Git: handling files

File created

You create a new file inside a git repo

This file is detected but ignored by git unless you **add**

File created

You create a new file inside a git repo

This file is detected but ignored by git unless you **add**

File added

Git is now monitoring if the file is changed.

If you change it further, just **add** it again.

When you're happy, you add the file to the staging area by doing a **commit**

File created

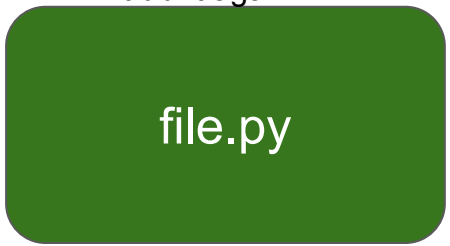
You create a new file inside a git repo

This file is detected but ignored by git unless you **add**

File added

Git is now monitoring if the file is changed.

If you change it further, just **add** it again.



When you're happy, you add the file to the staging area by doing a **commit**

File commited

Commits advance the status of your DAG.

A commit creates a set of files ready to **push**. Pushing is just sending all your commits to the remote hosting site.

File created

You create a new file inside a git repo

This file is detected but ignored by git unless you **add**

File added

Git is now monitoring if the file is changed.

If you change it further, just **add** it again.

When you're happy, you add the file to the staging area by doing a **commit**

File commited

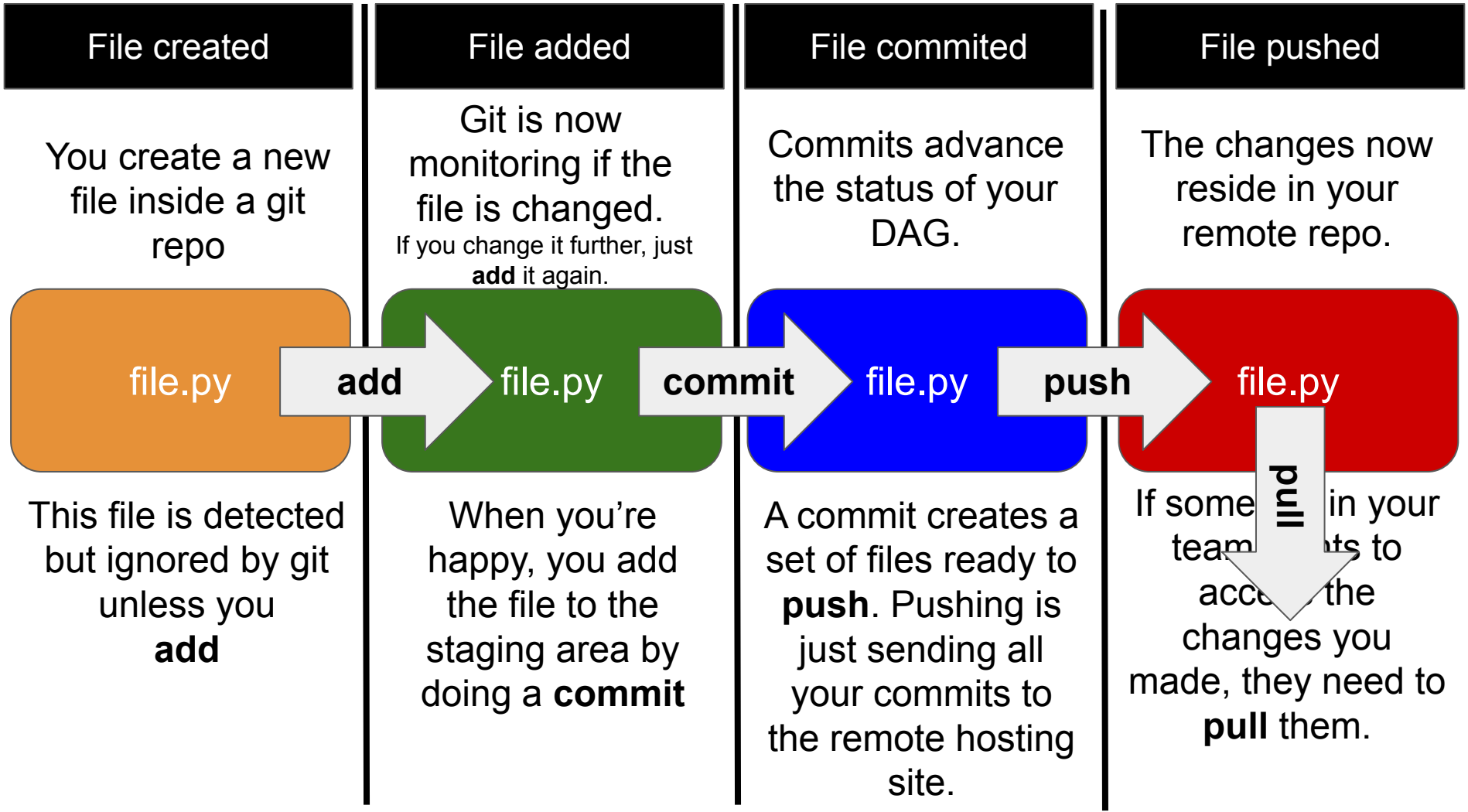
Commits advance the status of your DAG.

A commit creates a set of files ready to **push**. Pushing is just sending all your commits to the remote hosting site.

File pushed

The changes now reside in your remote repo.

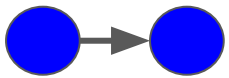
If someone in your team wants to access the changes you made, they need to **pull** them.


File created
File added
File commited
File pushed
You create a new file inside a git repo
Git is now monitoring if the file is changed.
If you change it further, just add it again.
Commits advance the status of your DAG.
The changes now reside in your remote repo.
file.py
add
file.py
commit
file.py
push
file.py
pull
This file is detected but ignored by git unless you add
When you're happy, you add the file to the staging area by doing a commit
A commit creates a set of files ready to push. Pushing is just sending all your commits to the remote hosting site.
changes you made, they need to pull them.

