



Agenda

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Introduction

- Who am I?

Source Control Branching Model

- Git flow
- Github flow

Trunk Based Development

- Why Trunk Based
- What's Trunk Based

My Experience about Trunk Based

- Implement TB in real life



Branching model is a Risk Management of software development

Source control branching model

Branching model is a Risk Management of software development

Eg. GitFlow, Github flow or Trunk Based

By Vincent Driessen

By Vincent Driessen



By Vincent Driessen



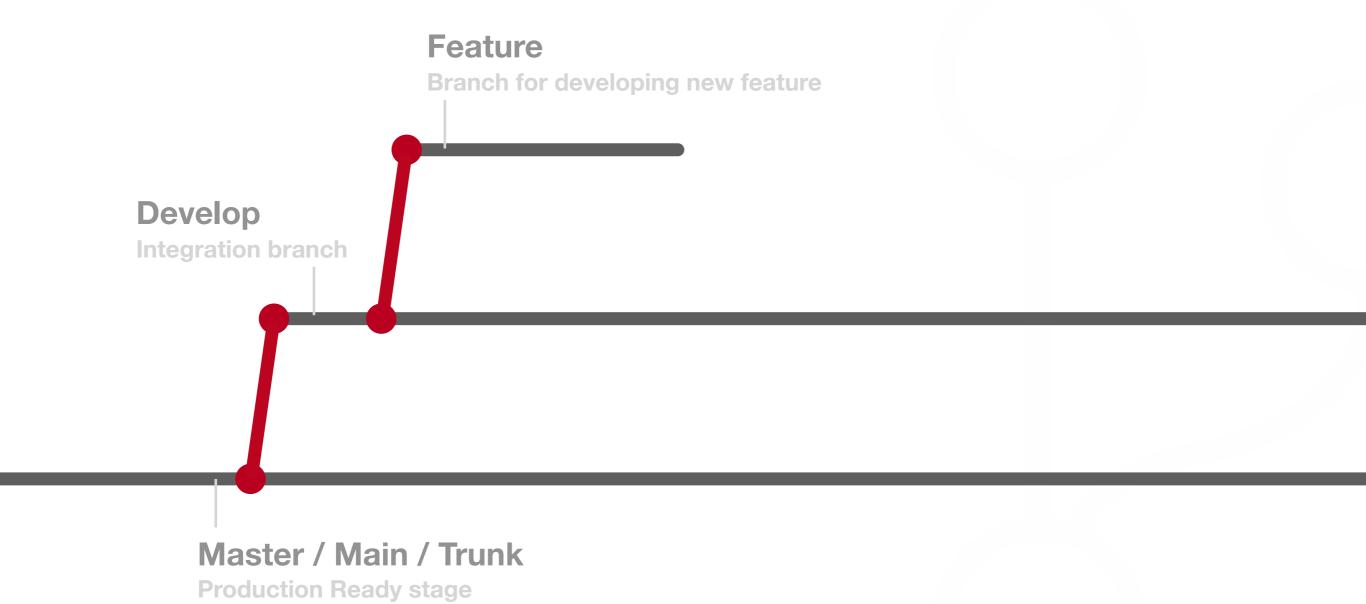
By Vincent Driessen

Master / Main / Trunk

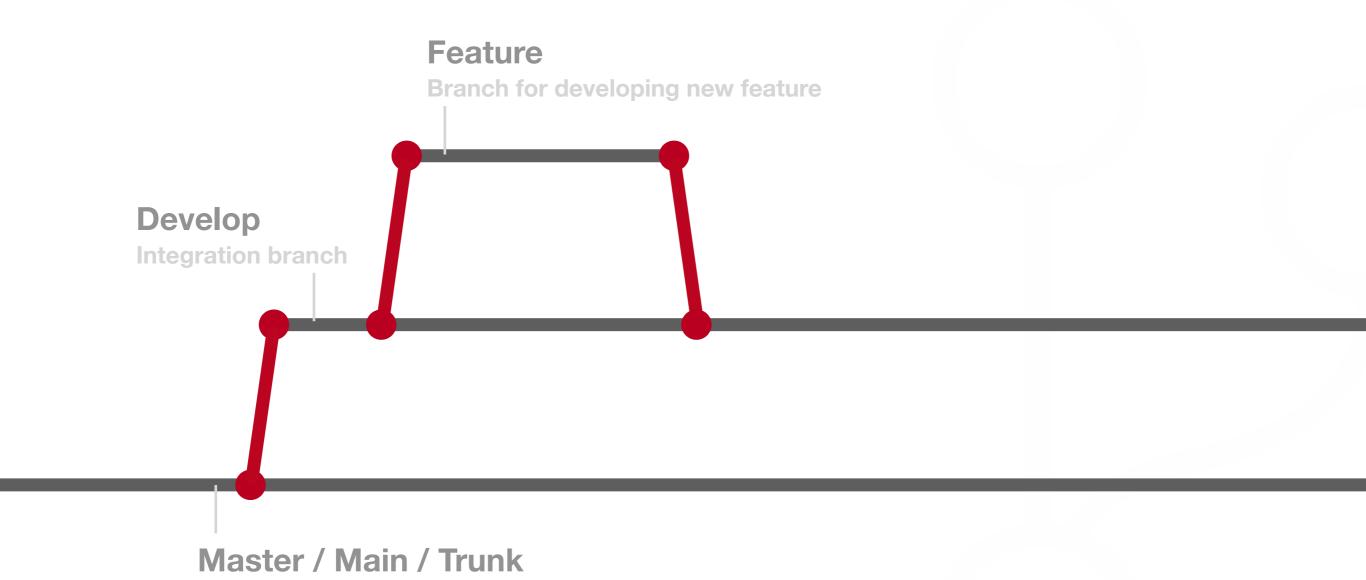
Production Ready stage

Develop Integration branch

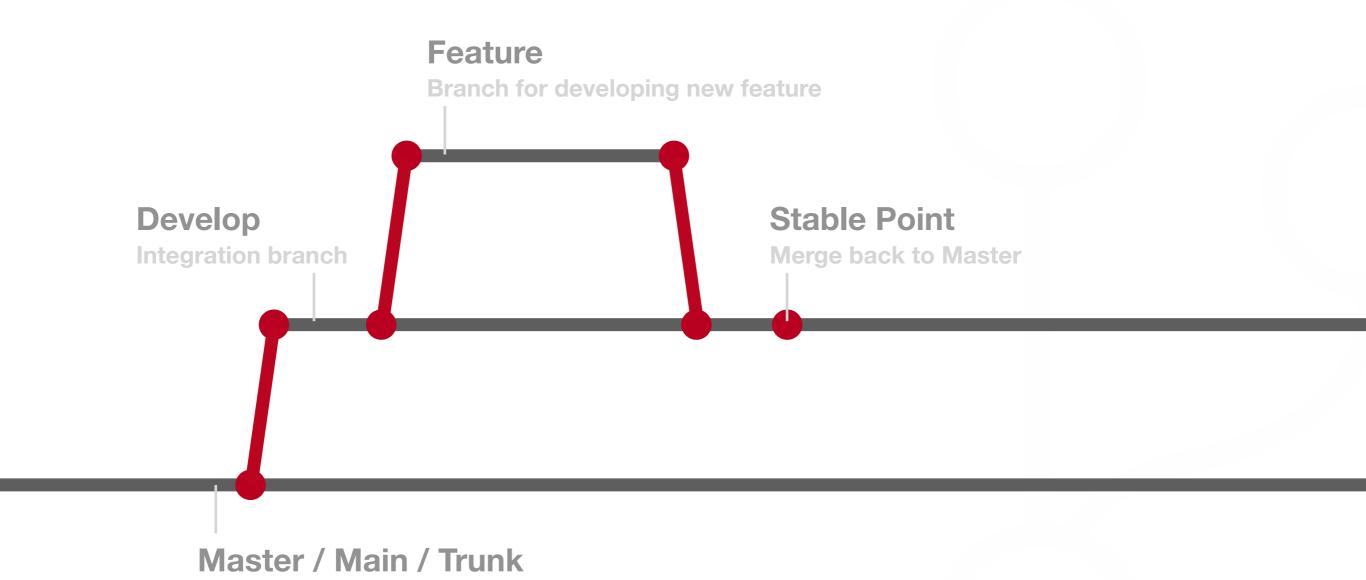
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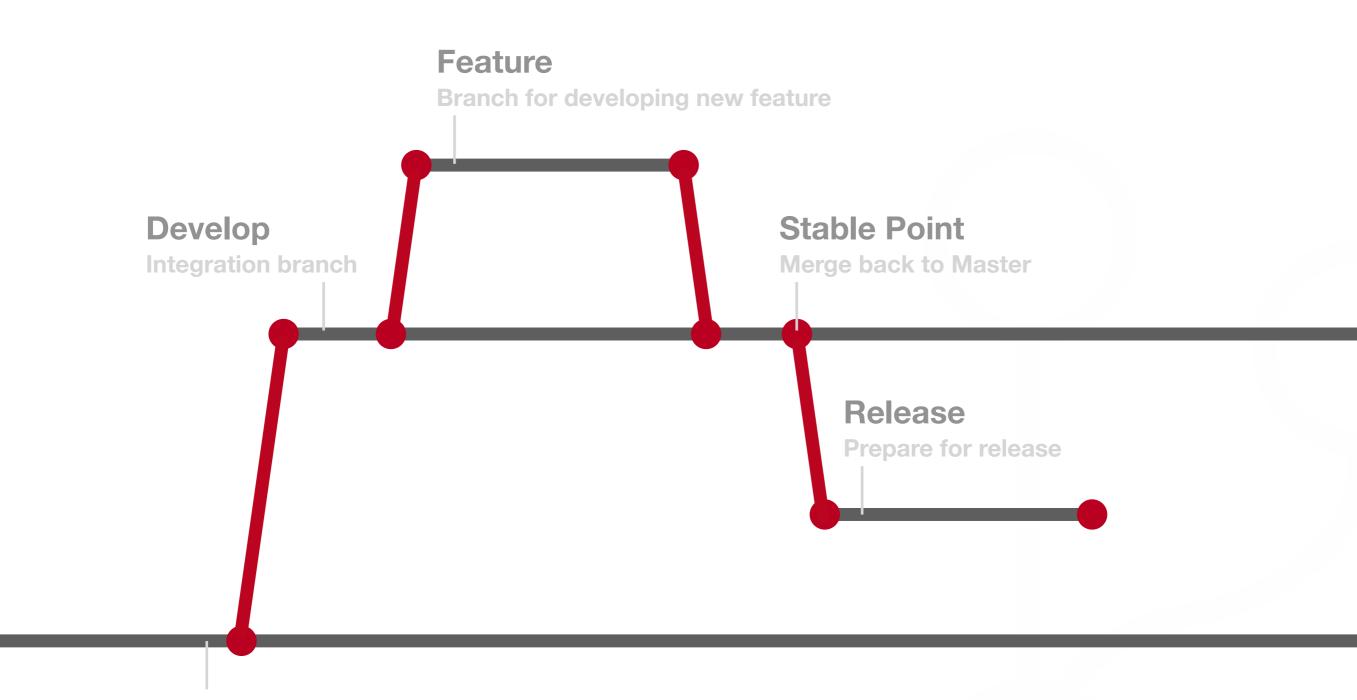
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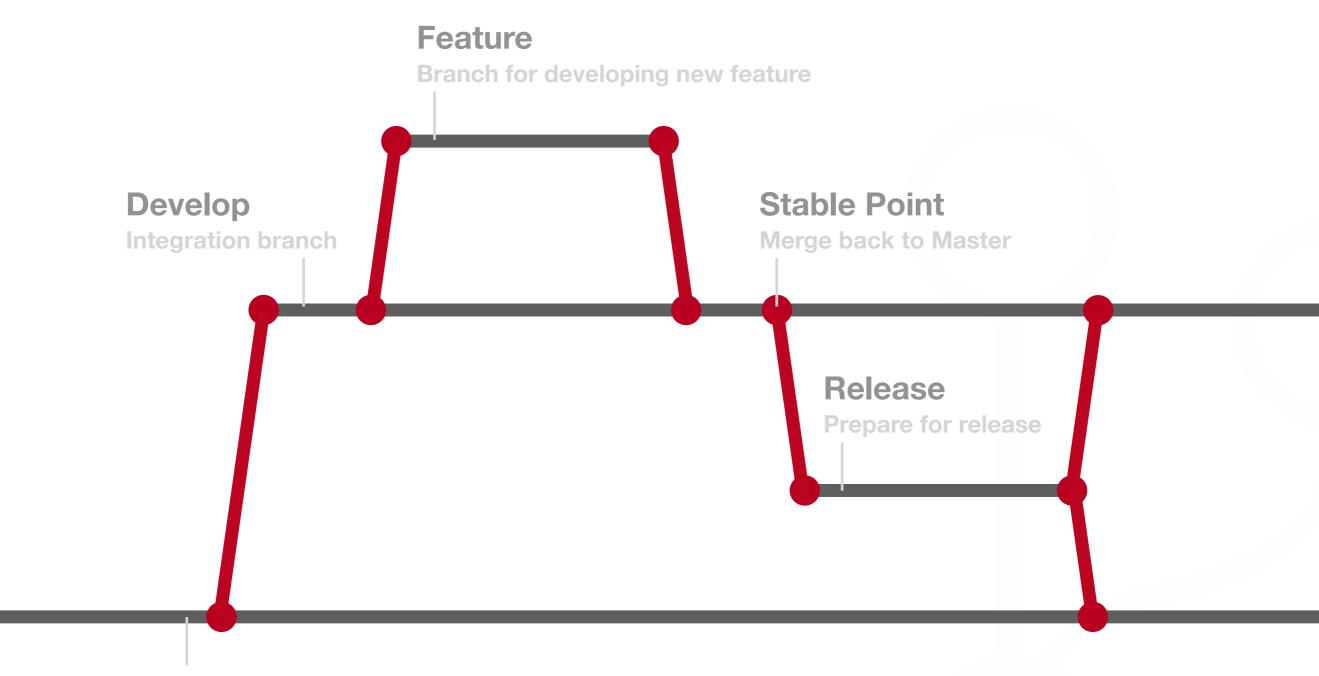


