GIT

VERSION CONTROL AND WHY WE NEED IT

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THE PLAN

Things we will be covering:

- What is version control?
- What is Git?
- Distributed & Non-centric
- Making a commit
- Pushing & Pulling
- Branching
- Merging
- *Workshop Component*
- Github
- Why use Github?
- Pull Requests
- *Workshop Component*
- End

WHAT IS VERSION CONTROL?

- Used to manage different versions of files
- Allows you to share versions between different computers
- All modern software companies use version control
- Version control is hard, but worth it once you know it

WHAT IS GIT?

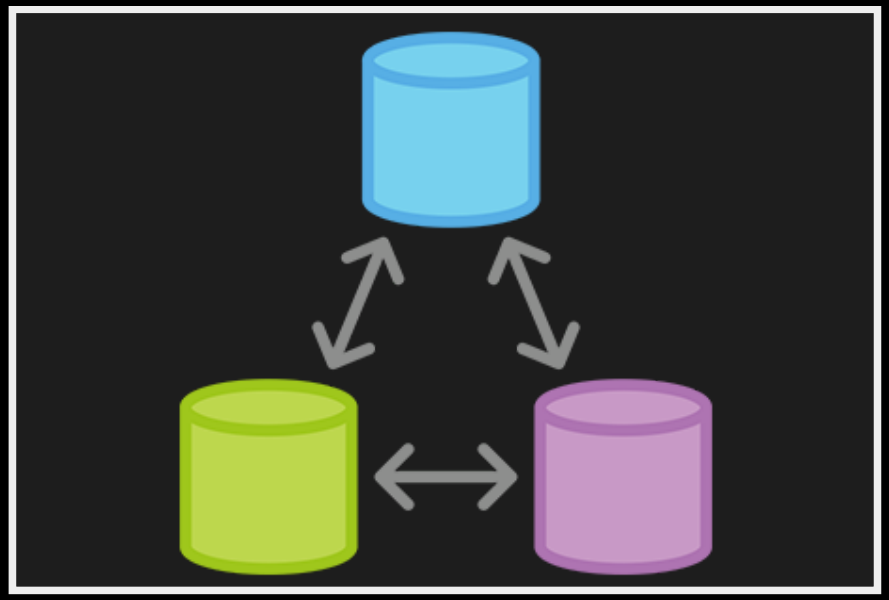
- Version control at its best
- Created by the inventor of Linux
- Quickly replaced outdated systems like SVN
- Likely the most common version control system today

MAKING A COMMIT

- A *repository* is a set of files that Git is managing
- A *commit* creates a snapshot of the current state
- Git records your snapshot as a list of changes

DISTRIBUTED & NON-CENTRIC

- Each person has their own copy of the respository
- Each person has everyone elses commits
- Everyone shares their commits between each other

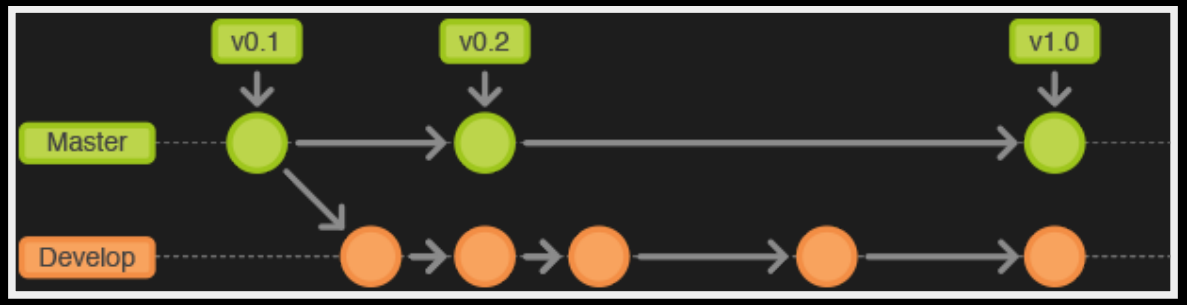


PUSHING & PULLING

- *Pushing* is giving someone your commits
- *Pulling* is getting someone elses commits
- A person will push and pull to *remotes*

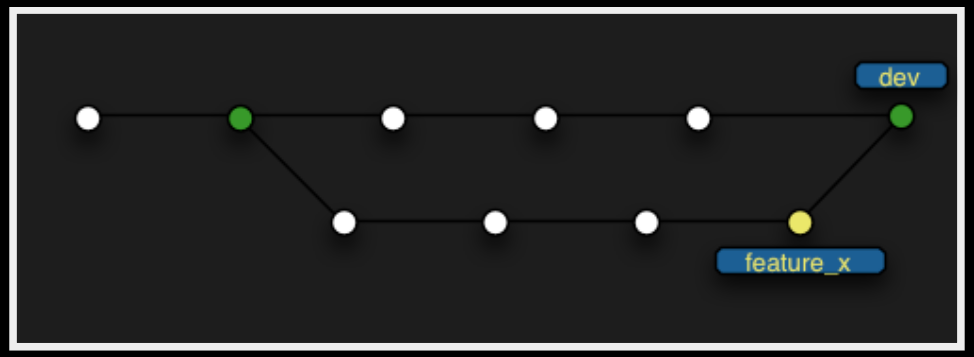
BRANCHING

- A *branch* is a split in the line of commits
- Branches behave like branches on a tree
- Everyones branches are uniquely identified by the remote



MERGING

- Branches can *merge* back into each other
- Git will look at the changes, and correctly put it all together



STANDARD WORKFLOW

1. Pull new commits on your main branch
2. Make a branch off of the main branch
3. Add some commits to your new branch
4. Merge your branch into the main branch
5. Push the commits in the main branch

WORKSHOPPIN’

http://bit.ly/1uMV6CA

GITHUB

- Github is a web interface for Git
- Github is just like any person's computer

WHY USE GITHUB?

- By centralizing, we simplify
- Github has a pretty web interface
- Github builds additional features on top of Git

FORKING

- You can completely copy an entire repository
- Having your own repository allows you to have a 'playground'
- Github will allow you to merge across repositories

PULL REQUESTS

- A pull request is a "request to merge" two branches
- Pull requests can be commented on, denied/accepted, etc..
- Github will preform the merge for you

STANDARD GITHUB WORKFLOW

1. Fork a repository
2. Checkout your forked repository
3. Create a new branch in the repository
4. Add some commits
5. Push your branch to your forked repository
6. Create a pull request to the main repository
7. Someone reviews your pull request
8. Pull request gets approved

WORKSHOPPIN’

http://bit.ly/1nBpEtK

END

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