How to Git Better

Using Git Workflows (with some help from Atlasssian)

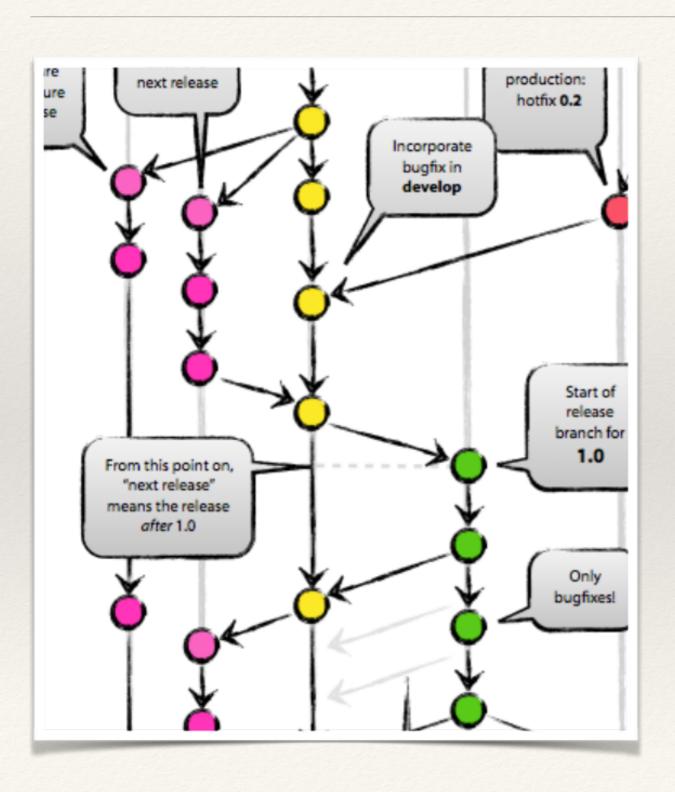


Why should we Git Better?

- Software Craftsmanship
- You are as proficient as you are familiar with your tools
- You are more likely to cut yourself with a dull knife than a sharp one



Fair Warning: Fancy Git Talk aHEAD



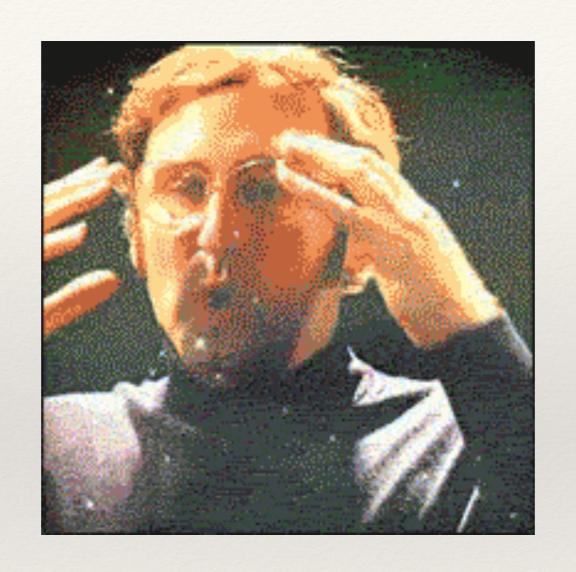
- Requires decent understanding of Git branches
 - Lots of Pictures

Available "Git up to Speed"
Brown Bag (before 22 June)

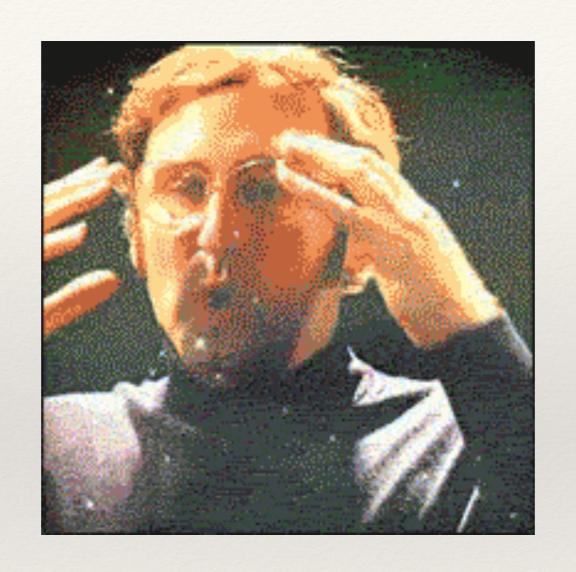
NEWSFLASH! Git is not Version Control!

- You: Umm... so what is it then?
 - Git is a set of tools that provides a <u>workflow</u> for your version control.

- You: Umm... and that means what exactly?
 - Use Git to customize your team's way of using version control in your daily development.



MIND = BLOWN



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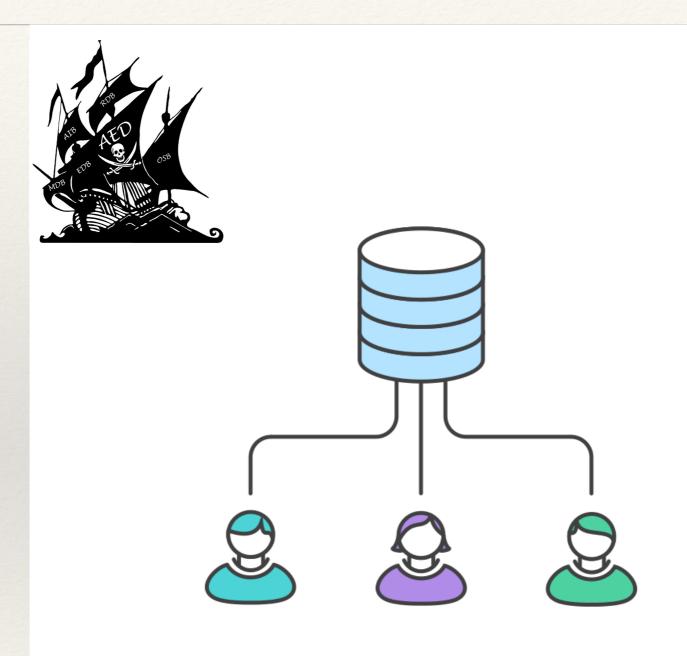
Popular Workflows for Git