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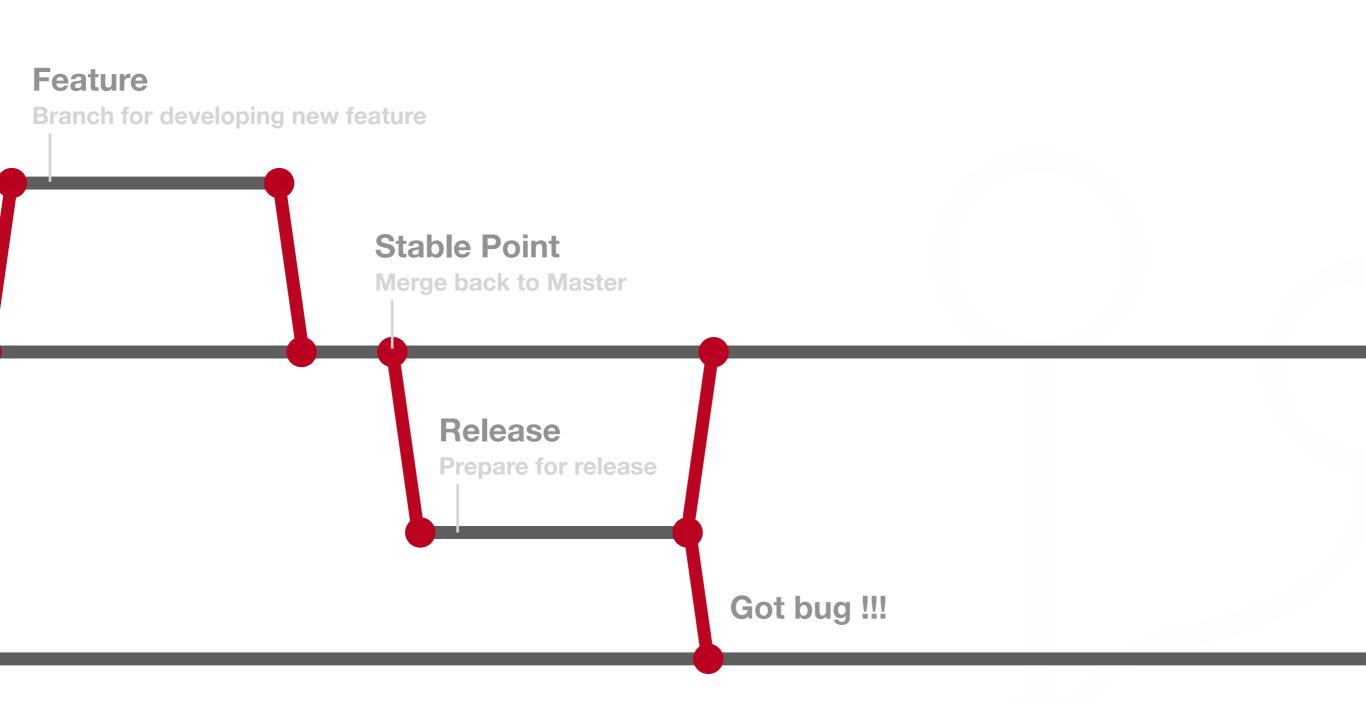


Master / Main / Trunk

Production Ready stage

Version 1.0.2

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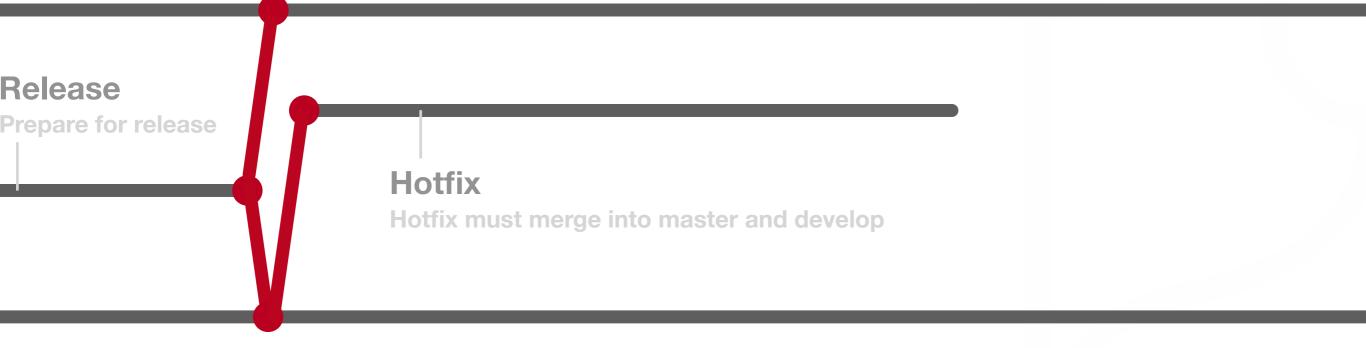
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Version 1.0.2

