

# Branches

# Branching



**HEAD** The snapshot you are viewing

# Branching



\$ git branch

**HEAD** The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

**HEAD** The snapshot you are viewing

# Branching



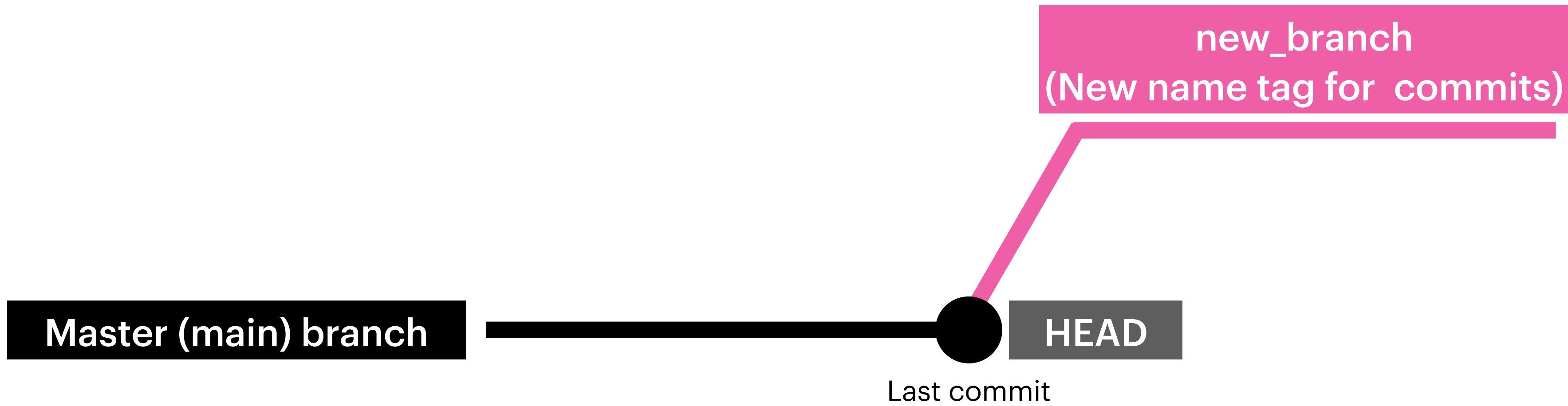
\$ git branch List of branches (Master)

\$ git branch new\_branch

HEAD

The snapshot you are viewing

# Branching



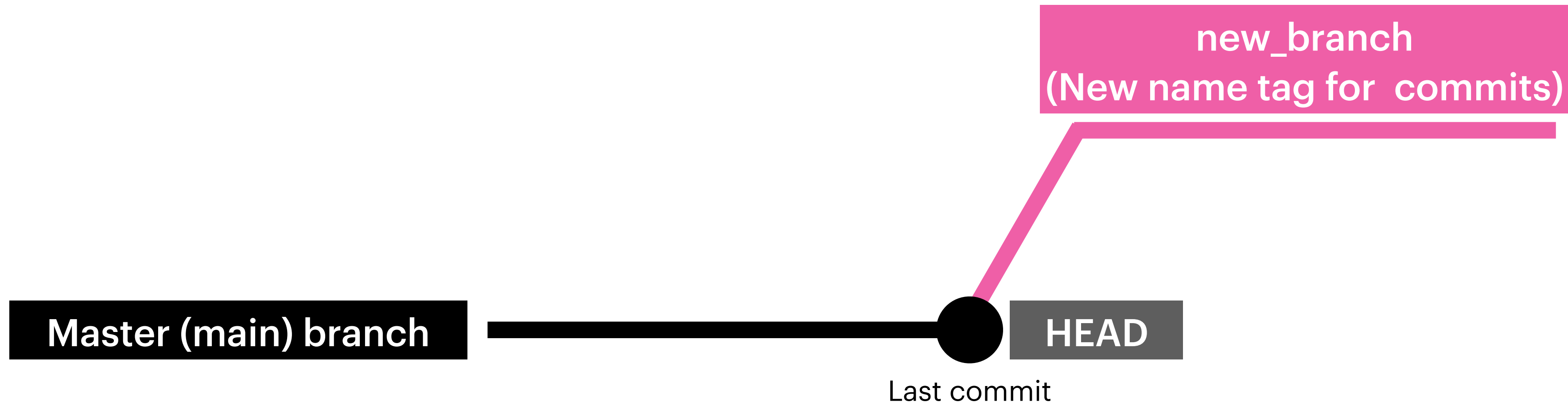
\$ git branch List of branches (Master)