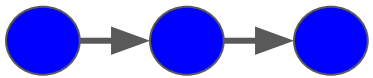
Branches

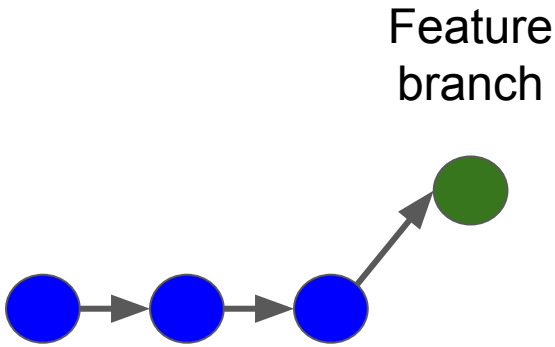
Initial commit

Some changes

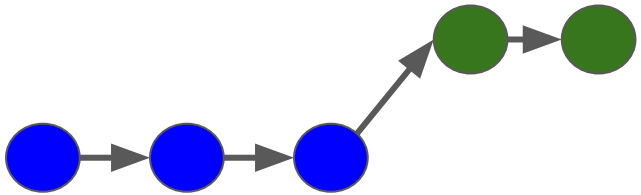


Working stage

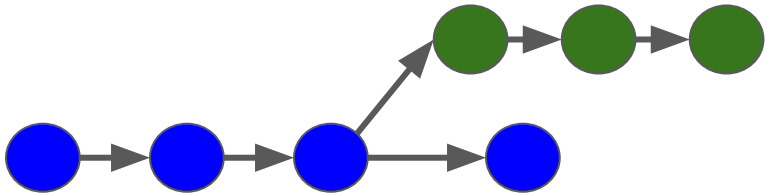



Feature
branch

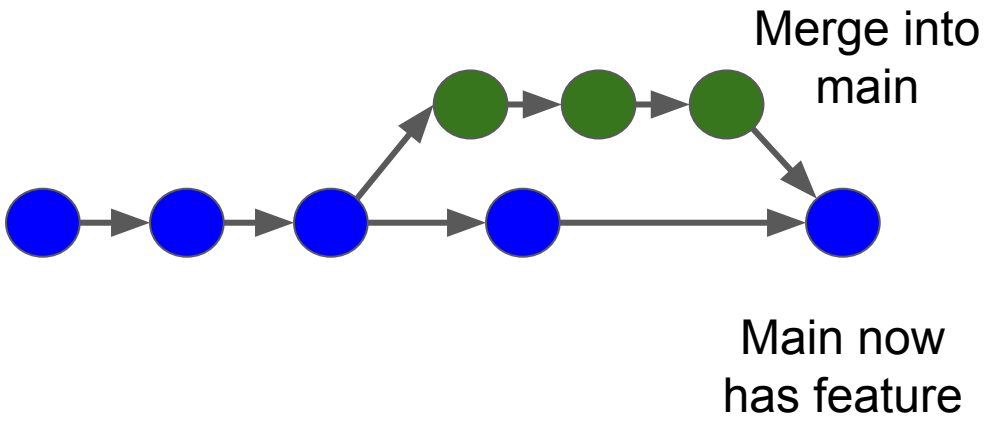
Develop
feature



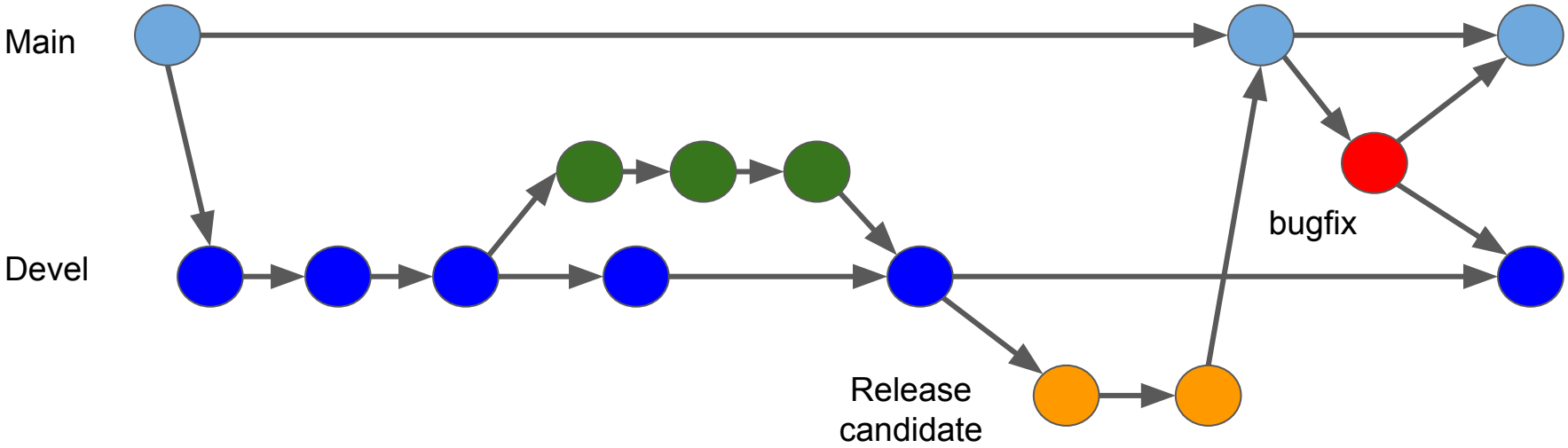
Keep
developing
feature



Keep
developing
main branch


Merge into
main
Main now
has feature

Complex development DAG

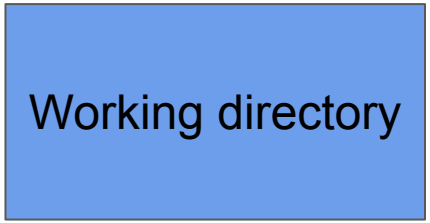


[SourceTree: free git helper]

