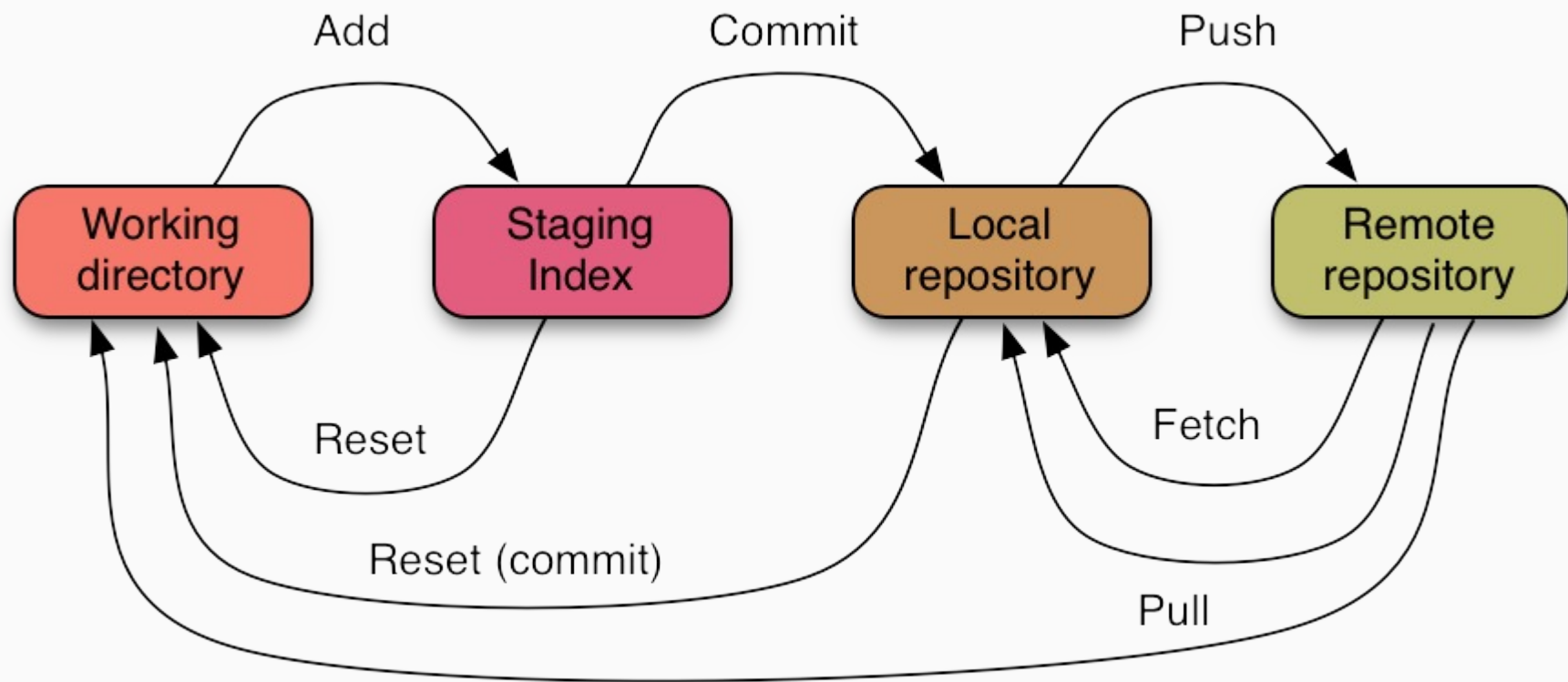


Git & GitHub



Branching

Branching in git is like opening a new timeline for new work to not affect what's already in the master branch.

It's light-weight, easy to create and when things do not work you can easily remove it, when it works you can merge your changes into the master branch to get all your work reflected in master.

? What is the master branch ?

<https://git-school.github.io/visualizing-git/>

Git Terms

- Branch: A copy environment/flow for development
- HEAD: Current branch/commit that is being viewed
 - detached HEAD: when you are checked out to a commit
 - Do not do any changes on a detached HEAD, only on branches
- Checkout: Switch the HEAD to a branch/commit
- Merge: Combine changes from branches together

Merge Conflict

- Merge conflict occur when trying to merge but there is some difference between branches or repositories
- What is the difference?
 - The same file having different updates
 - Let's force a conflict to see an example
- What's the best way to handle conflicts?
 - Avoid them

Reset Commit

Right click on the commit you want to go back to and select Reset Current Branch to Here

Git Reset options:

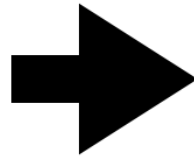
- Soft: file doesn't update, but changes are staged automatically

- Mixed: file doesn't update, but changes are not staged automatically

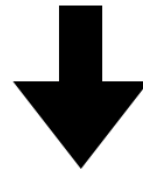
- Hard: file will lose all changes until the selected commit