\$ git branch new\_branch

HEAD

The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

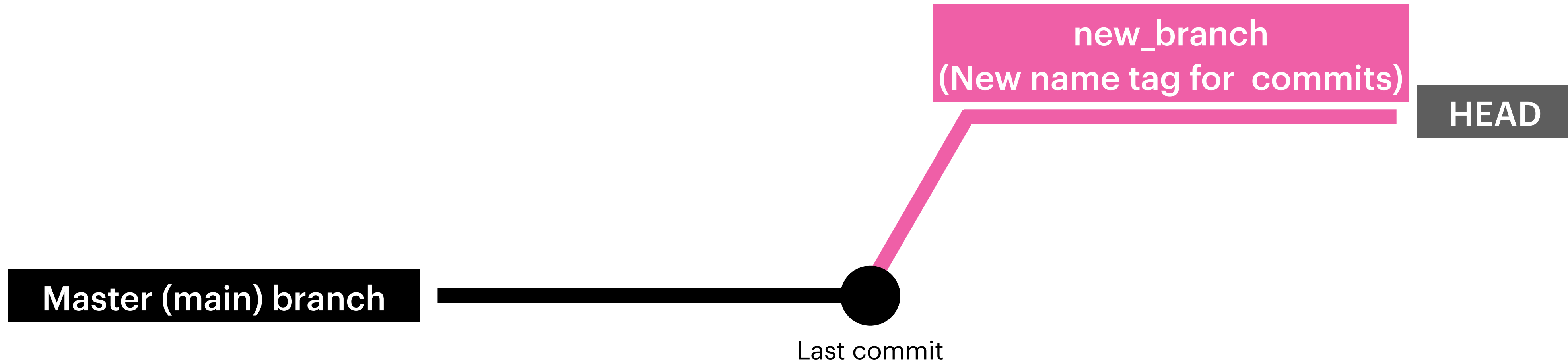
\$ git branch new\_branch

\$ git checkout new\_branch

HEAD

The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

\$ git branch new\_branch

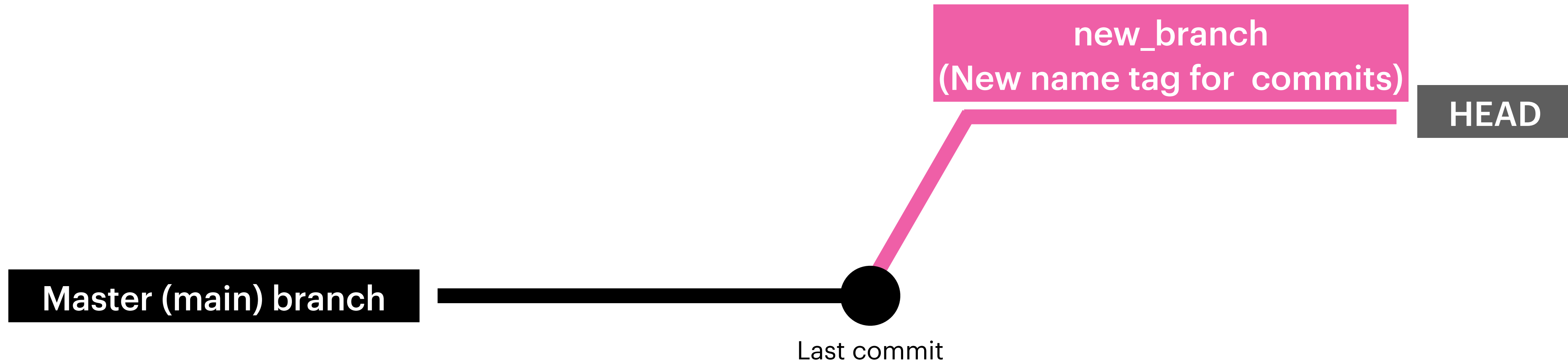
\$ git checkout new\_branch

HEAD

The snapshot you are viewing



# Branching



```
$ git branch List of branches (Master)
```

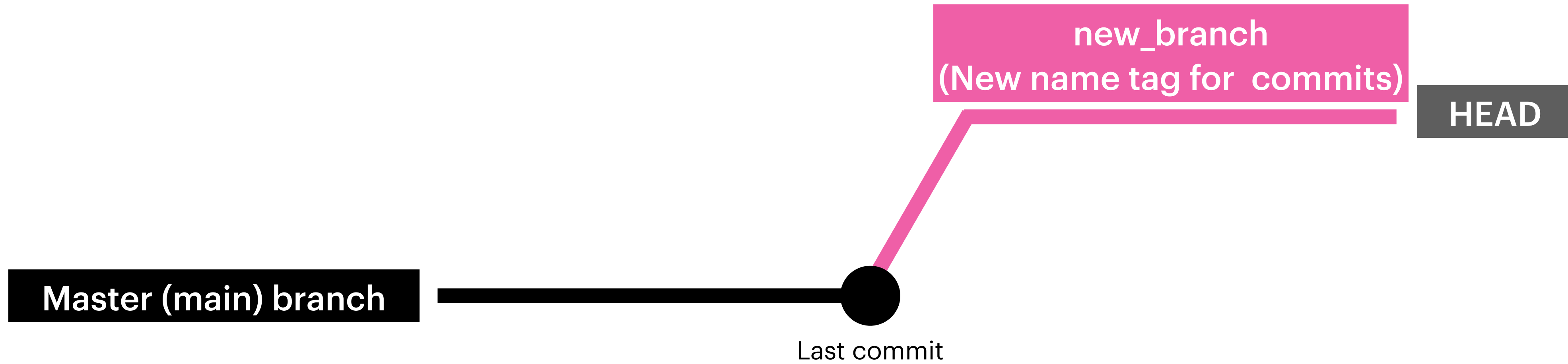
```
$ git branch new_branch }
```

```
$ git checkout new_branch }
```

