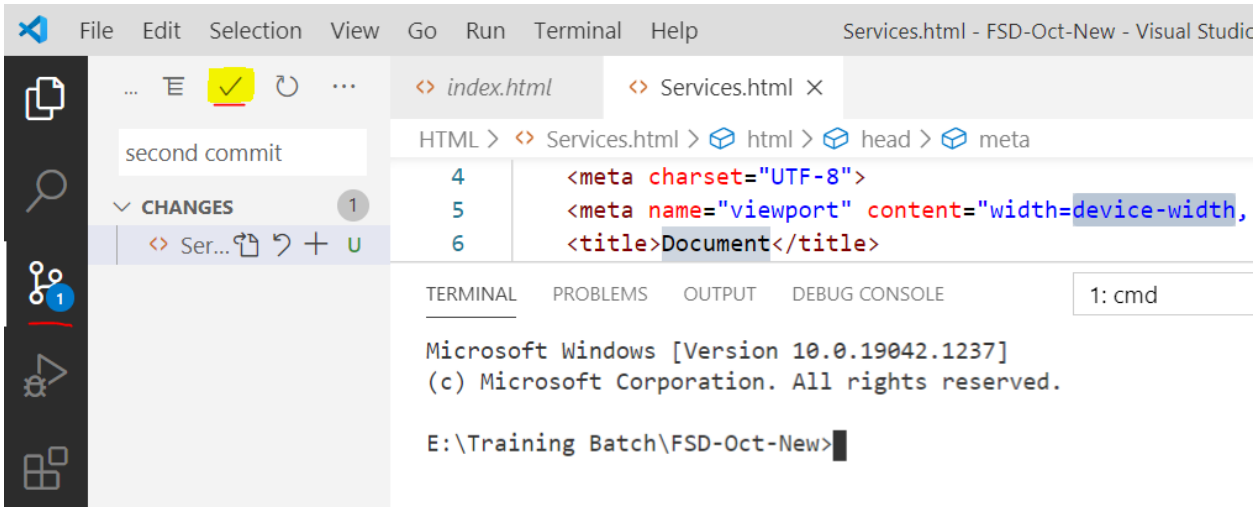
Step 5: Add below git commands

```
git config --global user.name "username"

git config --global user.email "email address"
```

Note:
Your username and email address should be the same as the one used with your git hosting provider i.e. github, bitbucket, gitlab etc

Step 5:



Commit your changes into a local repository.

And push your changes into the server Repository ie Github Repository.

```
E:\Training Batch\FSD-Oct-New>git push -u origin main
```

Or

```
E:\Training Batch\FSD-Oct-New>git push -u origin master
```

Note:
We need to authorize. First Time , When your trying to push your changes in local repository to server It will prompt for login(Enter username and password for login) and apply for authorization.

Git Commands

```
https://github.com/
Step 1: Create a/c github
        Create Code Repository
step 2: Download install git software (google it)
step 3: Create Local Folder(Machine)
CMD / VS Code
>git init
>git branch -M main
>git remote add origin https://github.com/narasimhareddyprostack/FSWD-2021-9PM.git

>git config --global user.name narasimhareddyprostack
>git config --global user.email "greetlabs@gmail.com"

step 4: create one code file.
        commit the all

step 5: git push -u origin main
                or
or > git push -u origin master
     You need to autherize.
```

apply commit

Note: Setting up - First time, It will prompt for login.
Once successfull login into git account.
we need to authorize the system to Github.

Top 25 - Git & Interview Questions and Answers

1. What is the difference between Git and SVN?
2. What is Git?
3. What is a distributed VCS?
4. What are the benefits of using a Version Control System?
5. What is ‘staging area’ or ‘index’ in Git?
6. What is the difference between the ‘git diff ’and ‘git status’?
7. What is the difference between ‘git remote’ and ‘git clone’?
8. What is the function of ‘git config’?
9. What is Git fork? What is the difference between fork, branch, and clone?
10. What are the different ways you can refer to a commit?
11. What is git cherry-pick?
12. What is the difference between Git and SVN?