[Auxiliary tool to manage git flows]

Working rationale

Local version of the git repository



Directory where you are working on your project


Local repository
Staging area
Area where you prepare your code to be committed
Working directory

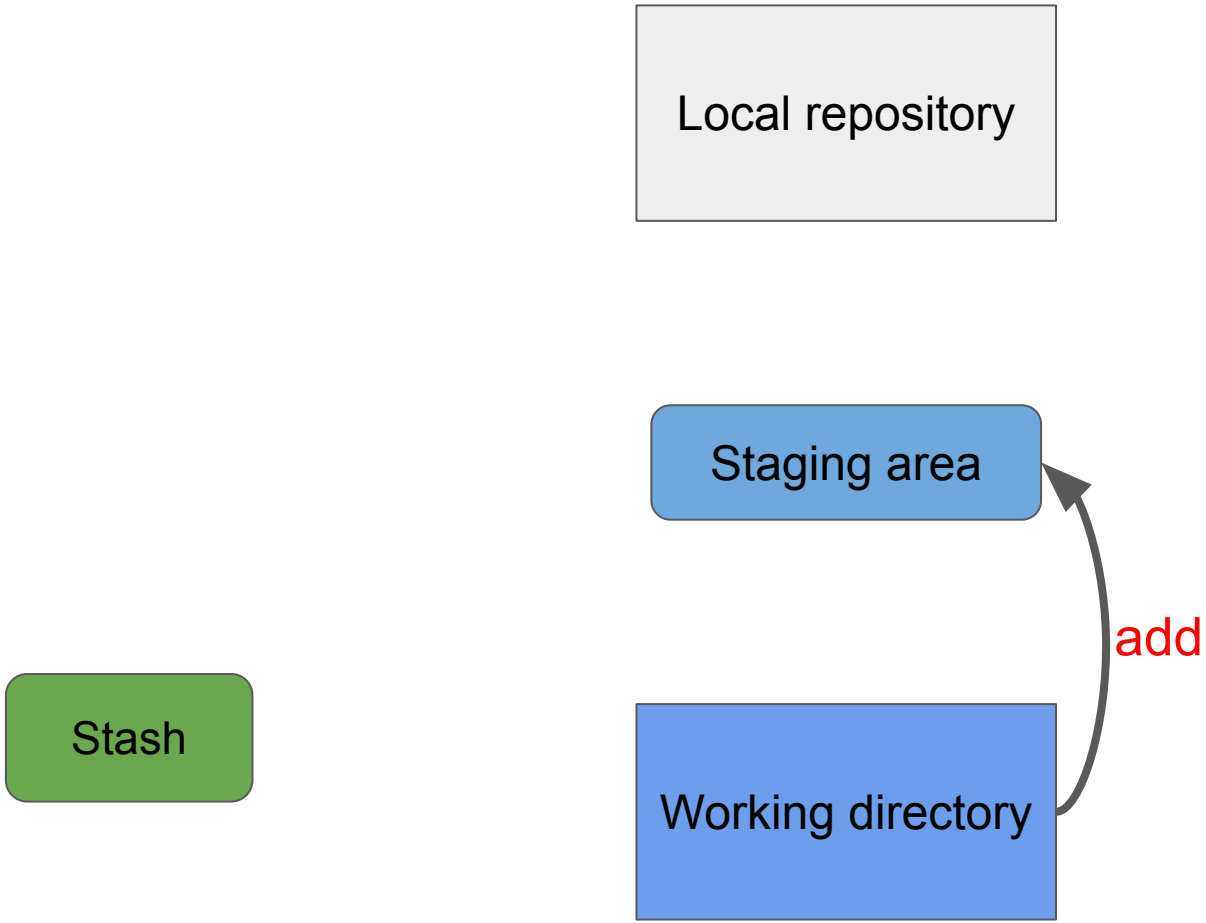
Local repository

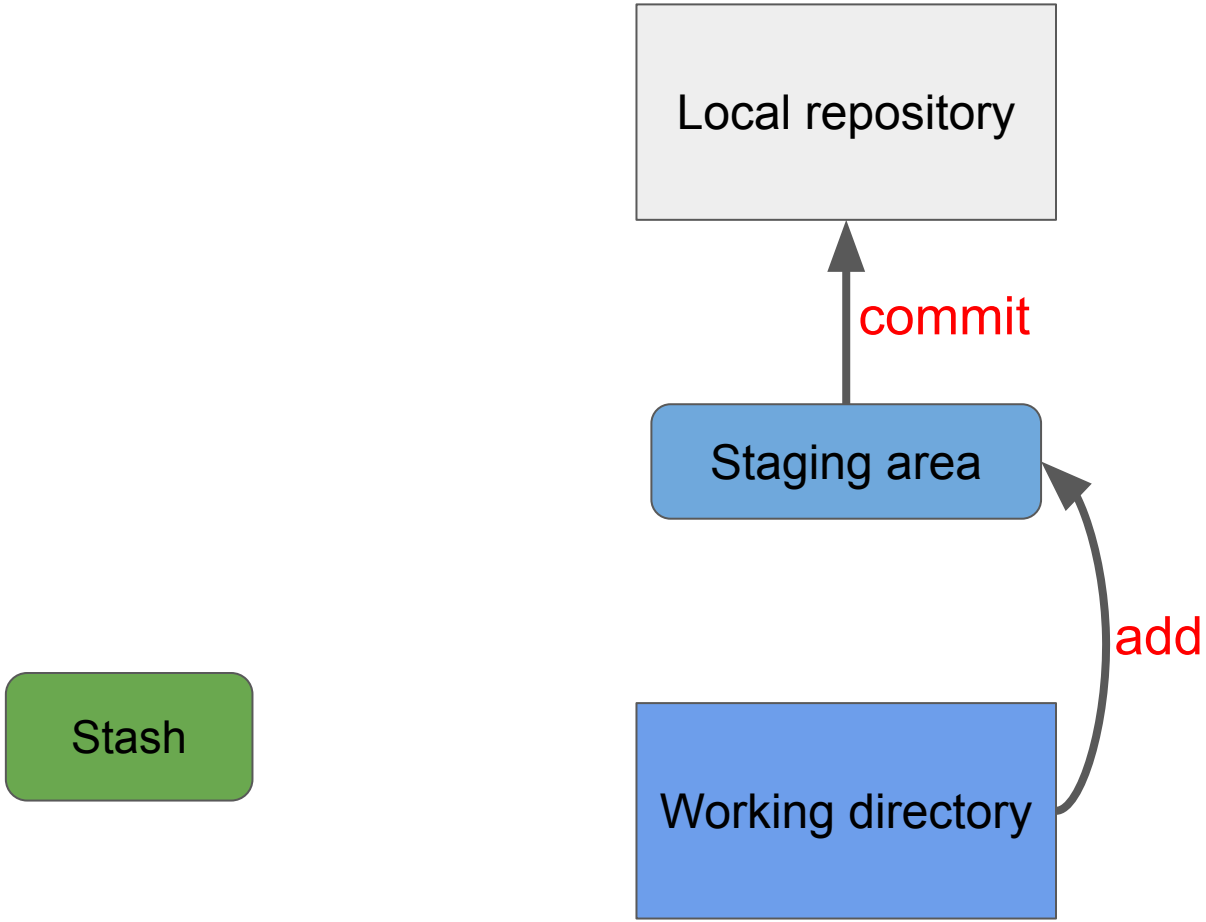
Auxiliary location: Where you save your current progress if you want to return to the beginning of the last commit: we will not cover it in the demo due to time restrictions. You might need to use it at some point.