HEAD

The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

\$ git branch new\_branch

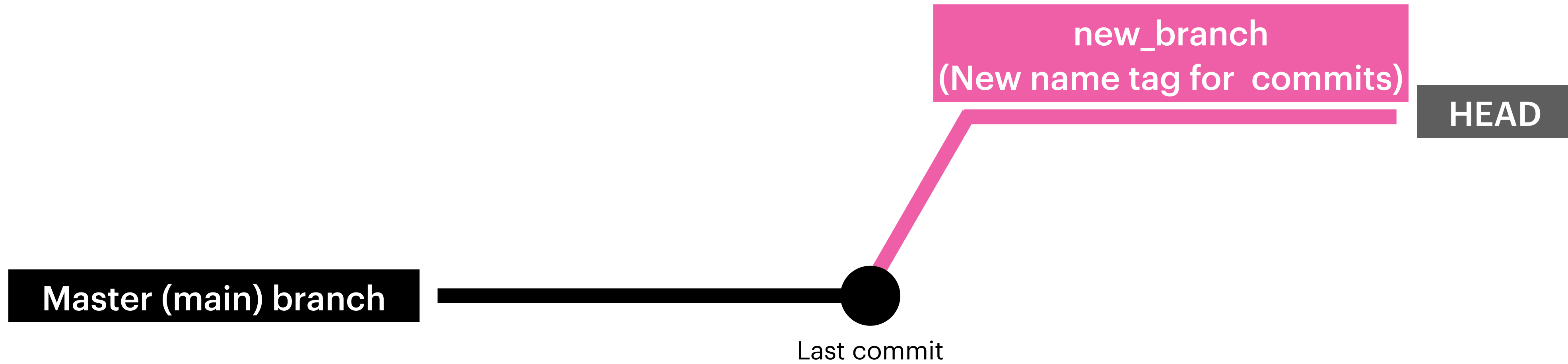
\$ git checkout new\_branch

} \$ git checkout -b new\_branch

HEAD

The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

\$ git branch new\_branch

\$ git checkout new\_branch

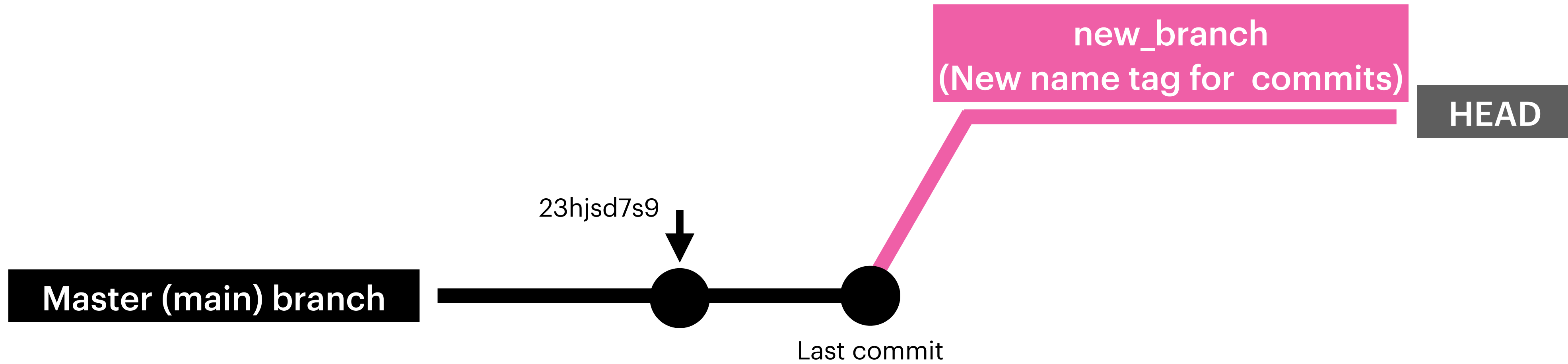
\$ git switch new\_branch

} \$ git checkout -b new\_branch

HEAD

The snapshot you are viewing

# Branching



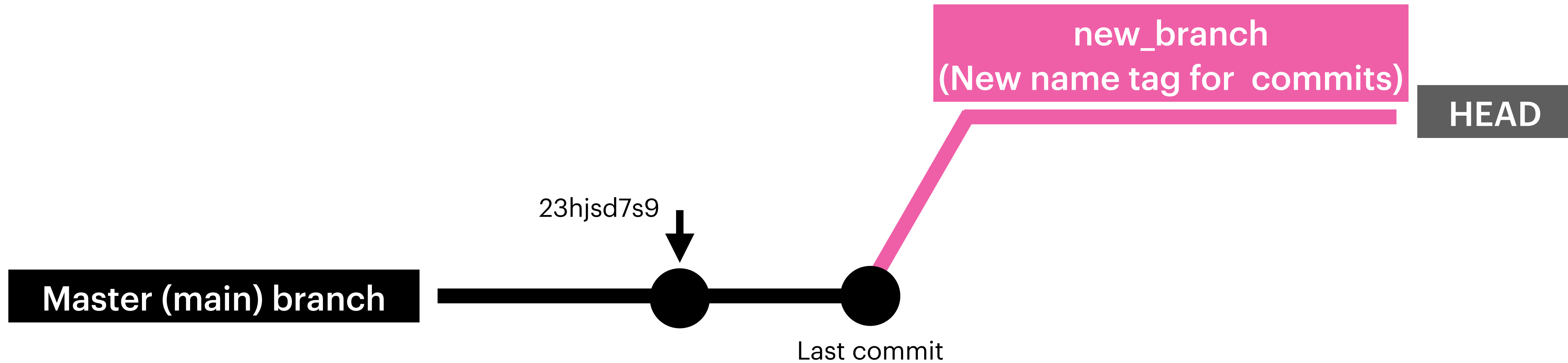