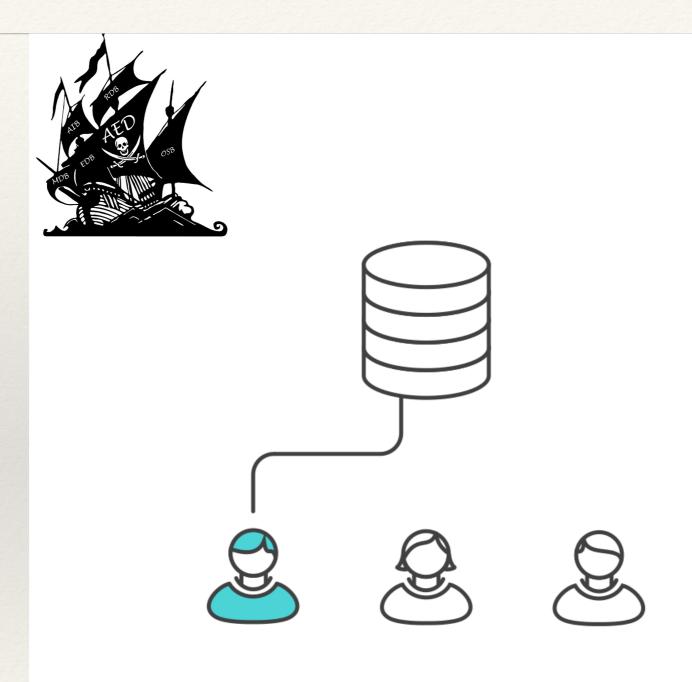
- This is well treaded territory... in industry
- Documented in Confluence on DEVLAN
 - 1. Centralized
 - 2. Feature Branch
 - 3. Git Flow
 - 4. Forking

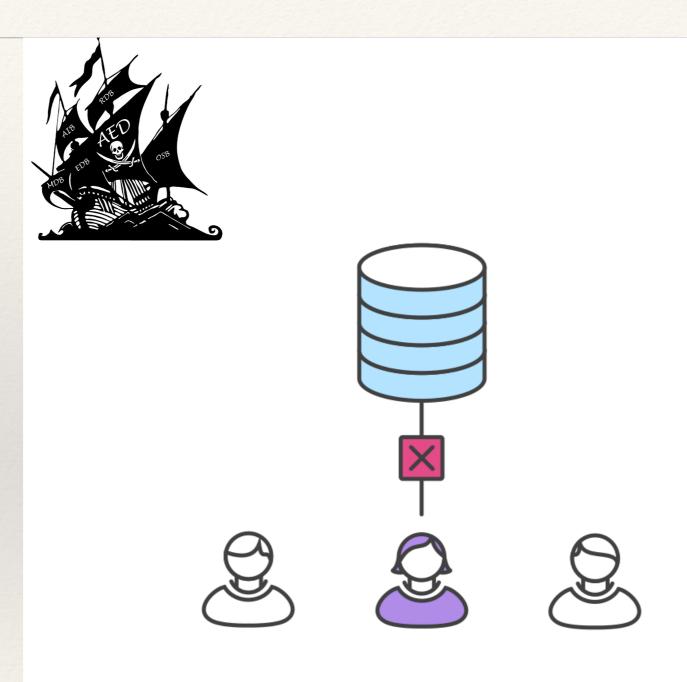
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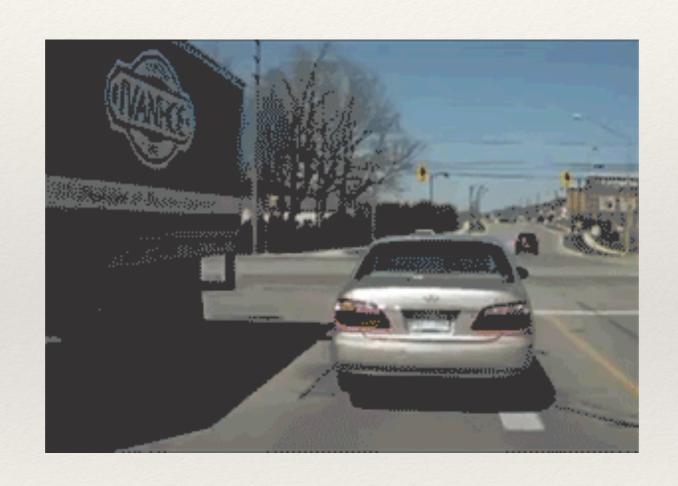
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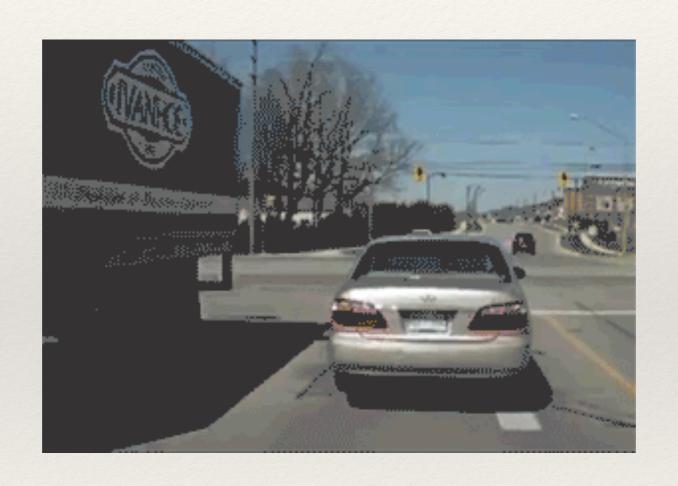




