## rebase

# master

# ---o---o---o

# \

# A---B topic

(topic)

$ git fetch

$ git rebase master

# master

# ---o---o---o

# \ \

# A---B A'---B' topic

## why rebase?

# master

# ---o---o---o---o---x

# \ \ /

# A---B---x---C topic

(topic)

$ git commit

$ git commit

$ git merge master

$ git commit

(master)

$ git merge topic

# merge commits do not add value

# difficult to read history

(topic)

$ git rebase master

# master

# ---o---o---o---o

# \ \

# A---B---C A'---B'---C' topic

## rebase -i

# Commit often, perfect later.

# master

# ---o---o---o

# \

# A---B---C---D topic

(topic)

$ git rebase -i master|head~4

pick A

pick B

pick C

pick D

# Commands:

# p, pick = use commit

# r, reword = use commit, but edit the commit message

# e, edit = use commit, but stop for amending

# s, squash = use commit, but meld into previous commit

# f, fixup = like "squash", but discard this commit's log message

# x, exec = run command (the rest of the line) using shell

# d, drop = remove commit

# scenario 1: edit, pick, drop

edit A

pick B

drop C

drop D

stopped at A...

(some changes...)

$ git add .

$ git rebase --continue

# master

# ---o---o---o

# |\

# | A---B---C---D

# \

# A'--B' topic

# scenario 2: reorder commits

pick A

pick C

pick B

pick D

# master

# ---o---o---o

# |\

# | A---B---C---D

# \

# A'--C'--B'--D' topic

# scenario 3: pick, fixup, reorder, drop

pick A

fixup C

pick B

#edit D (dropping D by commenting)

# results in

AC (commits A+C)

B (commit B)

# master

# ---o---o---o

# |\

# | A---B---C---D

# \

# AC'--B' topic

## push after rebase

(topic)

$ git push

$ git fetch

$ git rebase master

# master

# ---o---o---o

# \ \

# \ A'---B' topic

# \

# A---B topic{-1}

# origin/topic

$ git push topic

rejected (non-fast-forward)

do a pull/merge first

$ git push -f

# master

# ---o---o---o

# \ \

# \ A'---B' topic

# \ origin/topic

# A---B

# golden rule of rebase

# I normally don't rebase a branch,

# but when I do, I do master.

# - The Most Interesting Rebaser in the World

# #yolo

# don't rebase public branches

# last hotfix

# ---o---o---o

# \

# A---B master (me, others)

# I rebase master

(master)

$ git rebase hotfix

$ git push -f

# hotfix origin/master

# ---o---o---o---A'---B' master (me)

# \

# A---B master (others)

# Others merge origin/master

(master)

$ git merge origin/master

$ git push

# hotfix

# ---o---o---o---A'---B'

# \ \ origin/master

# A---B------------x master (me, others)

# Merge is better compared to rebase

# I merge master

(master)

$ git merge hotfix

$ git push

# hotfix

# ---o---o---o

# \ \

# A---B---x master (me, others)

# origin/master

# Others can fast-forward master now