COURSE GLOSSARY

Intermediate Git

Branch off: To create a new branch starting from an existing branch or commit so development proceeds independently from that point

Branch: A pointer to a sequence of commits representing an independent line of development within a Git repository, allowing multiple versions of the project to be developed in parallel

Clone (git clone): The operation and command that copies an existing repository (including its history) from a remote or local path to create a new local repository

Commit hash: A unique identifier (SHA-1 or SHA-256) assigned to a commit used to reference a specific snapshot, often shown in shortened form (e.g., the first seven characters)

Commit: A recorded snapshot of the repository at a specific point in time that captures changes to files along with metadata such as author, date, and a message

Conflict markers: Special lines Git inserts into a conflicted file (for example <<<<<<<, =======, >>>>>>> and a HEAD section) to show the differing versions that must be resolved

Delete branch flags (-d and -D): The git branch -d flag safely deletes a branch only if it has been merged, while -D force-deletes a branch regardless of merge status and can discard unmerged work

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git diff (command): A command that shows the differences between file versions across commits, branches, or between the working directory and the staging area

git fetch (command): A command that downloads commits, branches, and refs from a remote into the local repository without merging them into local branches

git pull (command): A convenience command that runs git fetch followed by git merge to update the current local branch with changes from a remote branch

git push (command): A command that uploads local commits from a specified local branch to a named branch on a remote repository, updating the remote state

git switch (command): A Git command used to change the current branch or create-and-switch to a new branch using the -c option

HEAD: A symbolic reference that points to the currently checked-out commit or branch in the working directory

Local repository: A Git repository stored on your own machine where you edit files, stage changes, and create commits before synchronizing with remotes

Main (branch): The default primary branch in many repositories that typically holds the production-ready or stable version of the project

Merge conflict: A situation where Git cannot automatically reconcile differing changes to the same part of a file between branches and requires manual resolution

Merge: The operation that integrates changes from one branch (the source) into another branch (the destination), combining their commit histories

Origin: The conventional default name Git assigns to the remote repository from which a local repository was cloned

Parent commits: The immediate predecessor commits referenced by a merge result, typically the latest commits from the branches being merged

Recursive merge: A Git merge strategy used when branches have diverged with different commits on both sides, performing a three-way merge to reconcile changes

Remote (remote repo): A repository hosted on another machine or service (e.g., GitHub, GitLab) that collaborators can access and synchronize with over a network

Repository (repo): A storage location managed by Git that contains a project's files, commit history, branches, and configuration

Staging area: The intermediate index where changes are placed (with git add) before they are included in the next commit