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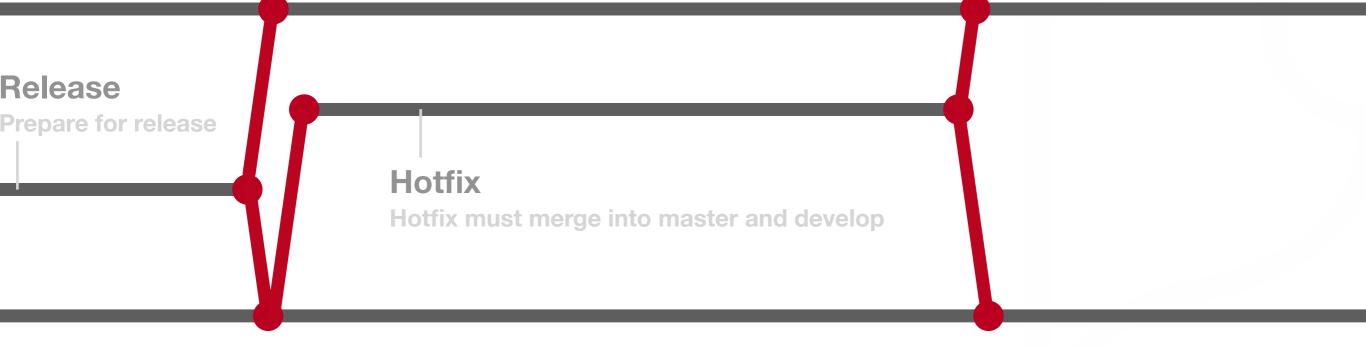


Version 1.0.2 Version 1.0.3

By Vincent Driessen

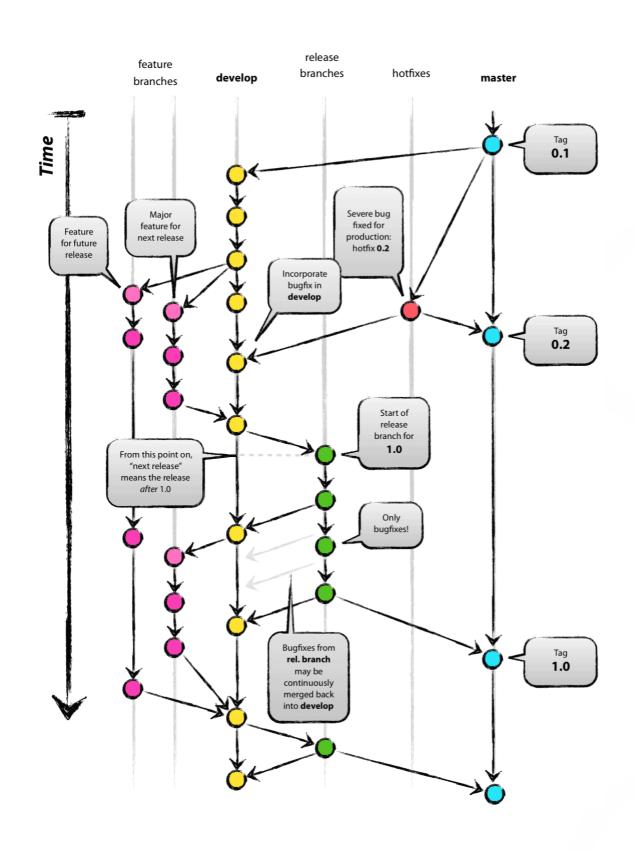
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Version 1.0.2 Version 1.0.3

By Vincent Driessen



By Github:P

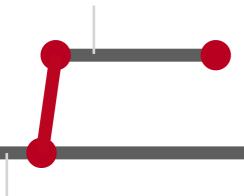
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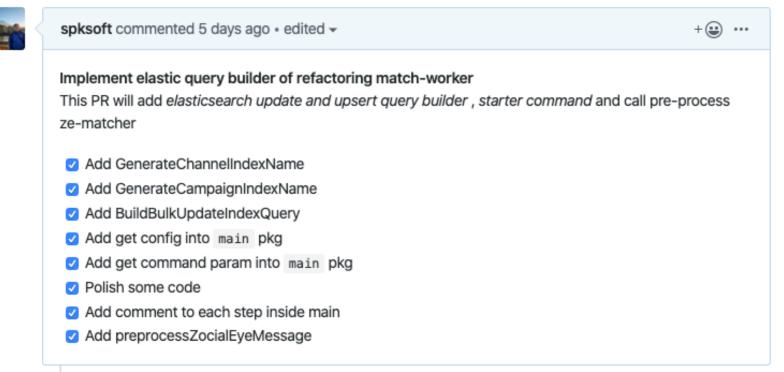
Supporting Branch

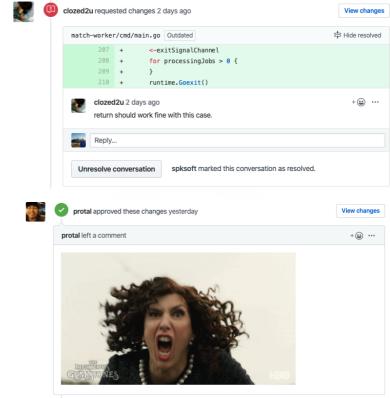
Develop own feature



Master / Main / Trunk

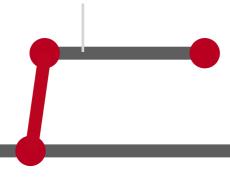
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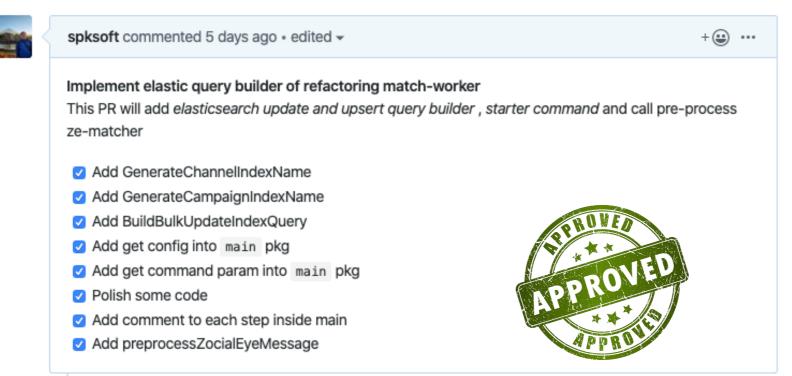
Supporting Branch