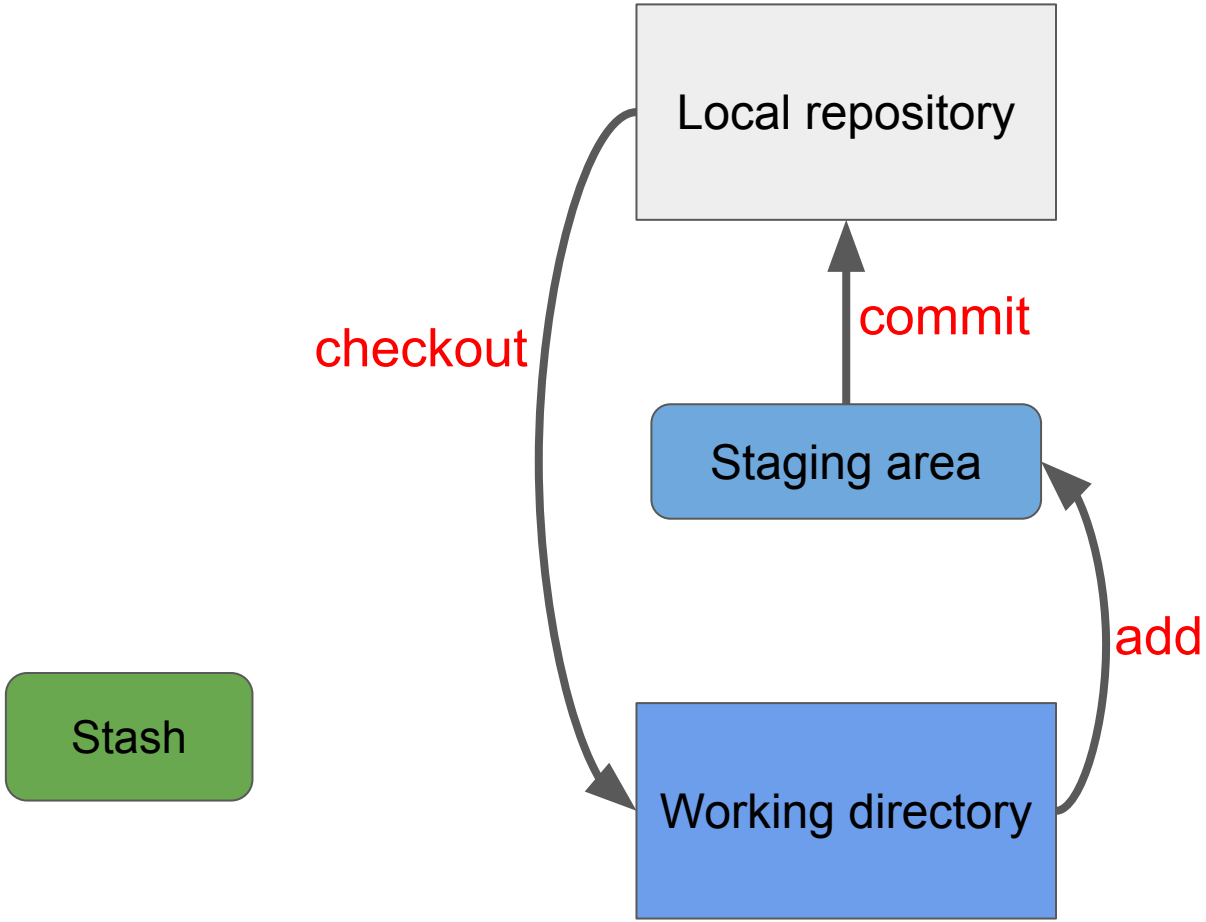
Staging area

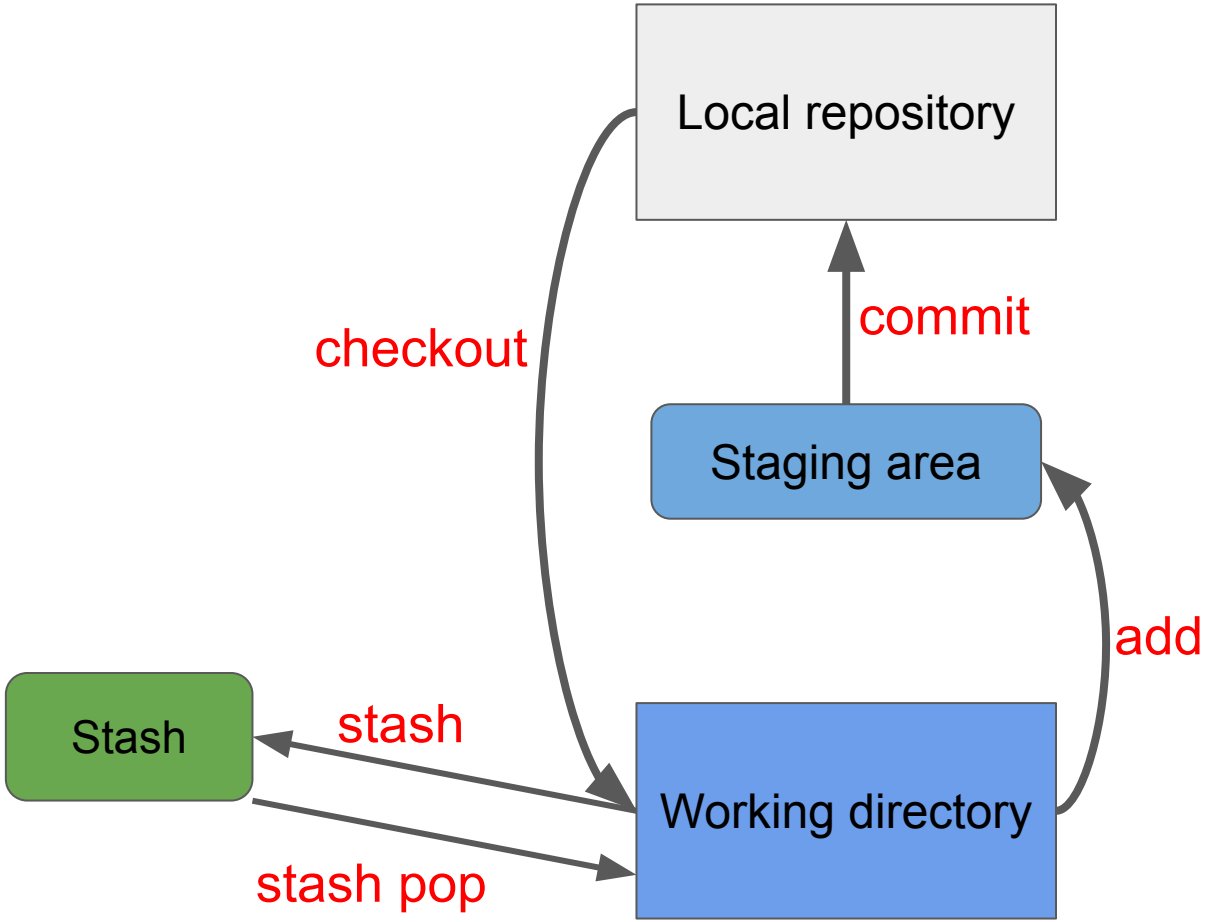
Stash

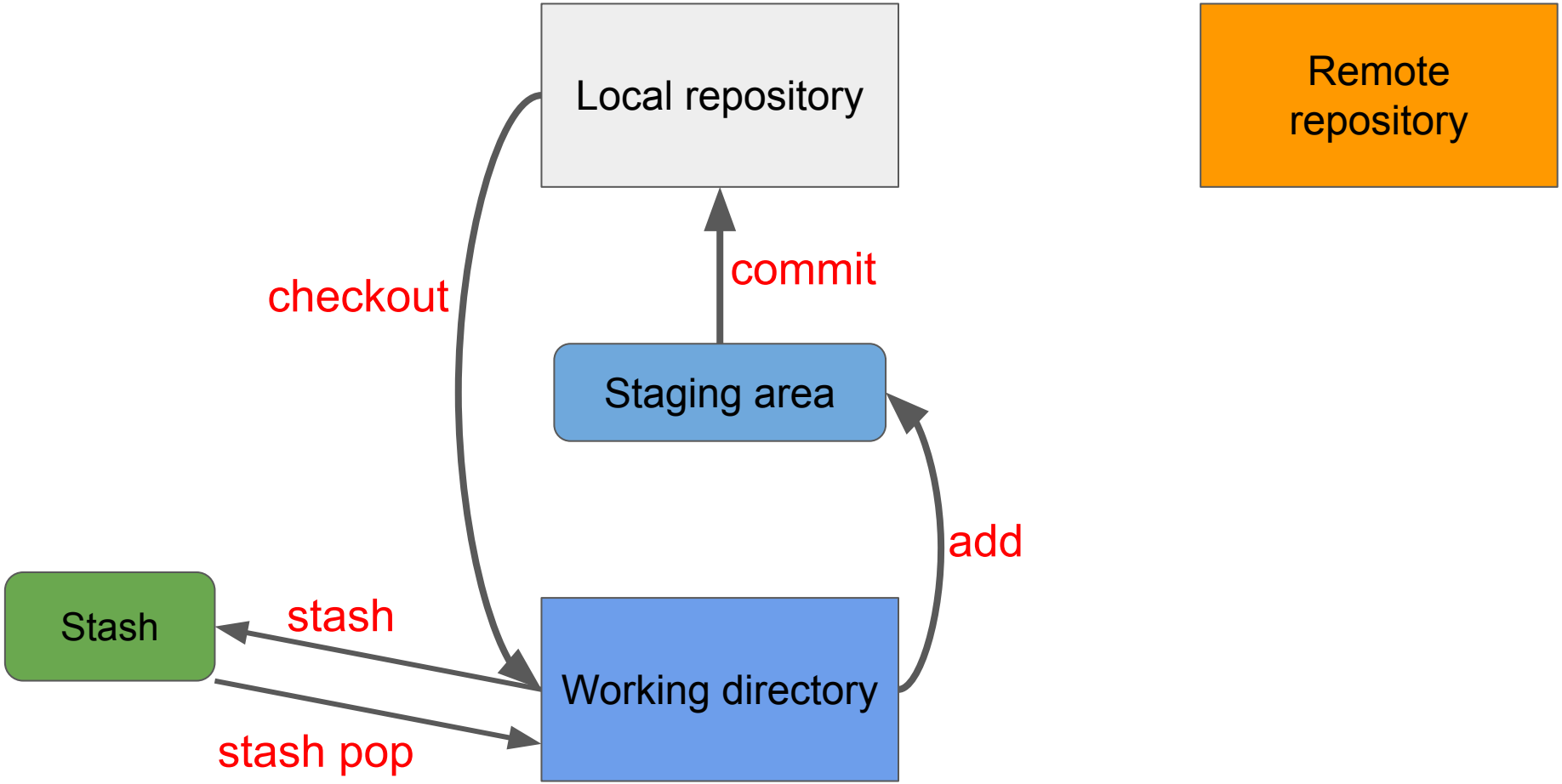
Working directory

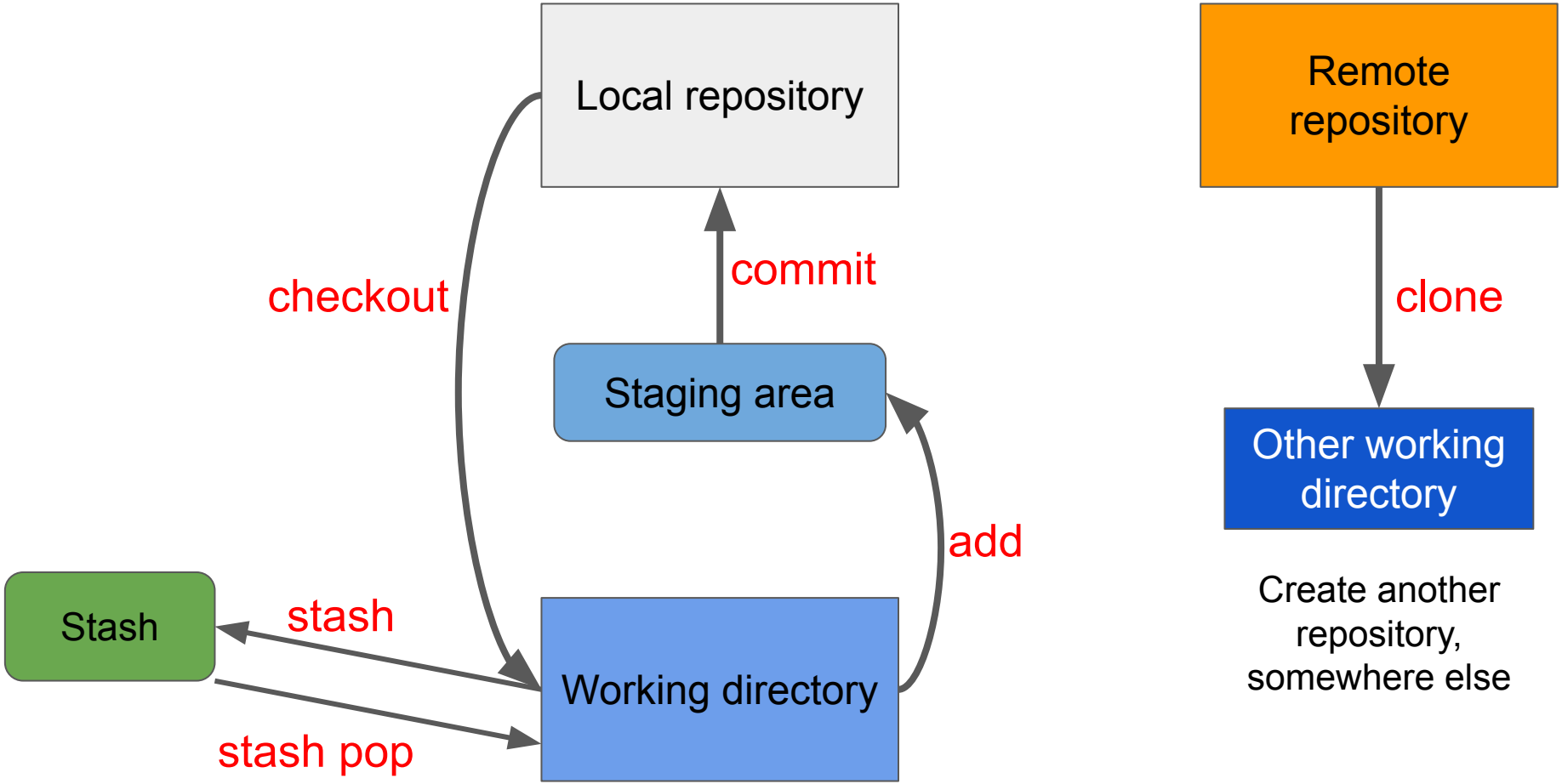

Local repository
Staging area
add
Stash
Working directory

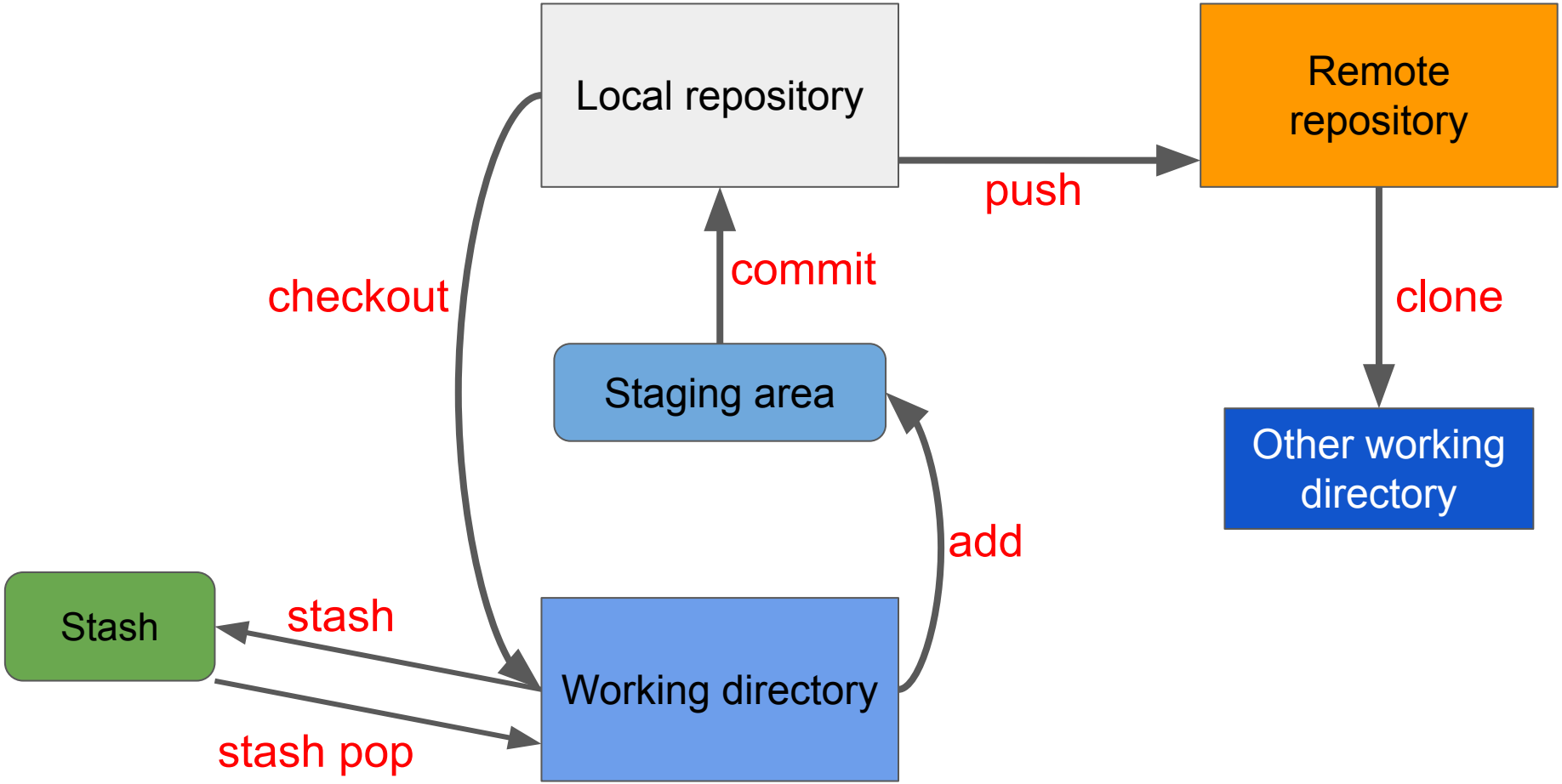