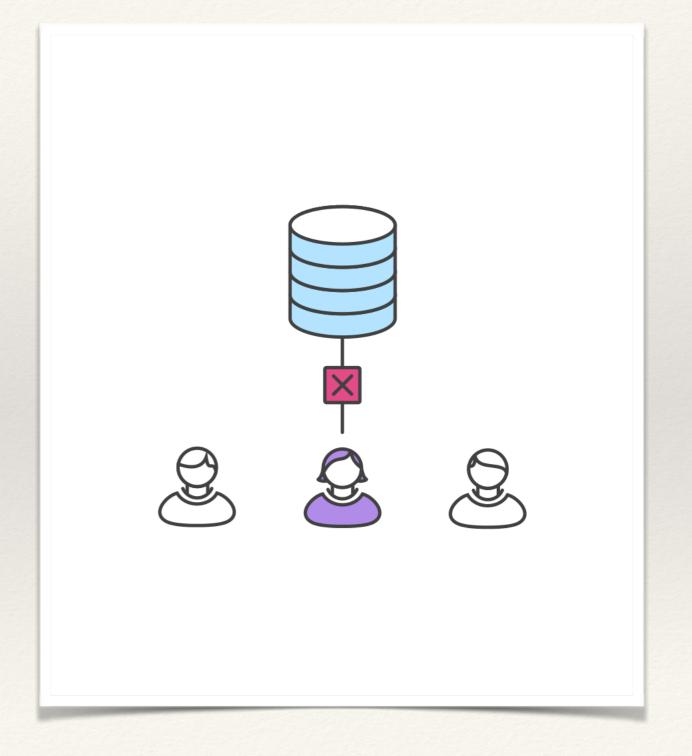
Typical Git 3-Way Merge



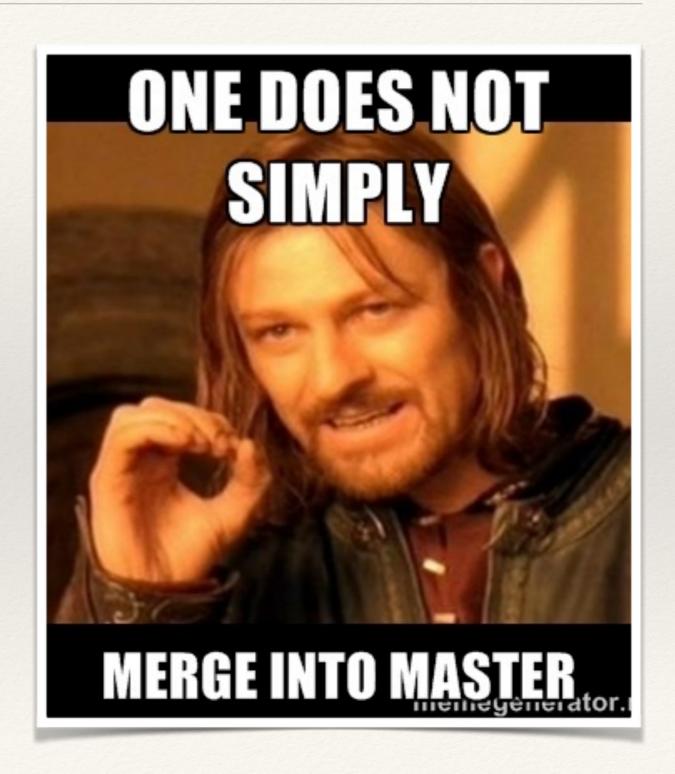
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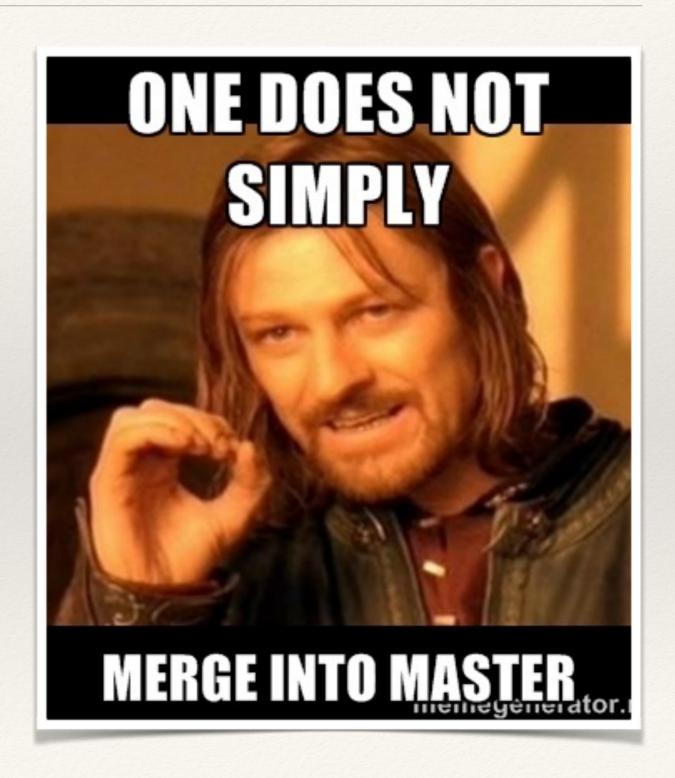
- Everyone for themselves!
- Errors compounded
- Knowledge partitioning
- Clear history...
- Lack of project organization
- No efforts to improve quality built into workflow



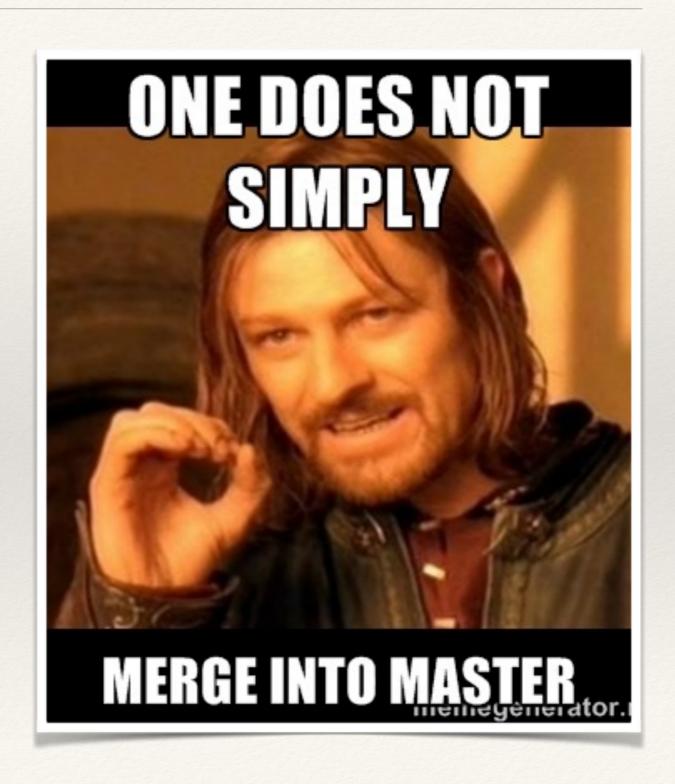
- * Keep master clean!
 - No direct commits
 - No broken builds
 - No partial features
 - Merges only