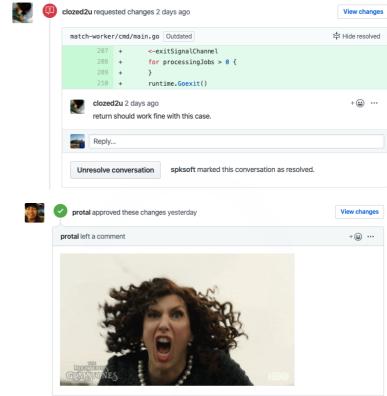
Develop own feature



Master / Main / Trunk

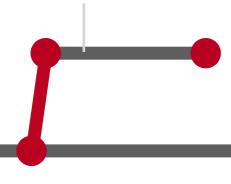
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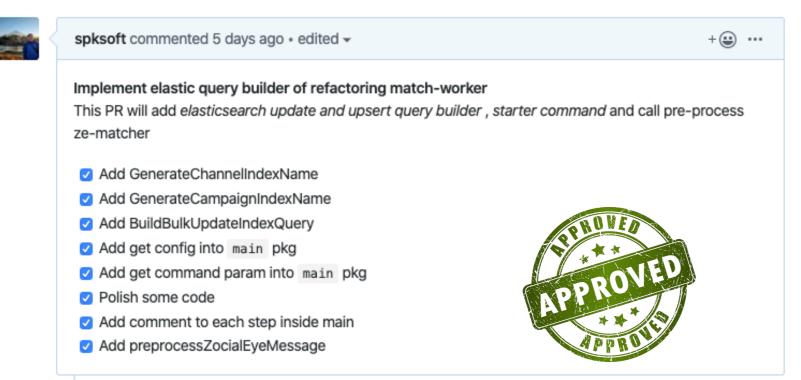
Supporting Branch

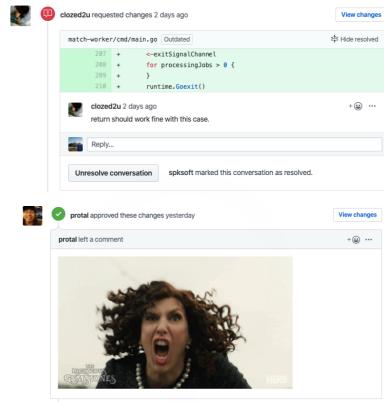
Develop own feature



Master / Main / Trunk

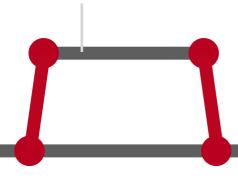
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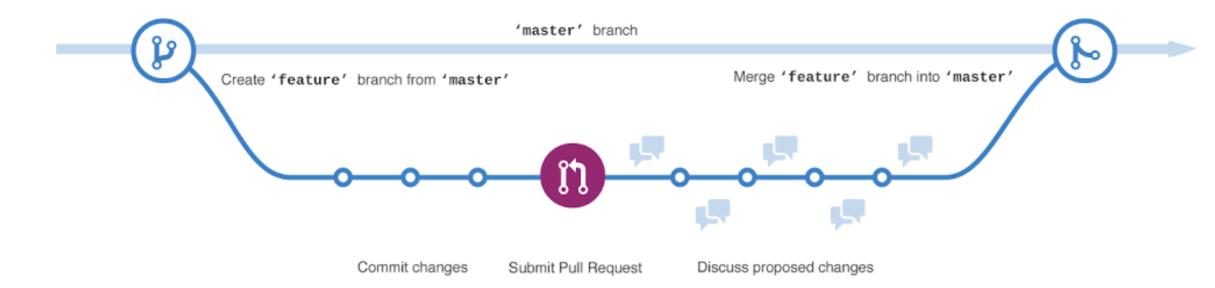
Supporting Branch

Develop own feature



Master / Main / Trunk

By Github:P



Why?

"Branches create distance between developers and we do not want that"

- Frank Compagner, Guerrilla Games

Why?

Frank's 'distance' is about the distance to the integration of code from multiple components/ modules/sub-teams

Why?

Break something unexpected once merged

Why?

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Be difficult to merge in

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Break something unexpected once merged

Be difficult to merge in

Not show that work was duplicated until it is merged

Not show problems of incompatibility/undesirability that does not break the build

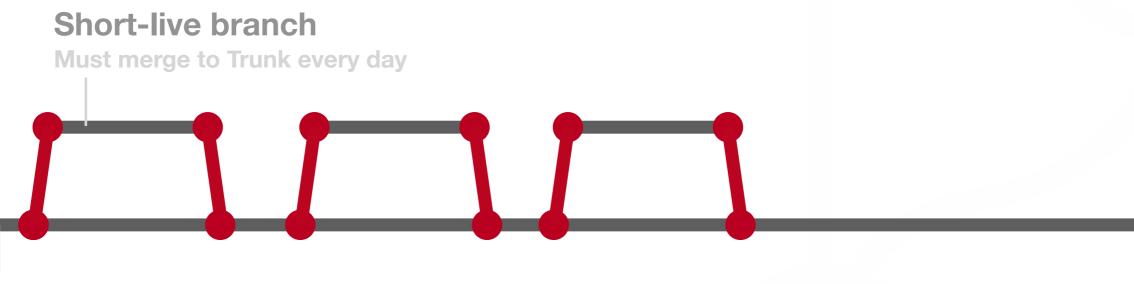
Why?

Trunk-Based Development is a branching model that reduces this distance to the minimum

What?



What?



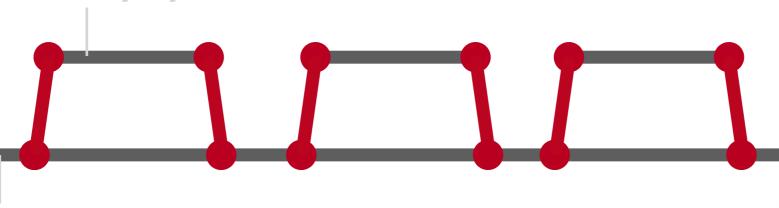
Master / Main / Trunk

Production Ready stage

What?