Revert vs Reset: Revert is for pushed commits, history is preserved

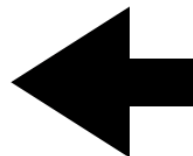
Local feature-a



Origin feature-a

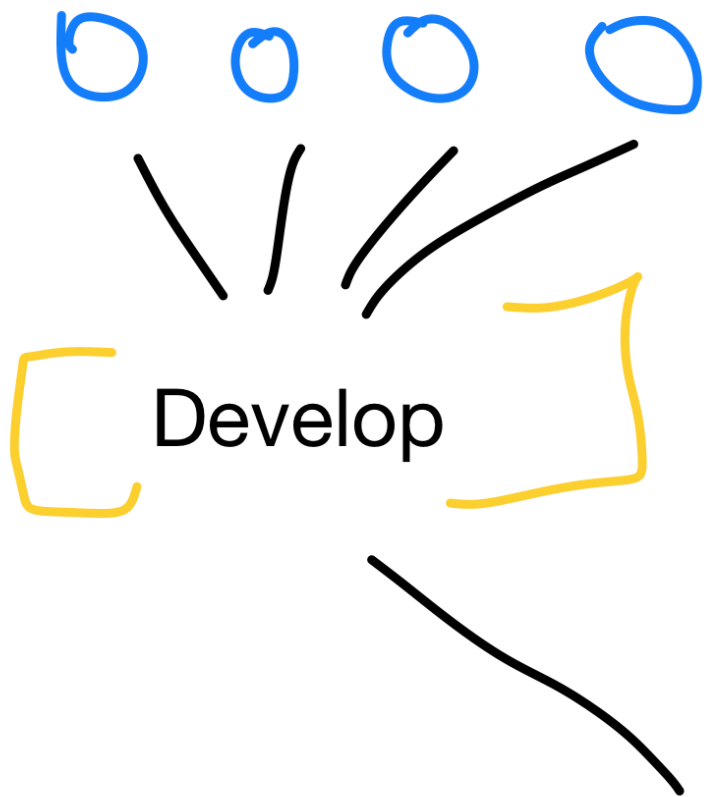


Origin feature-a
pull request to
Origin master

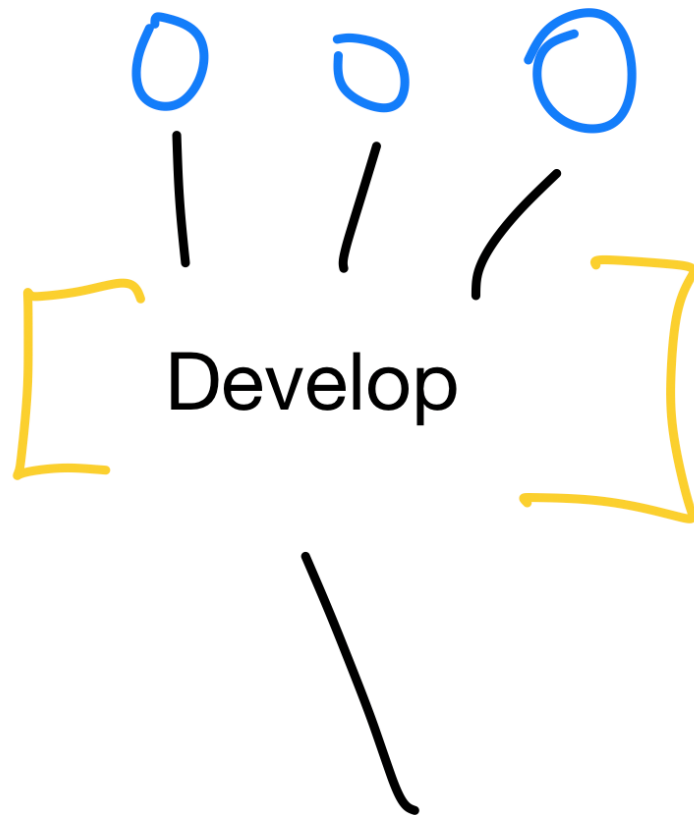


Local master

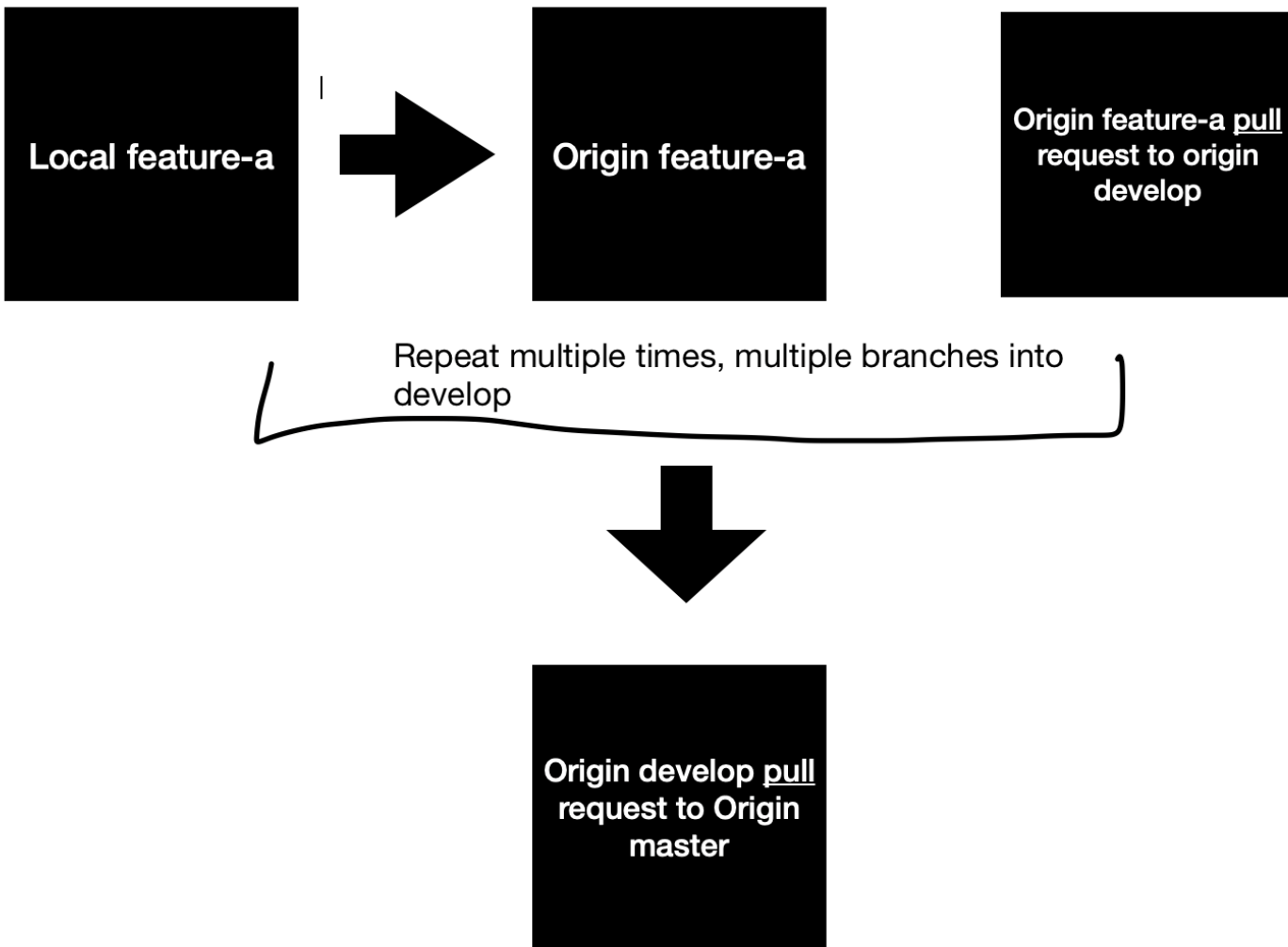




Master ver 1




Master ver 2



Pull Request

- Layer to check if the branch should be merged
- Usually used in a team flow where peer review is done before merging
 - Flow: Work in feature branch, push branch to origin, create pull request to merge from branch to another branch
 - Review is done by a team member
- In the pull request you can:
 - Comment/discuss, check individual commits and changes, confirm merges

Pull Request – Option 1

 Pull requests

- Click create pull request button on github