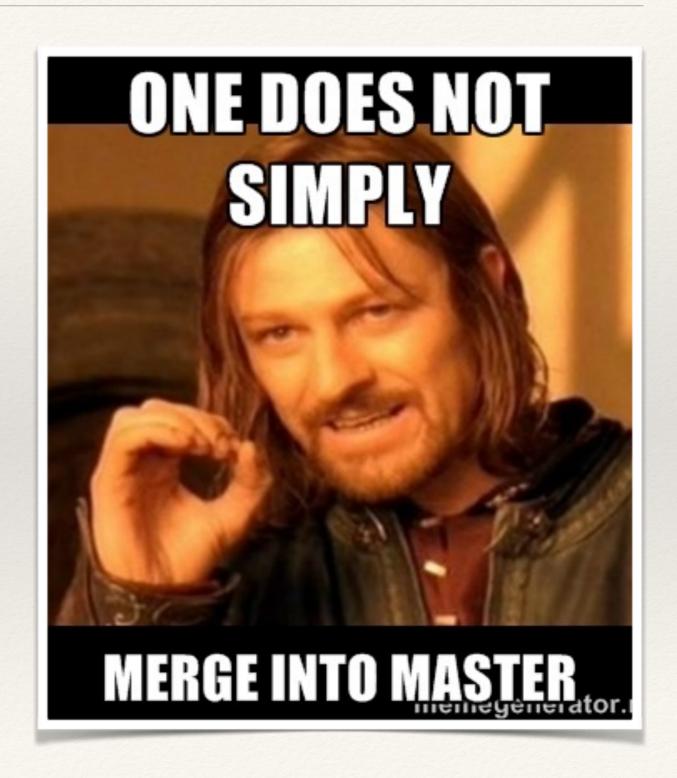
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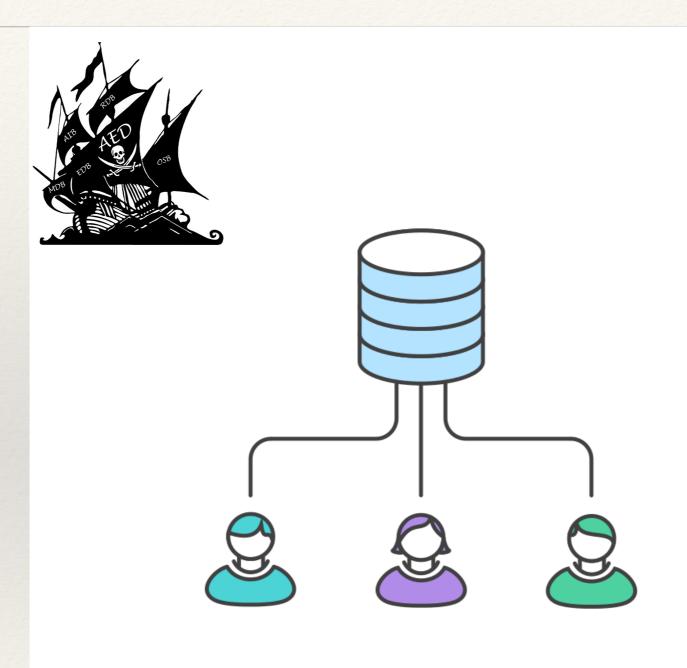
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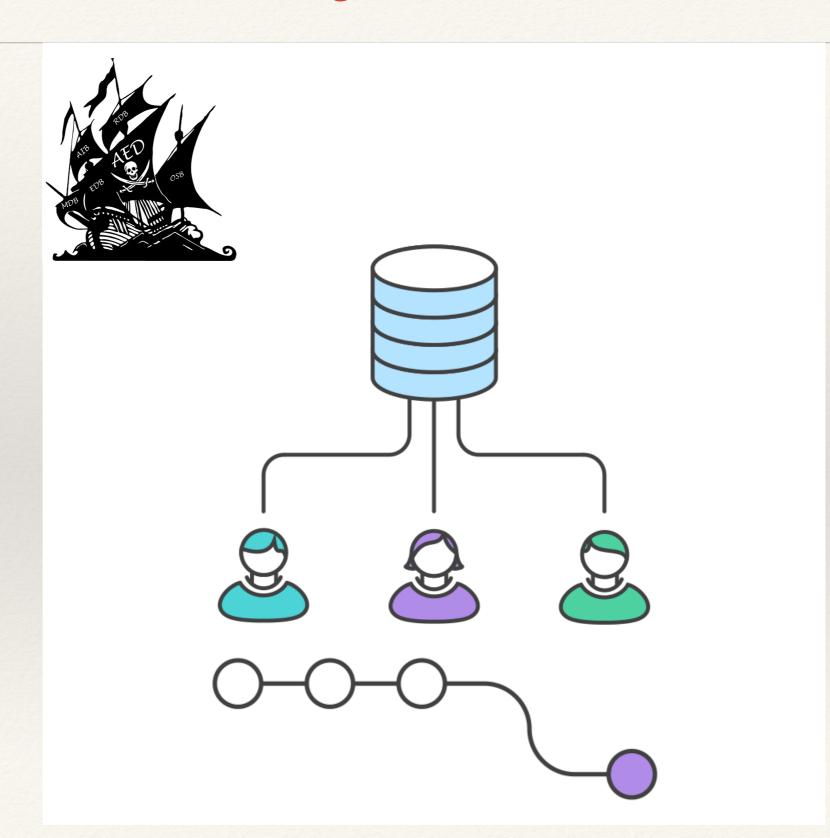
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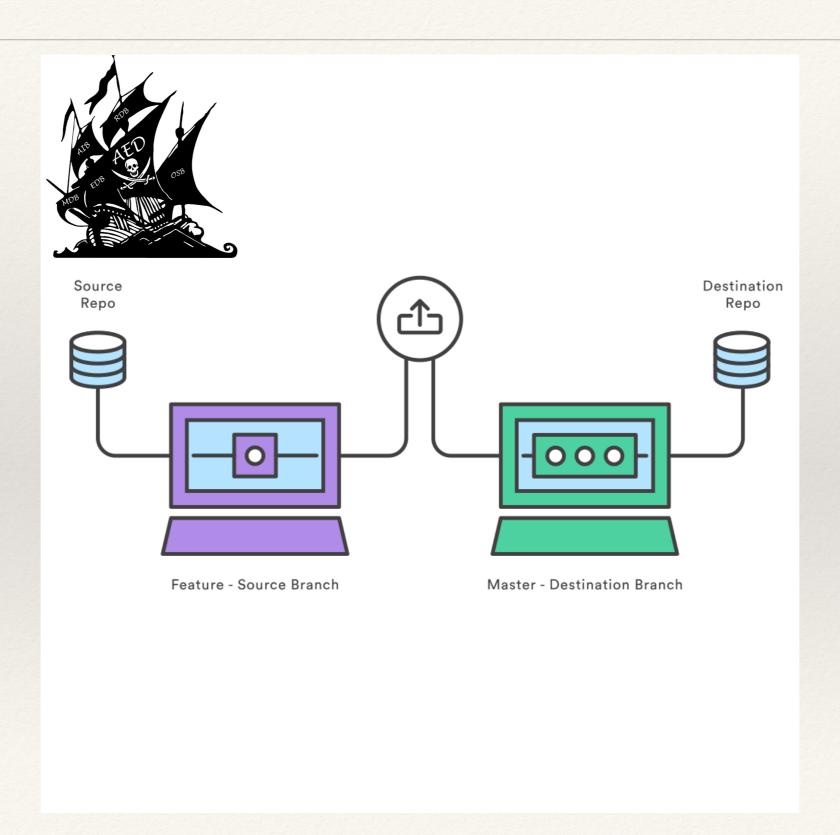


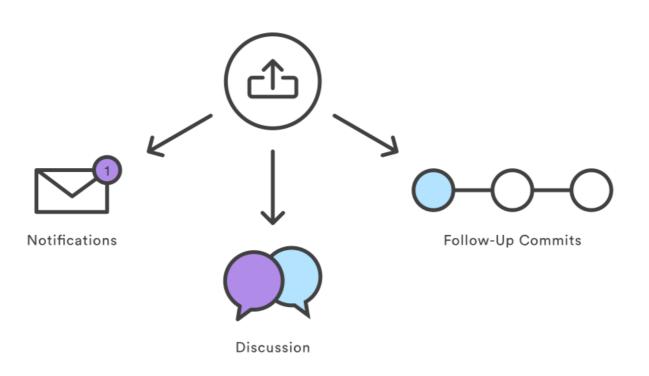
Feature Branching - A Branch Per Feature