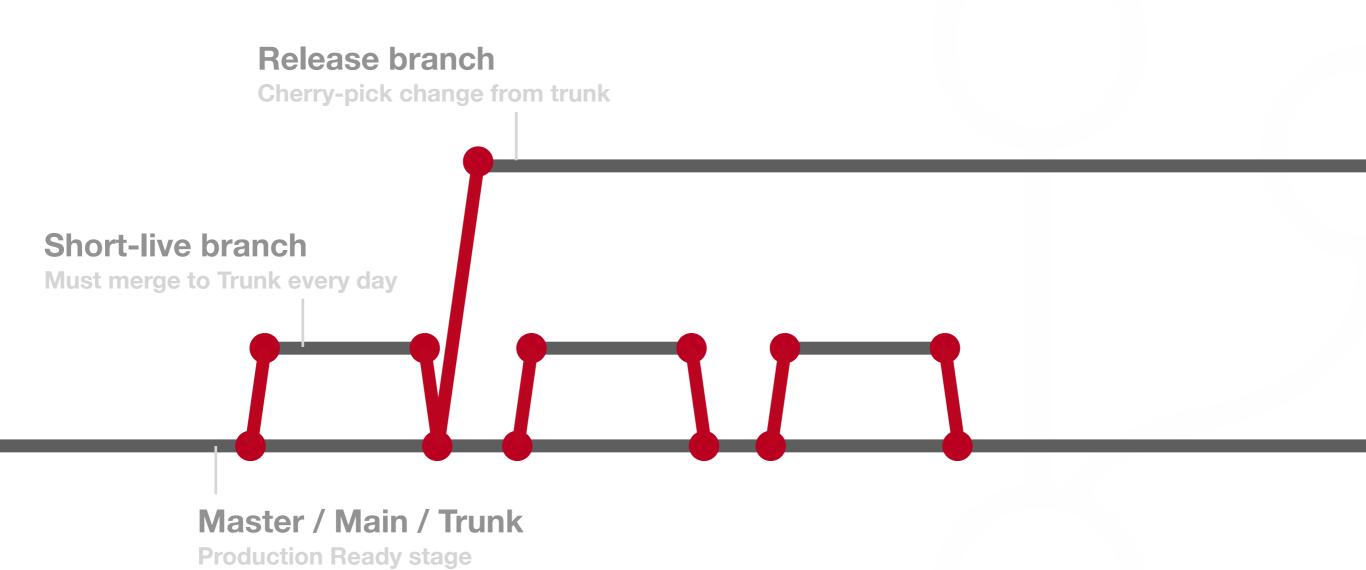
Short-live branch

Must merge to Trunk every day

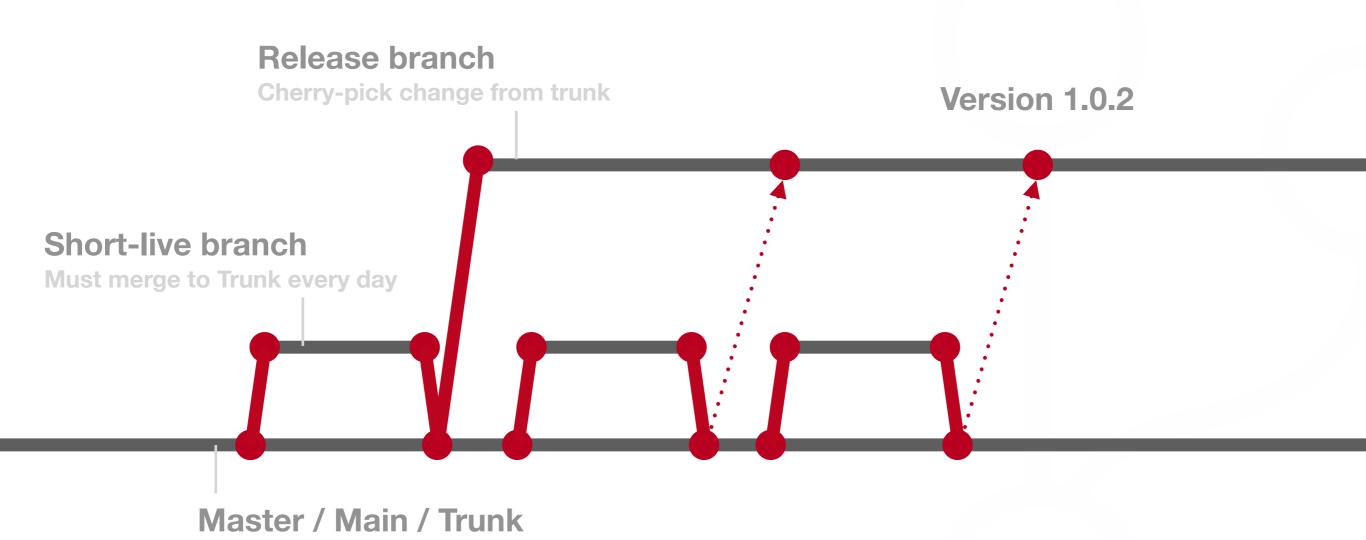


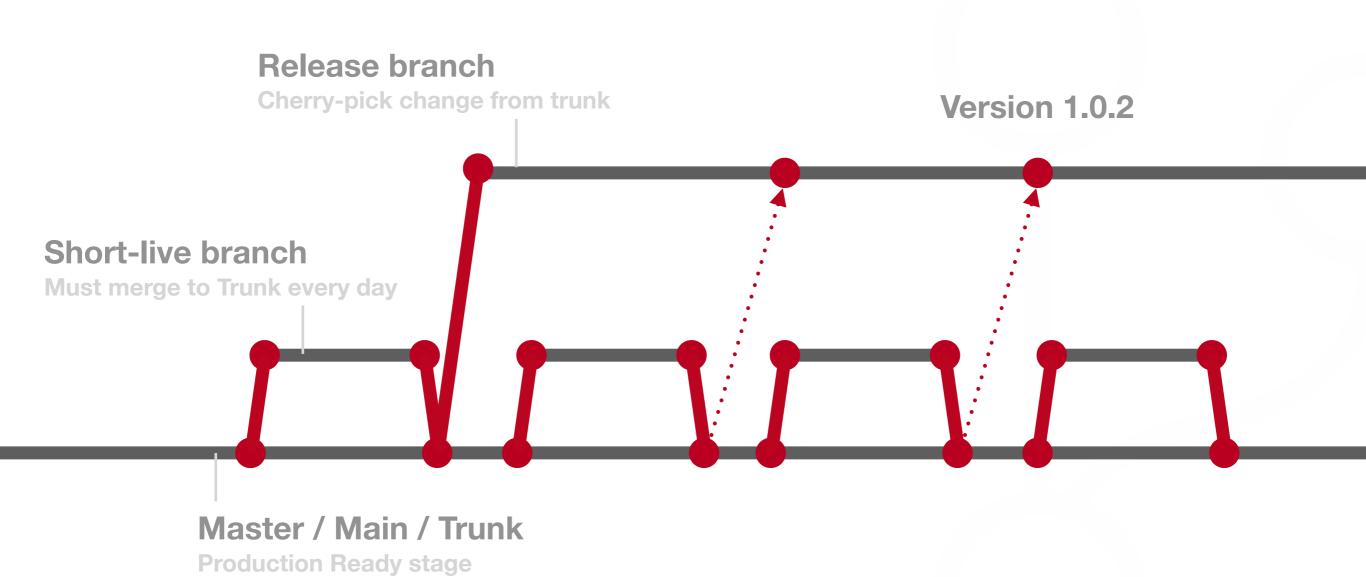
Master / Main / Trunk

Production Ready stage



Production Ready stage





What?

Checking out / cloning

Developer will update/pull/sync from *Trunk* branch many times a day (hour-by-hour), knowing that the build passes

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Code Reviews

The developer needs to get the commit reviewed. Some teams will count the fact that the code was 'pair programmed' as an automatic review

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A safety net

Continuous Integration (CI) daemons are set up to watch the *trunk* (and the *short-lived* feature branches used in review).

What?

Developer team commitments

Need to consider the impact of their potentially larger commits, especially where renames or moves were wholesale, and adopt techniques to allow those changes to be more easily consumed by teammates

What?

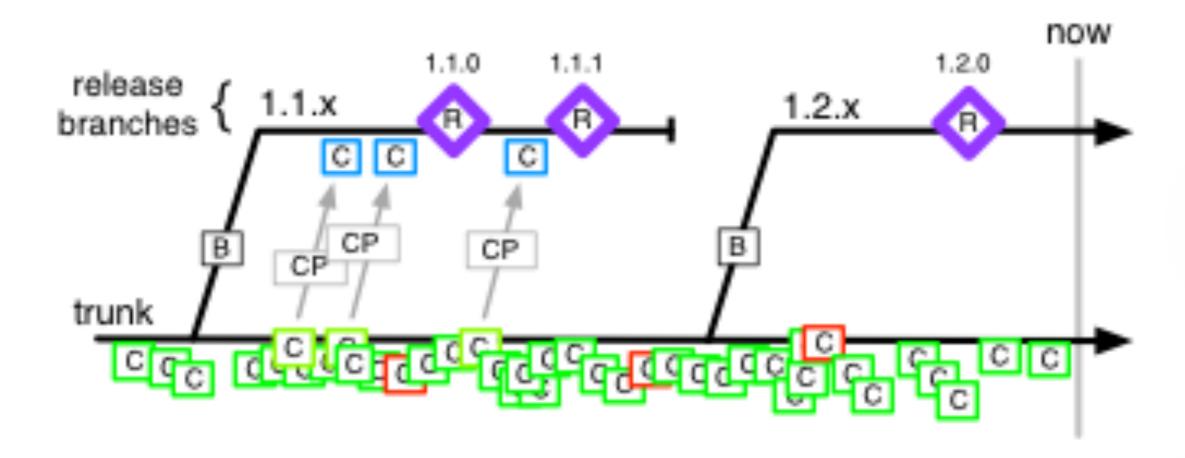
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Need to consider the impact of their potentially larger commits, especially where renames or moves were wholesale, and adopt techniques to allow those changes to be more easily consumed by teammates

Drilling into 'Distance'

Late merges of development that happened more than a couple of days ago.

