CS 200
Software Tools & Technologies Lab II

Session 5

GIT Advanced

Instructor

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The Cherry-pick Experiment

```
git init
echo ‘‘Alice’’ >> alice.md
git add alice.md; git commit -m ‘‘C1-Alice-1-file’’ alice.md

echo ‘‘Bod’’ >> bob.md
git add bob.md; git commit -m ‘‘C2-Bob-2-files’’ bob.md

echo ‘‘Eve’’ >> eve.md
echo ‘‘Alice Updated’’ >> alice.md
git add eve.md alice.md
git commit -m ‘‘C3-Eve-Alice-3-files’’ eve.md alice.md

echo ‘‘Dan’’ >> dan.md
git add dan.md; git commit -m ‘‘C4-Dan-4-files’’ dan.md

rm *.md
git add .
git commit -m "all deleted-0-files"

git cherry-pick <C4-Commit-Hash>
git cherry-pick <C3-Commit-Hash>
```

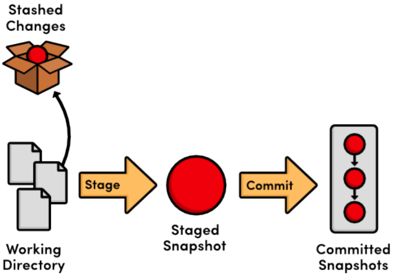
The Cherry-pick Experiment

Point-to-Ponder

- When we `git cherry-pick` a commit, will we get all of the files associated with that commit
- Or will we get just one file back?
- Or will the attempt to git cherry-pick a commit fail since all of the files associated with the commit have been deleted from our workspace?

When you `git cherry-pick` a commit, **only the change associated** with that commit is re-applied to the working tree.

GIT Stashing



What is the motivation?

Note

- The stash is local to your Git repository
- Stashes are not transferred to the server when you push.

Image Source: Google

An Experiment

The Scenario

- I have both committed and uncommitted changes in my current branch.
- I want to switch to a different branch.
- I don't want to commit the changes before switching

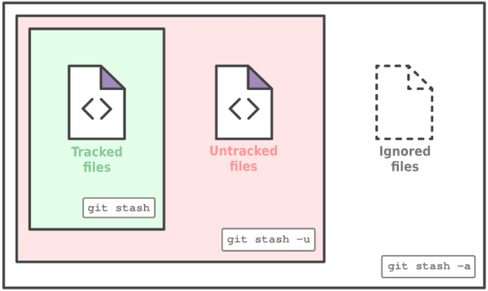
- Recreate this scenario and see the result of `git status` in each branch

Real World example

Switching between development and production branches with uncommitted changes in development.

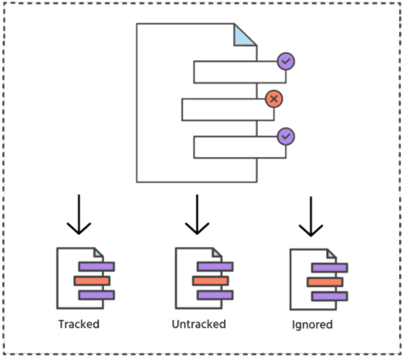
git stash

- Stashing your work
  `git stash`
- Stash with a message
  `git stash save "Descriptive Message of changes"`
- Stashing untracked or ignored files
  `git stash -u`



`git stash -p` Partial stashes

- You can also choose to stash just a single file, a collection of files, or individual changes from within files.
- This is interactive.



Other Stashing Usages

- Viewing stash diffs
- Listing stashed changes
- Re-applying your stashed changes
- Creating a branch from a stash
- Cleaning up your stash

`git prune/gc`

- Let us do an experiment
- Make two commits in your current branch
- Discard the latest commit with `git reset --hard`
- Is the latest commit deleted?