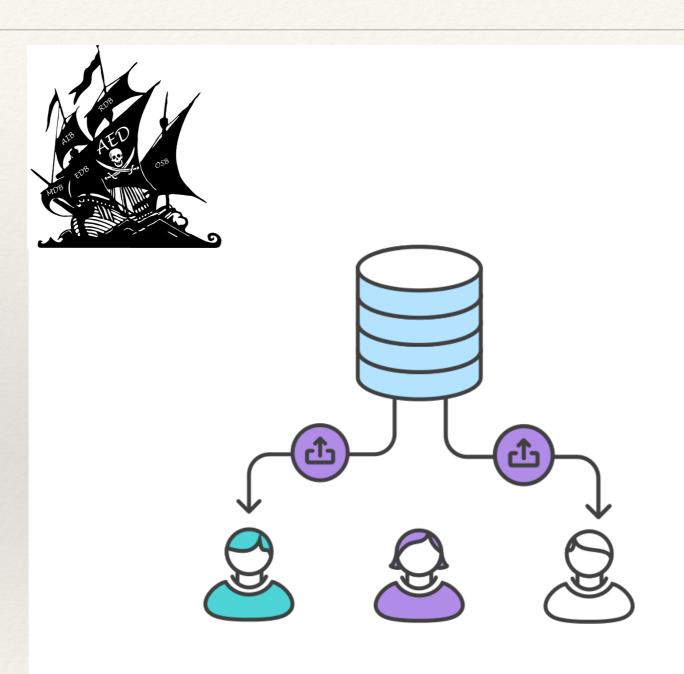


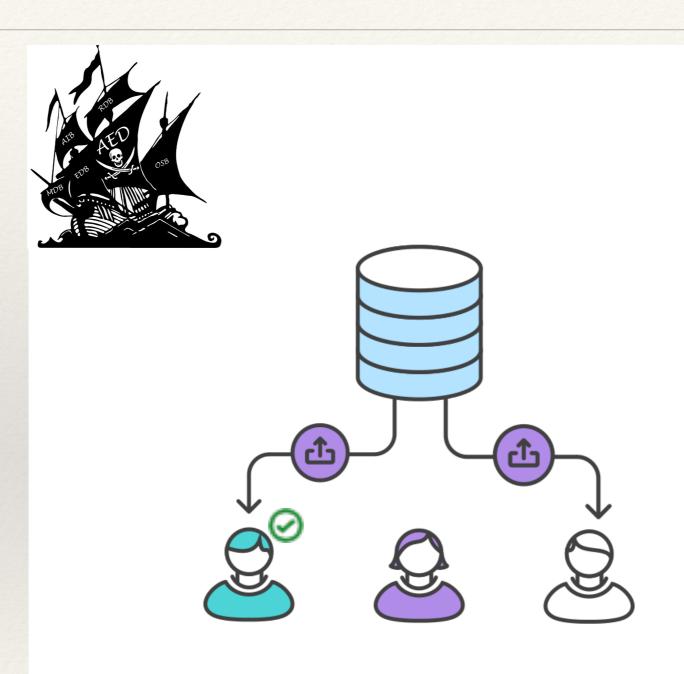
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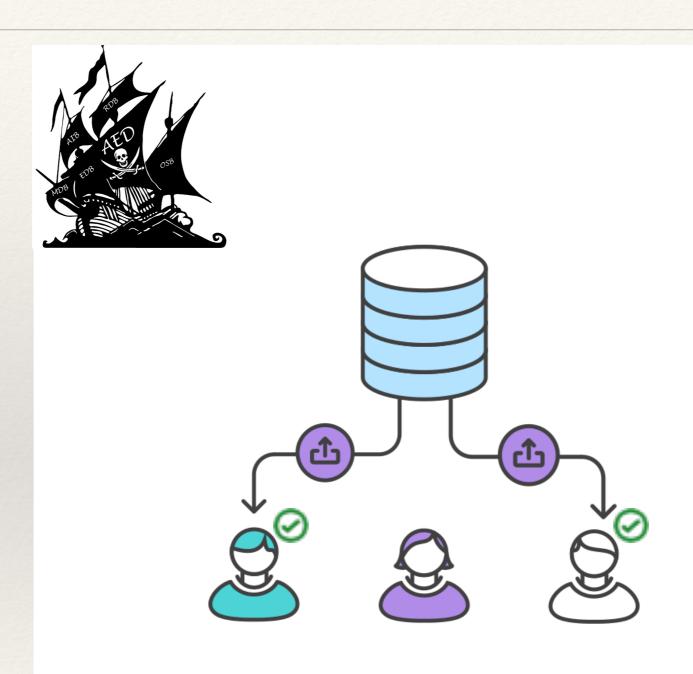