Local repository
commit
Staging area
add
Stash
Working directory

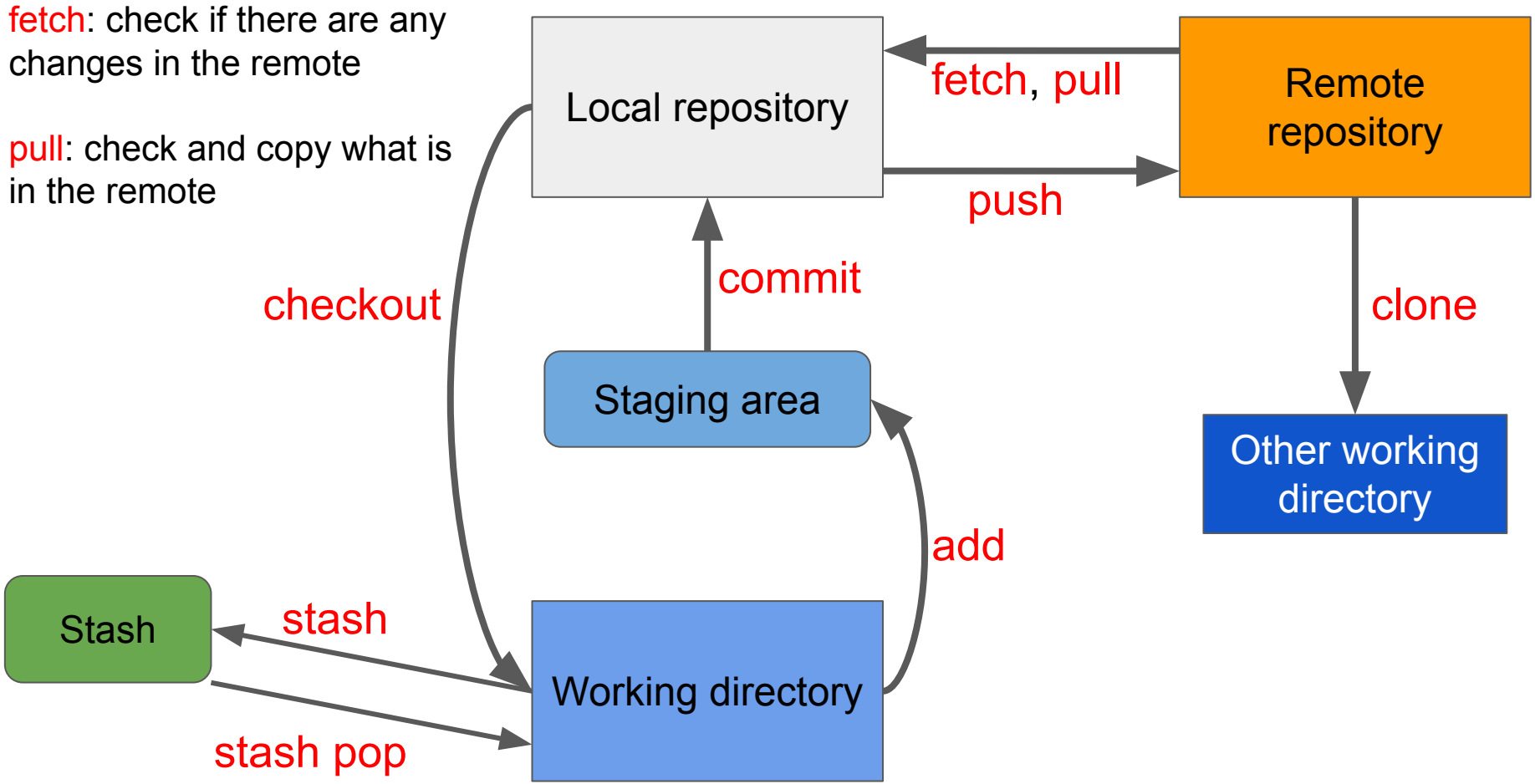

Local repository
checkout
commit
Staging area
add
Stash
Working directory


Local repository
checkout
commit
Staging area
add
Stash
stash
Working directory
stash pop


Local repository
Remote repository
checkout