A breaking build that lowers development team throughput, and diverts resources while it is being fixed



My Branching Model = Git flow + Github flow + *Trunk Based*

Settings up GitHub repo

After pull requests are merged, you can have head branches deleted automatically.

Automatically delete head branches

Deleted branches will still be able to be restored.

- Automatic Remove Head Branch After Merged -

Settings up GitHub repo

Require pull request reviews before merging

When enabled, all commits must be made to a non-protected branch and submitted via a pull request with the required number of approving reviews and no changes requested before it can be merged into a branch that matches this rule.

Required approving reviews: 1 ▼

✓ Dismiss stale pull request approvals when new commits are pushed

New reviewable commits pushed to a matching branch will dismiss pull request review approvals.

□ Require review from Code Owners

Require an approved review in pull requests including files with a designated code owner.

Require status checks to pass before merging

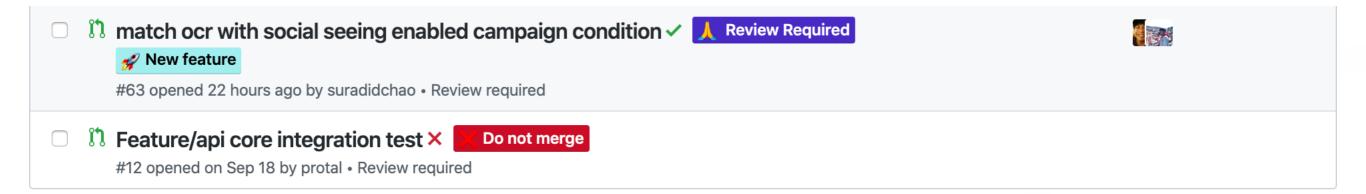
Choose which status checks must pass before branches can be merged into a branch that matches this rule. When enabled, commits must first be pushed to another branch, then merged or pushed directly to a branch that matches this rule after status checks have passed.