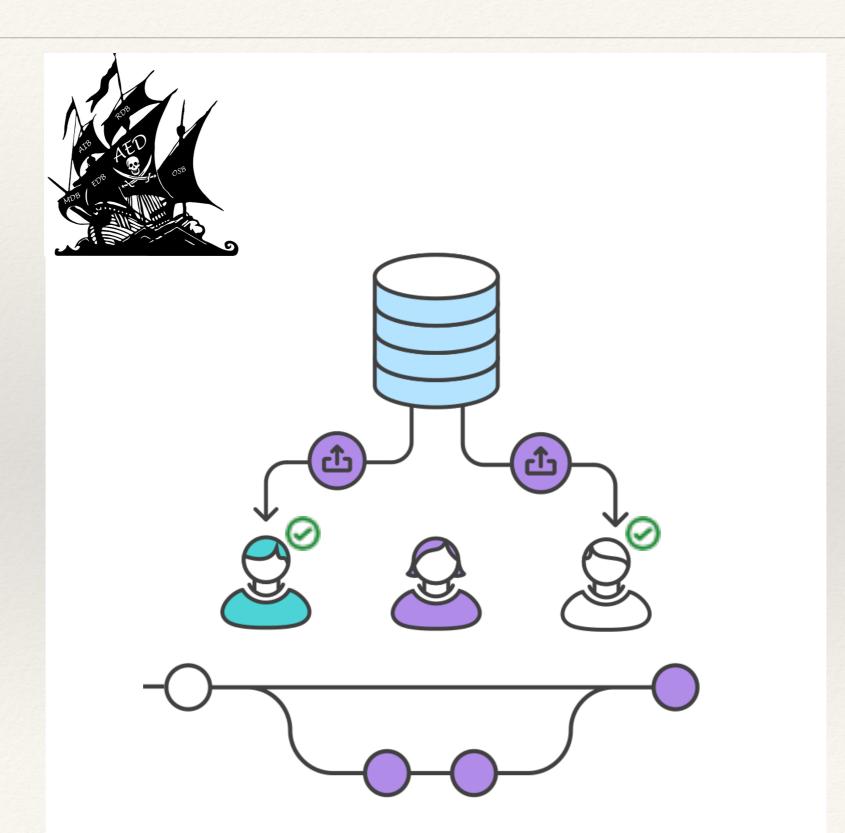












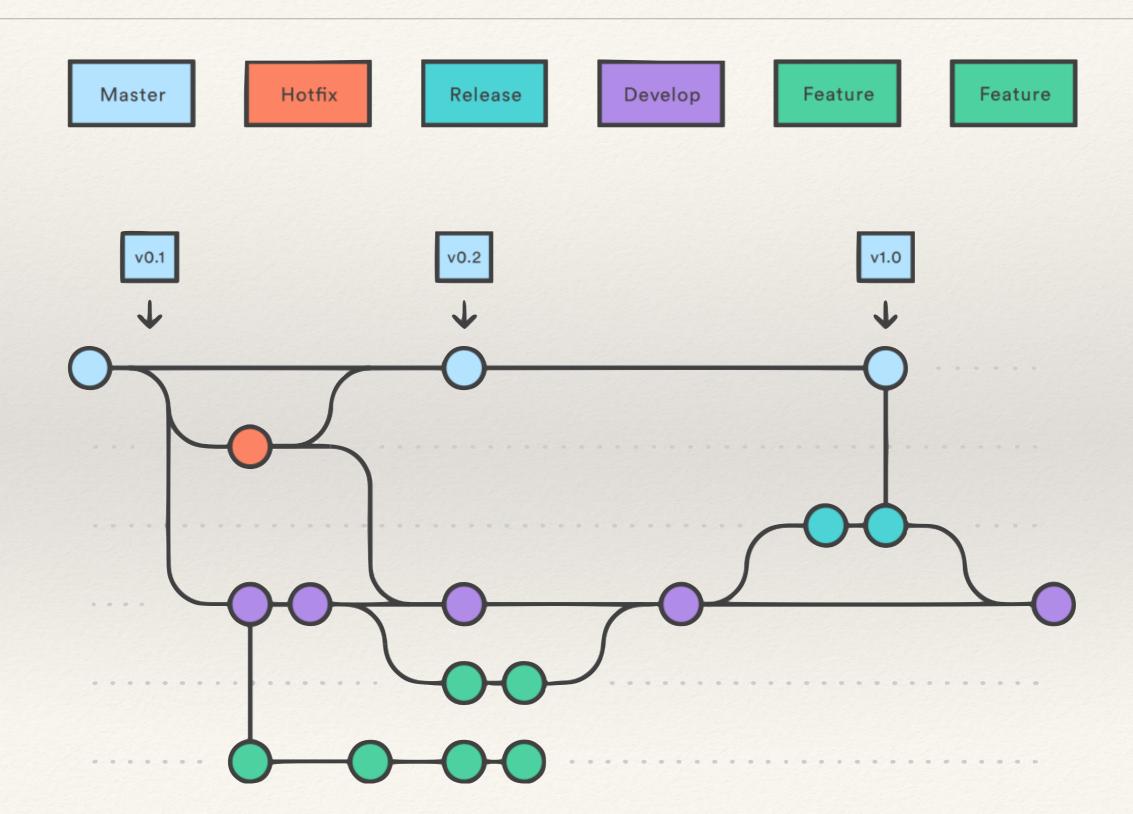
Feature Branching

- Pull Requests give us:
 - A stable master branch protected from chaos
 - Digestible pieces of Code Review
 - Knowledge sharing / Collective code ownership
 - Clear history of changes
 - Clear improvements made

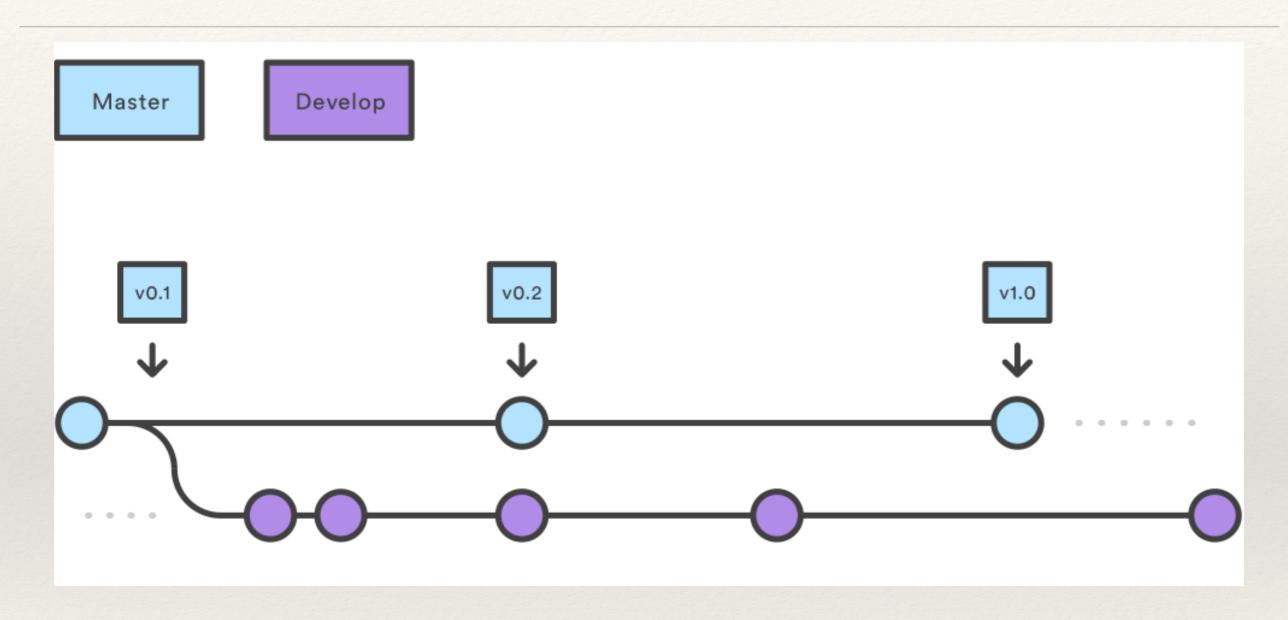




Git Flow, or How I Became OCD about DVCS



Git Flow: Historical Branches



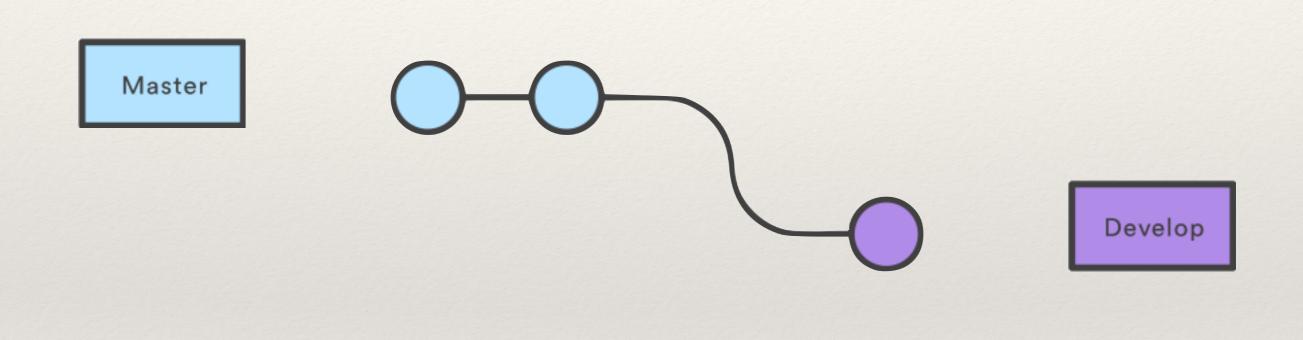
- master contains stable delivered versions only
- develop is for stable incorporation of new features