- Click the create new pull request button
- Select the base and compare branches

New pull request



base: master ▼



compare: feature-a ▼

Create pull request

- Click the create pull request button
- Make sure information is correct and create pull request button

Pull Request – Option 2

- Click the compare and & pull request button after changes are pushed



feature-a had recent pushes less than a minute ago

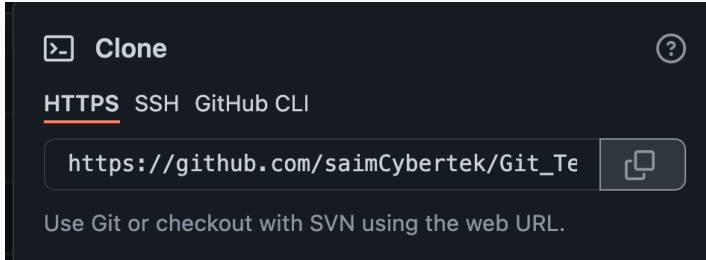
Compare & pull request

Cloning

- Go to the github.com remote repository
- Click green code button
- Copy the https git link
- In IntelliJ -> file -> new -> project from version control



Code ▾



Clone

HTTPS SSH GitHub CLI

https://github.com/saimCybertek/Git_Test.git

Use Git or checkout with SVN using the web URL.

Version control: Git

URL: https://github.com/saimCybertek/Git_Test.git