Date 19/02/026

complete git and github

GIT

- Version control system is a tool that helps to track changes in the code

* Git is a version control system. it is;
  - popular
  - free & open source
  - fast & scalable

(1) track the history
(2) collaborate

* Github (Github.com)
website that allows developers to store and manage their code using git. (in the form of folders).
↳ (Repository)

↳ changes => commit = changes are final

setting up git
↳ visual studio code
↳ windows (Git bash)
↳ Mac (Terminal)

git --version (To check git version)

configuring git

= git config --global user.name "My name"
= git config --global user.email "demo@gmail.com"
= git config --list

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clone & status

clone - cloning a repo on our local machine
git clone <- link ->

status - display the state of the code
git status

* cd = change directory
* ls = list files
* ls -a = hidden files

add → commit

status

* untracked
new file that git doesn't yet track

* modified
changed

* staged
file is ready to be commited

* unmodified
unchanged

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Add & commit

add - adds new or changed files in your working directory to the git staging area.

git add <- file name ->

commit - it is the record of change

git commit -m "some message"

Push command

push - upload local repo content to remote repo

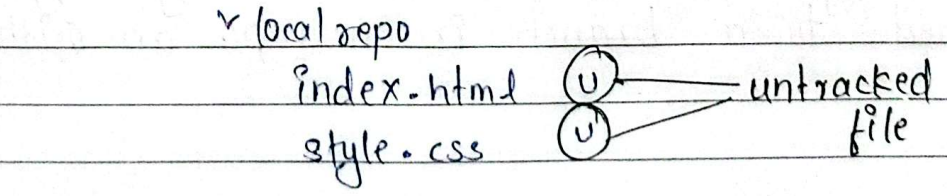
git push ~~ore~~ ~~m~~ origin main
(origin ← name, main ← branch)

push = local → Remote

Init command

init - used to create a new git repo

git init
git remote add ~~ore~~ origin <- link ->
git remote -v (to verify remote)
git branch (to check branch)
git branch -M main (to rename branch)
git push origin main



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git push -u og origin main

workflow

local git

Git branches

Branch commands

git branch (to check branch)
git branch -M main (to rename branch)
git checkout <- branch name -> (to navigate)
git checkout -b <- new branch name -> (to create new branch)
git branch -d <- branch name -> (to delete branch)

Merging code

* way 1

git diff <- branch name -> (to compare commits, branches, files & more)
git merge <- branch name -> (to merge 2 branches)

* way 2

create a PR (Pull request)

pull requeste

it lets you tell others about changes you're published to a branch in a repo on Github.

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Pull command

used to fetch and download content from a remote repo and immediately update the local repo to match that content.

git pull origin main

Resolving Merge conflicts

An event that takes place when git is unable to automatically resolve differences in code between two commits.

undoing changes

case 1: staged changes

git reset <- file name ->

git reset

case 2: commited changes (for one commit)

git reset HEAD~1

case 3: commited changes (for many commits)

git reset <- commit hash ->

git reset --hard <- commit hash ->

* git log (to check log)

log = history

Fork

A fork is a new repo that shares code and visibility settings with the original "upstream" repo

Fork is a rough copy.