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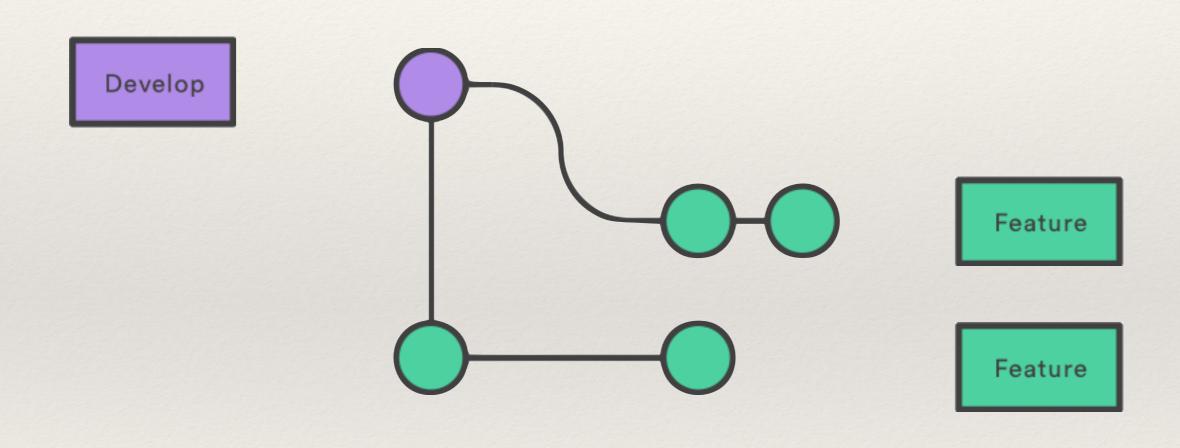
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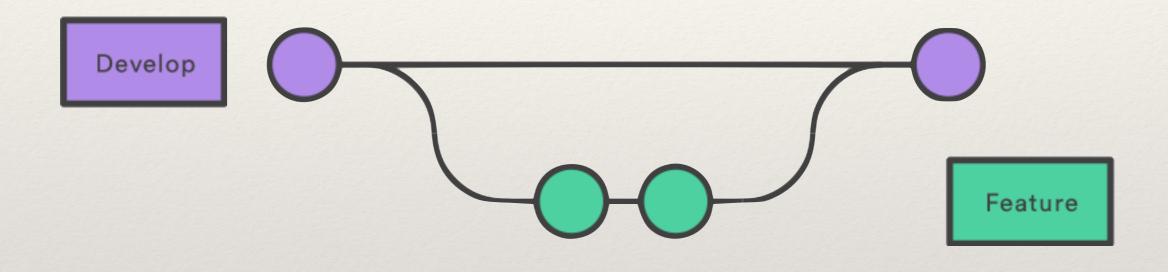
New features incorporated (by feature branching!) into <u>develop</u>

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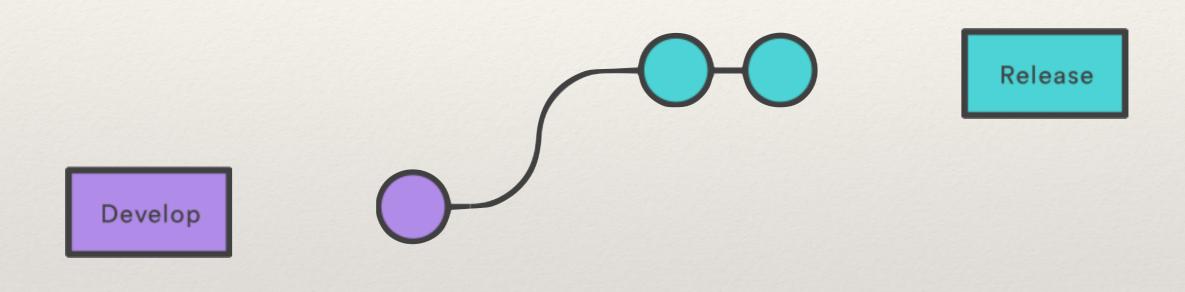


- Branch from <u>develop</u>
- Pull Request to merge into <u>develop</u>

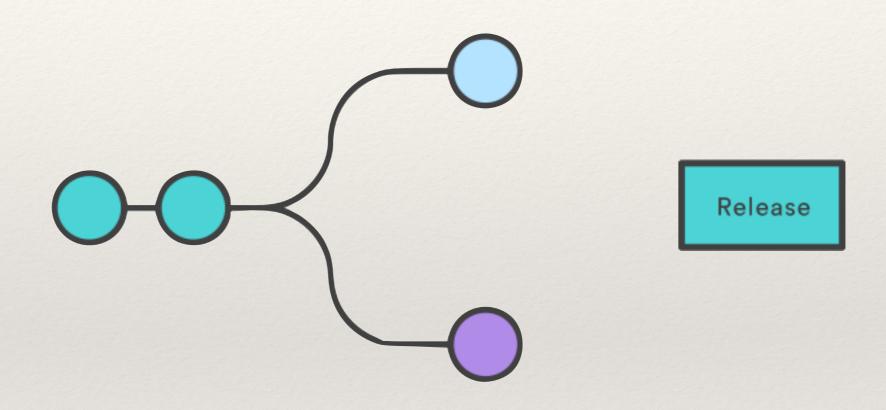
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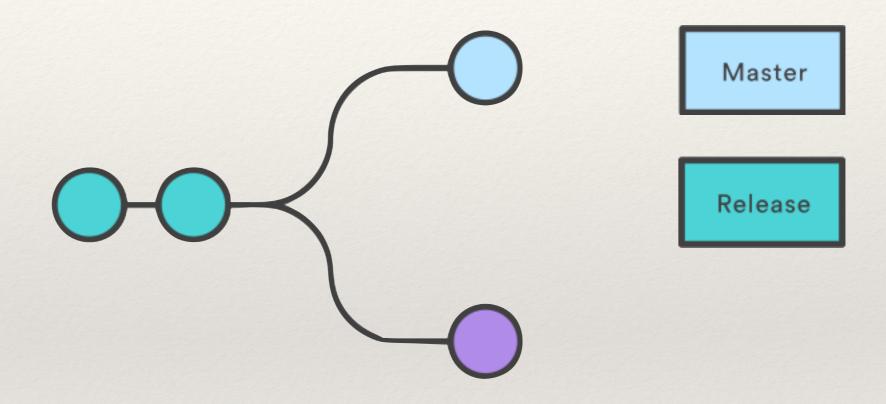
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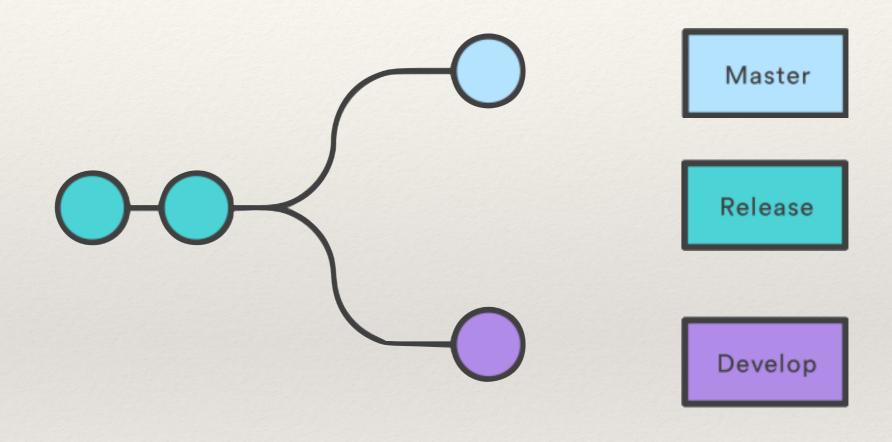
- Release candidates executed in separate release branch
- No new features only <u>fixes</u>