commit
Staging area
add
Stash
stash
Working directory
stash pop


Local repository
Remote repository
checkout
commit
clone
Staging area
Other working directory
add
Stash
stash
Working directory
Create another repository, somewhere else
stash pop

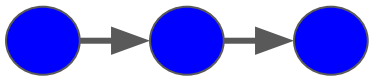

Local repository
Remote repository
push
checkout
commit
clone
Staging area
Other working directory
add
Stash
stash
Working directory
stash pop


fetch: check if there are any changes in the remote
pull: check and copy what is in the remote
Local repository
Remote repository
fetch, pull
push
commit
checkout
clone
Staging area
Other working directory
add
Stash
stash
stash pop
Working directory

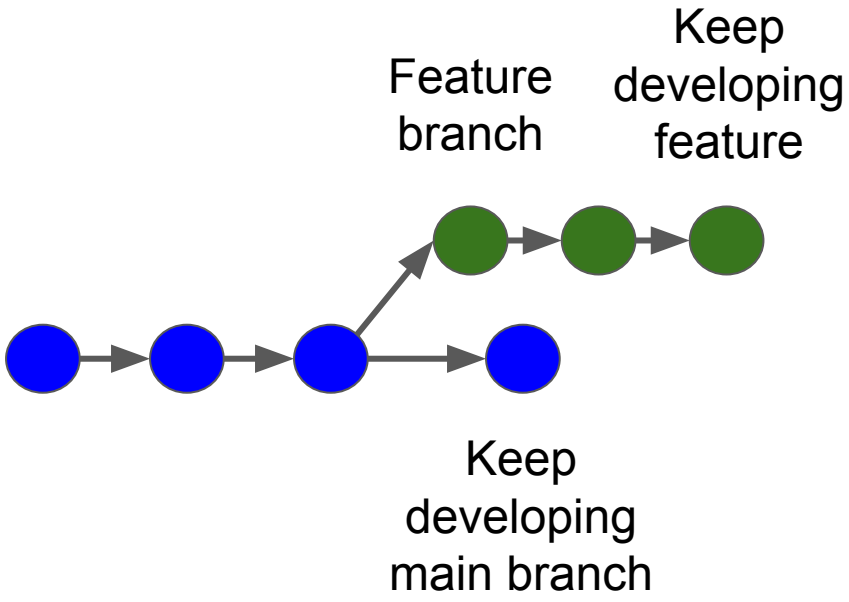
Demo images

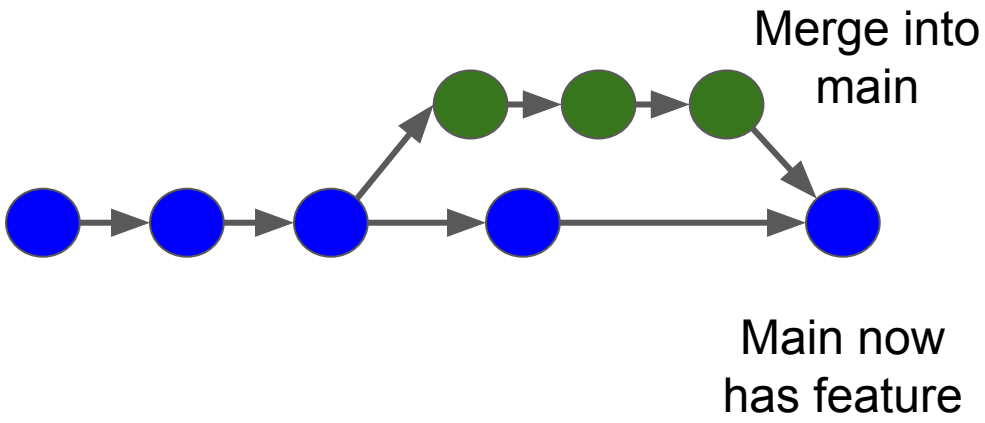
Initial commit

Working stage



Some changes


Feature
branch
Keep
developing
feature
Keep
developing
main branch


Merge into
main
Main now
has feature