# Git Basics

**version control**

noun Computing

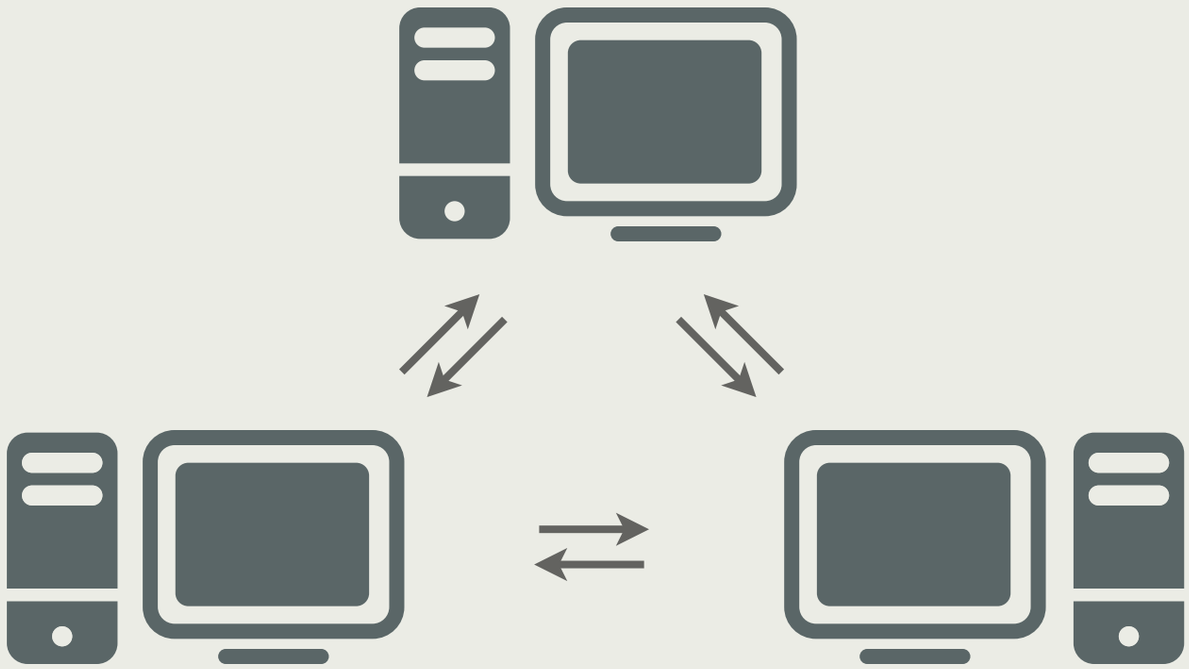
**the task of keeping a software system consisting of many versions and configurations well organised.**

# Centralised

## (e.g. Subversion)

1 source of truth

1 point of failure



# Distributed

## (e.g. Git, Mercurial)

# No 1 source of truth

# No 1 point of failure

# Commands

## (for day-to-day activities)

init
clone
add
commit
remote
push
stash
revert
log
branch
checkout
merge

# Staging

## (the fundamental git concept)

working directory
add
staging area/index
commit
repository

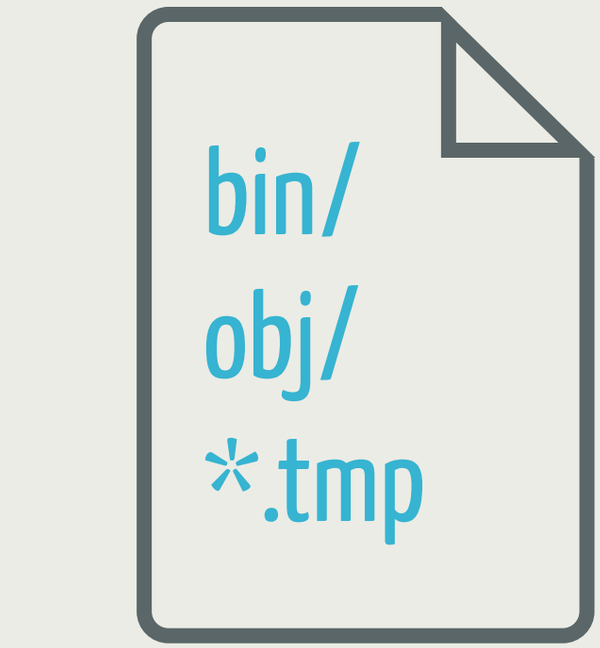
# Helping Hands

## (log, diff & status)

| | |
|---|---|
| log | Show commit logs |
| diff | Show changes between commits |
| status | Show the working tree status |