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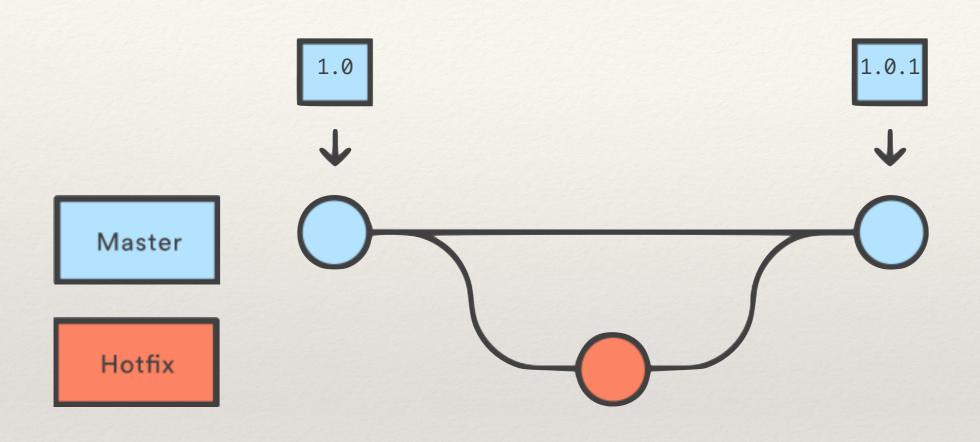


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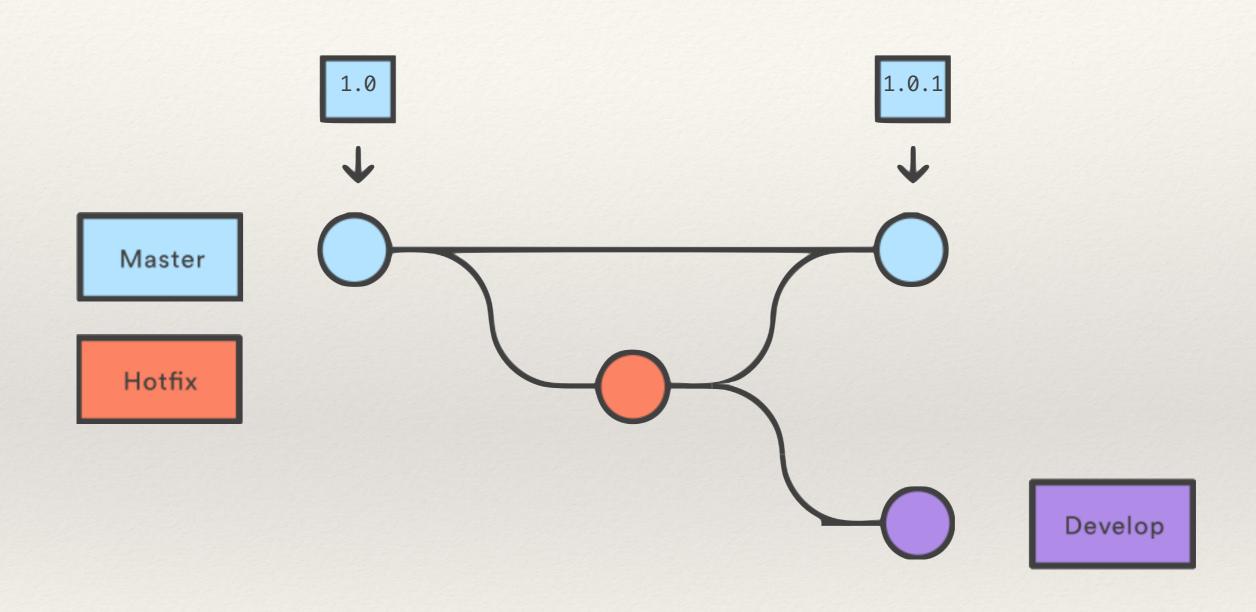
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Git Flow: Hotfix Branches



- Branch for applying hotfixes (perfect for Discrepancy Reports)
- Merge into master and develop

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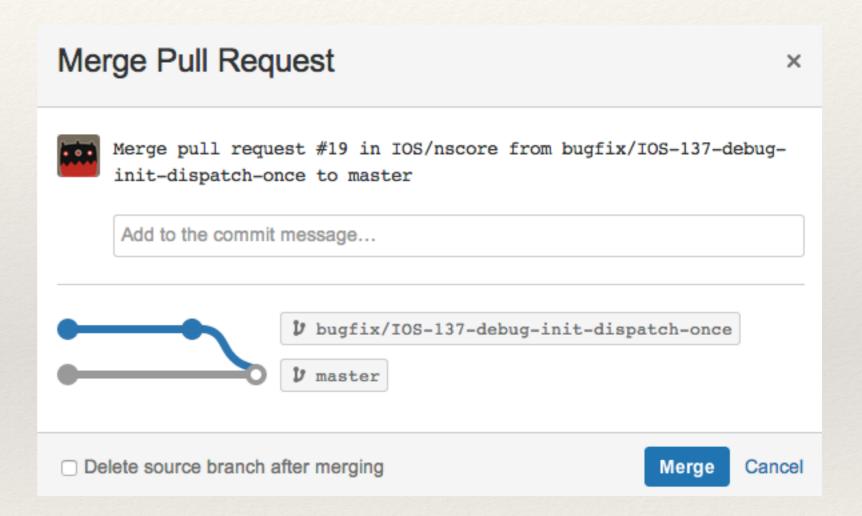
How Atlasssian Helps

- * Track all issues in Jira
- Create feature branch from each Jira issue



How Atlasssian Helps

- Track all issues in Jira
- Create feature branch from each Jira issue
- Merge feature branch in Stash using Pull Requests



Questions?

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GO FORTH AND ROCK