Require branches to be up to date before merging

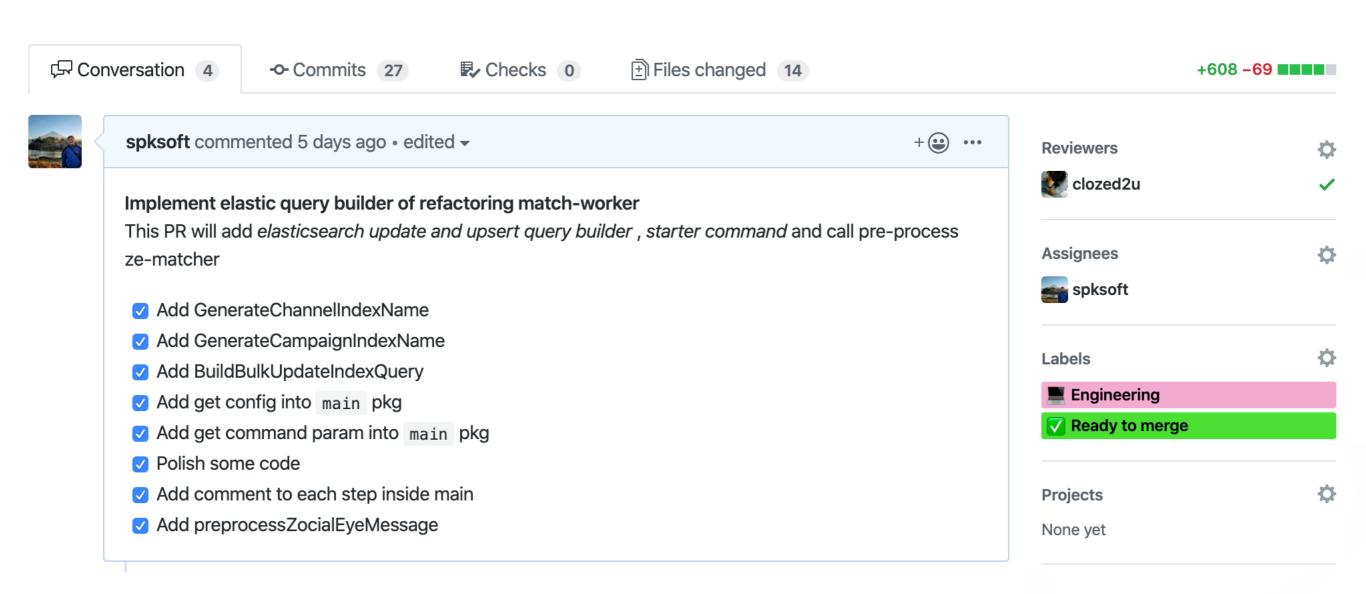
This ensures pull requests targeting a matching branch have been tested with the latest code. This setting will not take effect unless at least one status check is enabled (see below).

- Before merge any PR must be passed status check -

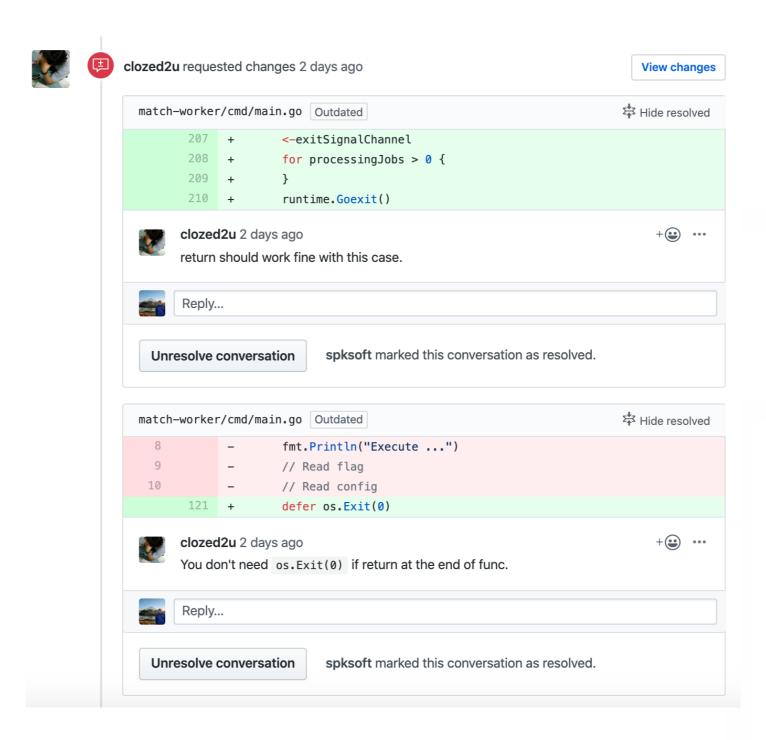
Settings up GitHub repo



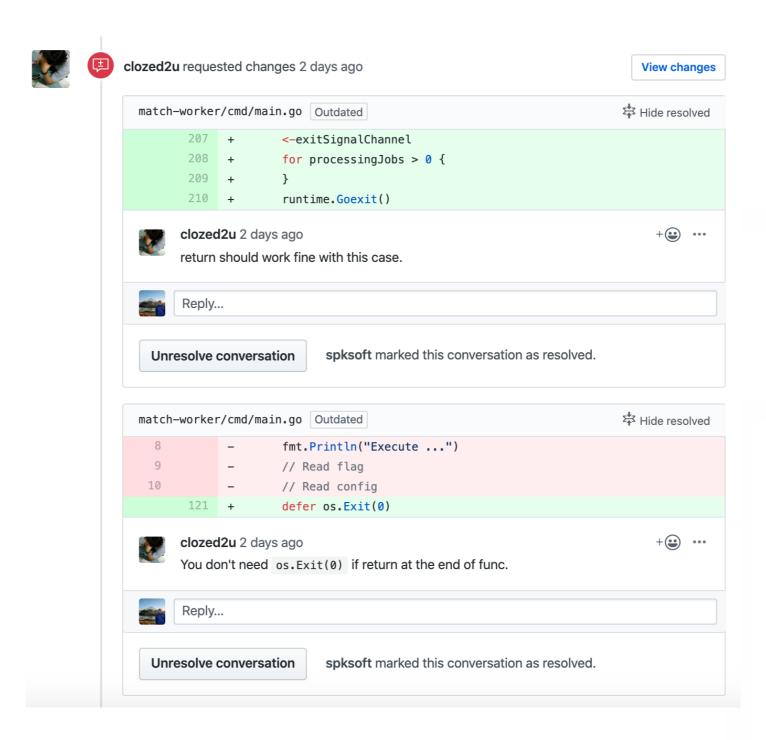
Settings up GitHub repo



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posts/a-successful-git-branching-model/, <a href="https://ntt