# .gitignore

(excluding files you don't need)

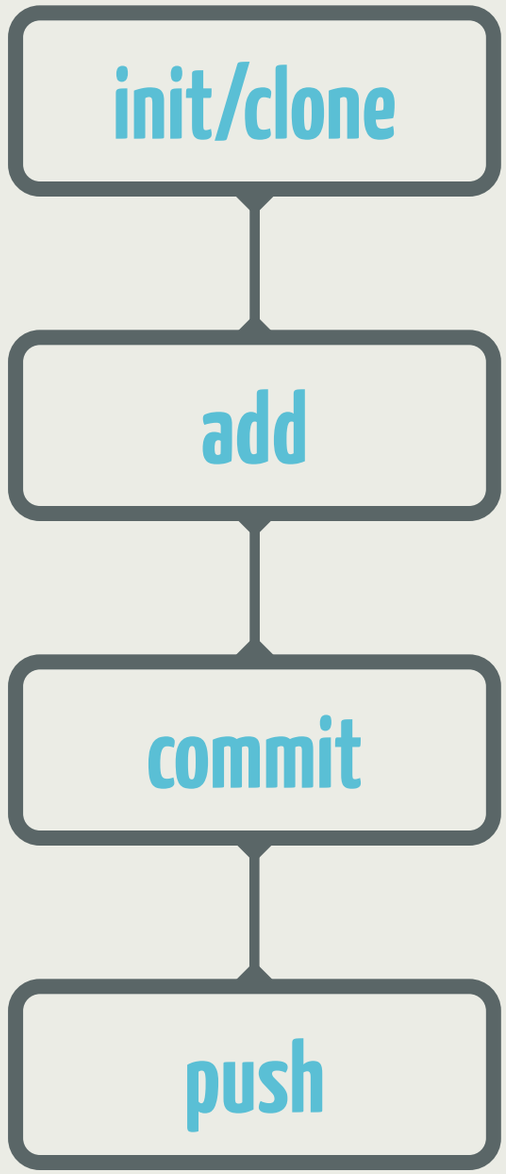



.gitignore

# Workflows

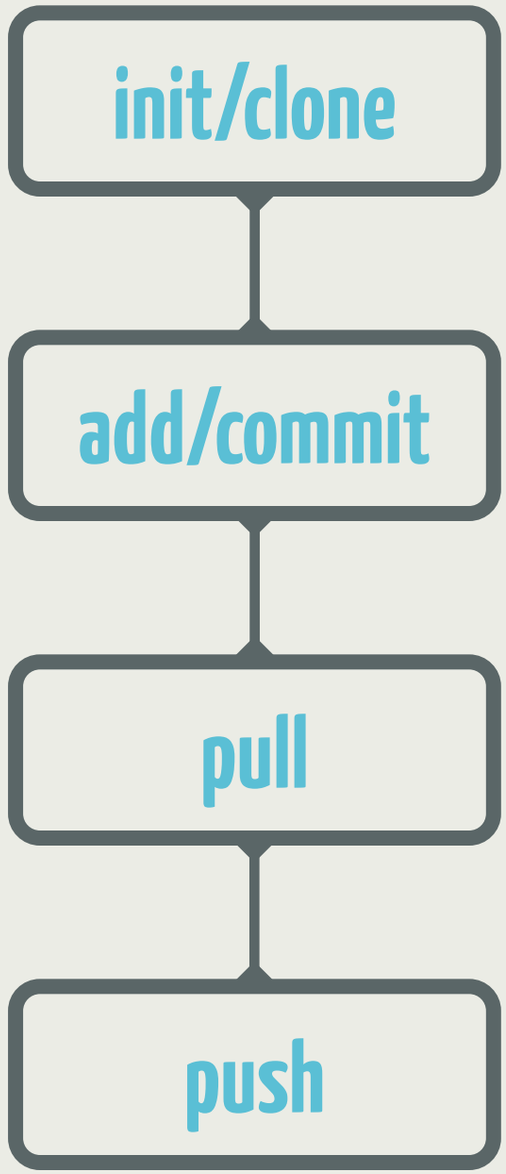
(super simple, happy path git usage)

