

Git & Github

Introduction to Version Control and Git Basics

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1. Introduction Git & Github

What is the version control system ?

A Version Control System keeps track of the changes that we make to our files. By using a VCS, we can know when the changes were made and who made them. It also lets us easily revert a change if it turns out not to be a good idea.

About Git:

Git Is a version control system introduced by Linux travol. The creator of Linux OS.

What are the key points?

- Git is used to tracking changes in the source code
- The distributed version control tool is used for source code management
- It allows multiple developers to work together
- It supports non-linear development through its thousands of parallel branches

2. Installation & Configuration

Check if you have git on your machine? You can do this by running `git --version`.

Download : <https://git-scm.com/downloads>

Create account in github/bitbucket

<https://github.com/signup>

<https://bitbucket.org/>

How to install git

Windows: <https://desktop.github.com/>

Linux : `sudo apt install git`

Mac : <https://desktop.github.com> or <https://git-scm.com/download/mac>

Guide for all OS platform

All Platforms <https://git-scm.com>

2. Installation & Configuration

First step with git:

Configuring user information used across all local repositories

git config --global user.name “[firstname lastname]”

set an email address that will be associated with each history marker

git config --global user.email “[valid-email]”

set automatic command line coloring for Git for easy reviewing

git config --global color.ui auto

git config --global --edit

2. Installation & Configuration

Configure local repositories

```
mkdir git-test-repo
```

```
cd git-test-repo
```

```
git init
```

```
git add hello.txt
```

```
git status
```

```
git commit
```

3. Git Workflow

There are four fundamental elements in the Git Workflow.

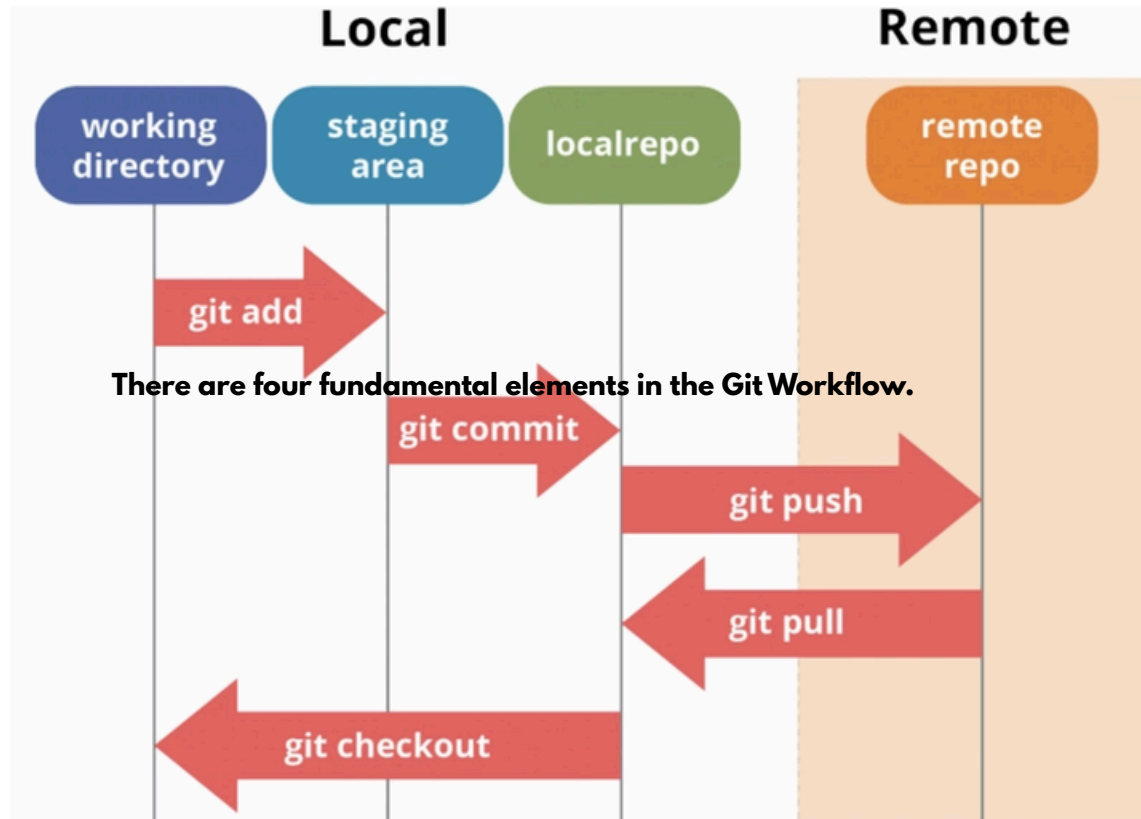


Diagram of a simple Git Workflow

Working Directory, Staging Area, Local Repository and Remote Repository.

4. Hands On Git

Create a new repository on the command line

Initialize git repo in the folder

git init

Add files to the repo

git add . // (.)for including all files, add a specific mention of the file name

Add commit/stage file

git commit -m "initial commit"

Change to main branch

git branch -m main

Connect with the upstream/remote repository

git remote add origin [Repository URL]

Push changes to the repository

git push -u origin main

4. Hands On Git

Push an existing repository from the command line

Add a folder/files to a repository

git remote add origin <https://github.com/username/repo-name.git>

Change to main branch

git branch -m main

Push to the repository

git push -u origin main

Thank You!

Stay Connect:

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