

# All GitHub Concepts



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# Cloning Repositories

`git clone <repository_url>:`

Copies a remote repository to your local machine

# Managing Branches

`git branch`: Lists existing branches. `git checkout <branch_name>`: Switches to a different branch. `git checkout -b <new_branch_name>`: Creates a new branch and switches to it.

`git merge <branch_name>`: Combines changes from another branch into your current branch.

# Working with Files

`git add <filename>`: Adds a file to the staging area for the next commit. `git add .`: Adds all changed files to the staging area. `git status`: Shows the status of files in the repository (untracked, modified, staged).

# Committing Changes

`git commit -m "<commit_message>":` Commits staged changes with a message.

# Synchronizing with Remote

`git pull origin <branch_name>`: Fetches and merges changes from the remote repository into your local branch.

# Viewing History

git log: Shows a list of commits with information like author, date, and commit message.

# Using Tags

`git tag <tag_name>`: Creates a tag to mark a specific commit. `git push`

`origin <tag_name>`: Pushes a tag to the remote repository.



# Resolving Conflicts

`git mergetool`: Launches a visual merge tool to resolve conflicts manually.

# Reverting Changes

`git revert <commit_hash>`: Undoes the changes introduced by a specific commit.

# To initialize a repository or create new git repository in your local system

```
git init
```

# What are the new changes and files updated in your code

git status

# How to push code to a remote repository?

- i. First you need to authenticate yourself by using token or basic authentication
- ii. After this you can create a repository on your github account
- iii. Copy the http url, then use following

Command: `git remote add origin <remote_url>`

# How to get status and updates made in remote branches

```
git diff origin/<branch_name>
```

# How to remove files from the staging area?

`git reset`

## **How to create a git-ignore file?**

Command: `touch .gitignore` (works in git-bash)

Terminal: `git add .gitignore`

# How to search for text in the current working repo/directory?

`git grep <text>`

## **How to create and move branch working directory (local)?**

Command: `git checkout -b <branch_name>`



# How to fetch the latest changes from remote to local?

Command: `git pull origin master (branch_name)`

## **How to save local changes made without committing or moving them to remote repository?**

Command: `git stash`

Hint: Used when you want to save local changes temporarily that are not yet committed.

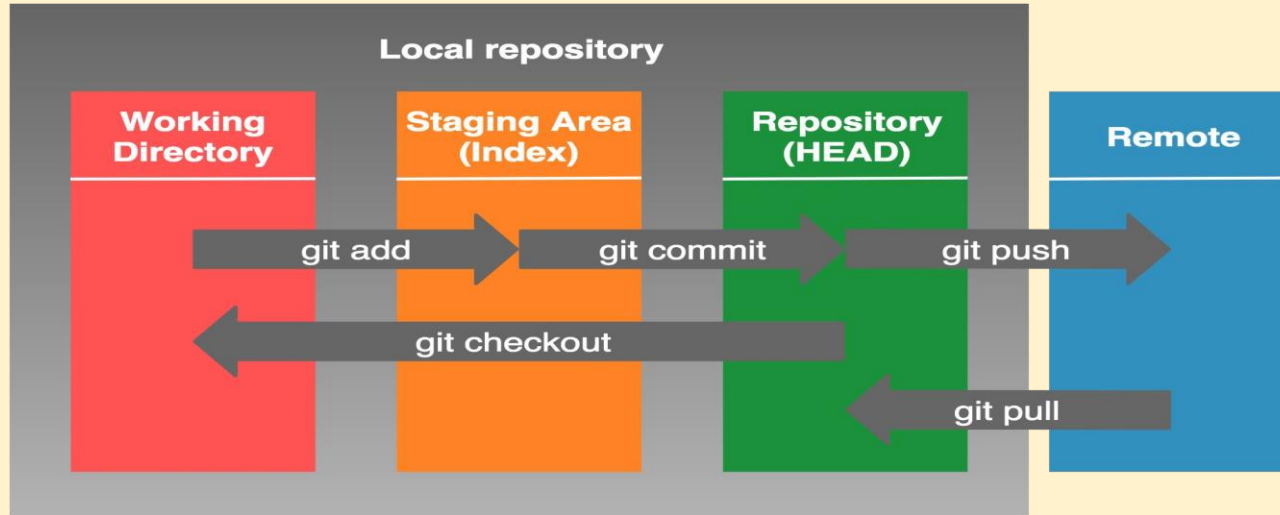
Its primary use is when you want to switch a branch or work on different task.

# How to use stashed changes in git local repo so as to commit to remote repository?

Command: `git stash apply`

Hint: Helps to use the changes which were stashed earlier. Make sure before applying the changes you switch to the repository for which changes were made.

# Git WorkFlow



Keep following - @Girish Gowda - LinkedIn

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