Create or copy a repo
Committing code
Pulling code
Pushing code
Feature branches
Backing out changes



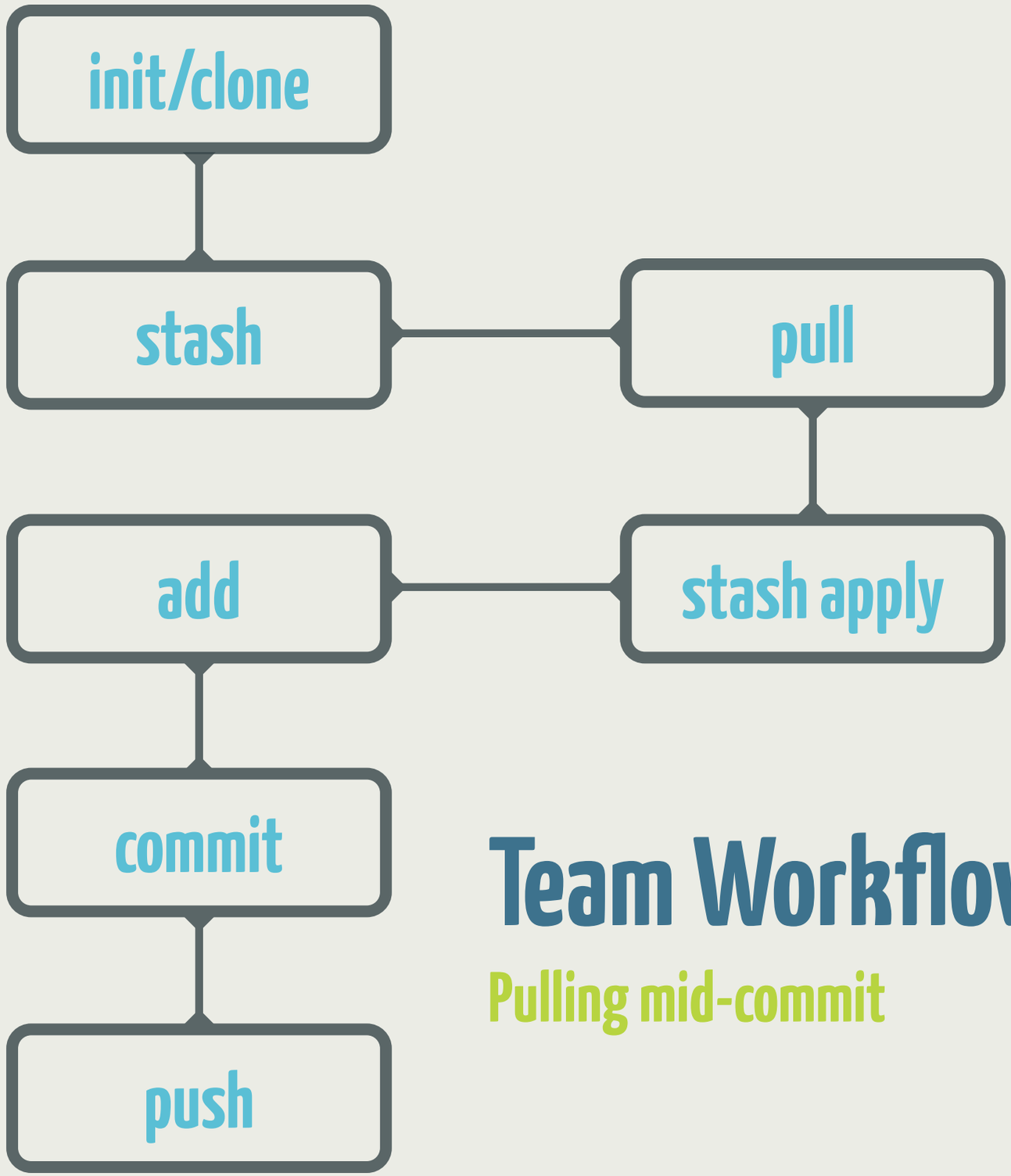

# Super Simple Git Workflow

## For the lone wolf



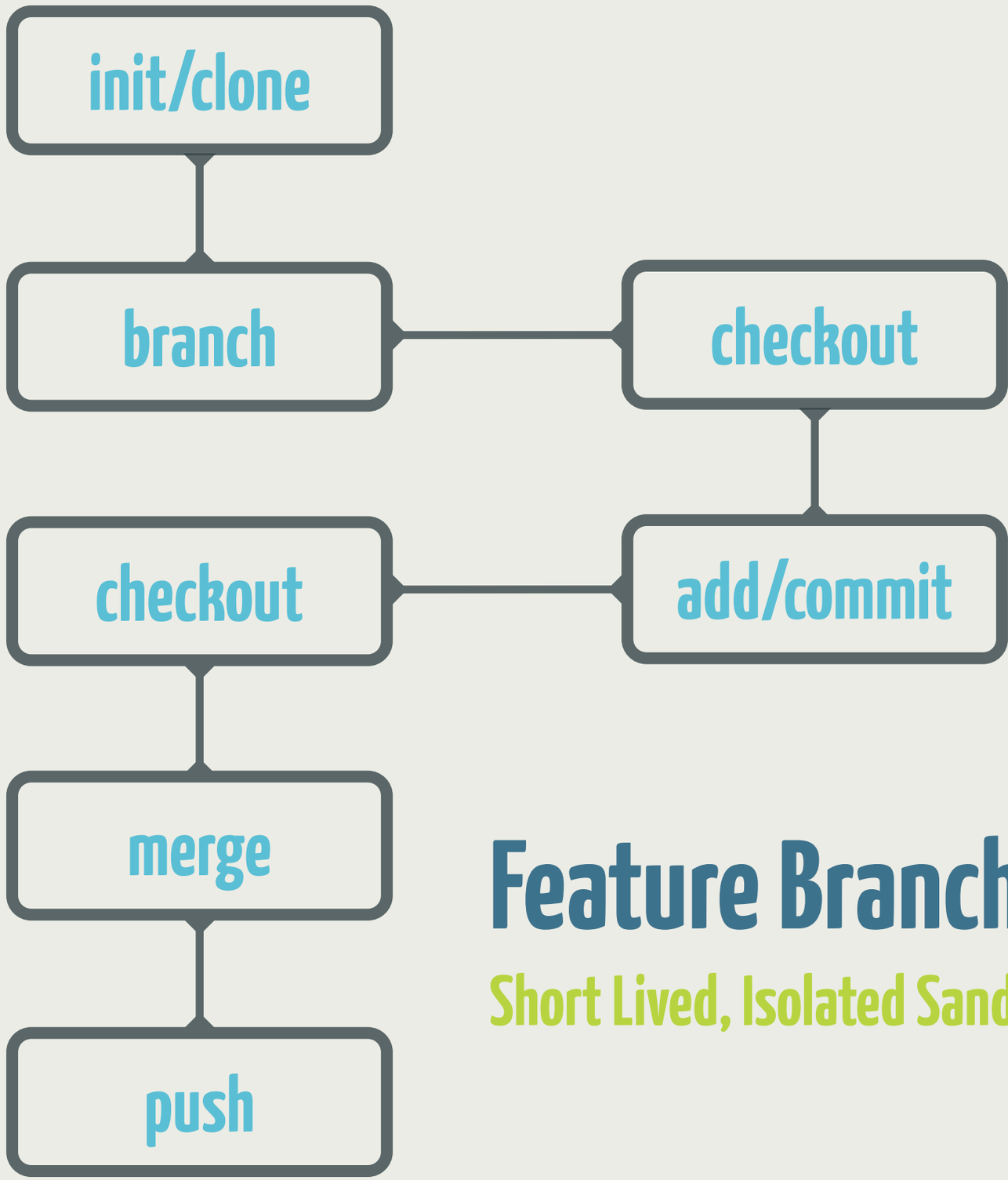

# Super Simple Team Workflow

## For the hyper agile team




# Team Workflow

## Pulling mid-commit




# Feature Branches

## Short Lived, Isolated Sandboxes

# Undoing Changes

## (checkout, reset & revert)

`checkout <file>` — Revert uncommitted changes

`reset HEAD <file>` — Revert staged changes

`revert HEAD` — Revert committed changes

# Git Basics