\$ git branch List of branches (Master)

\$ git branch new\_branch  
\$ git checkout new\_branch } \$ git checkout -b new\_branch

\$ git switch new\_branch

**HEAD** The snapshot you are viewing

# Branching



\$ git branch List of branches (Master)

\$ git branch new\_branch  
\$ git checkout new\_branch } \$ git checkout -b new\_branch

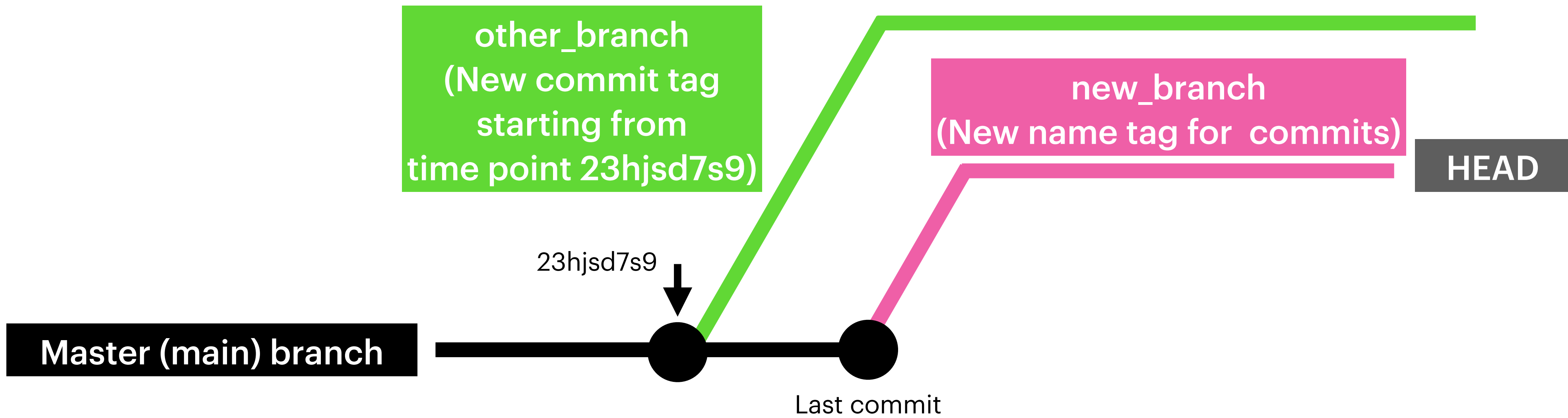
\$ git switch new\_branch

\$ git branch other\_branch 23hjsd7s9

HEAD

The snapshot you are viewing

# Branching



`$ git branch` List of branches (Master)

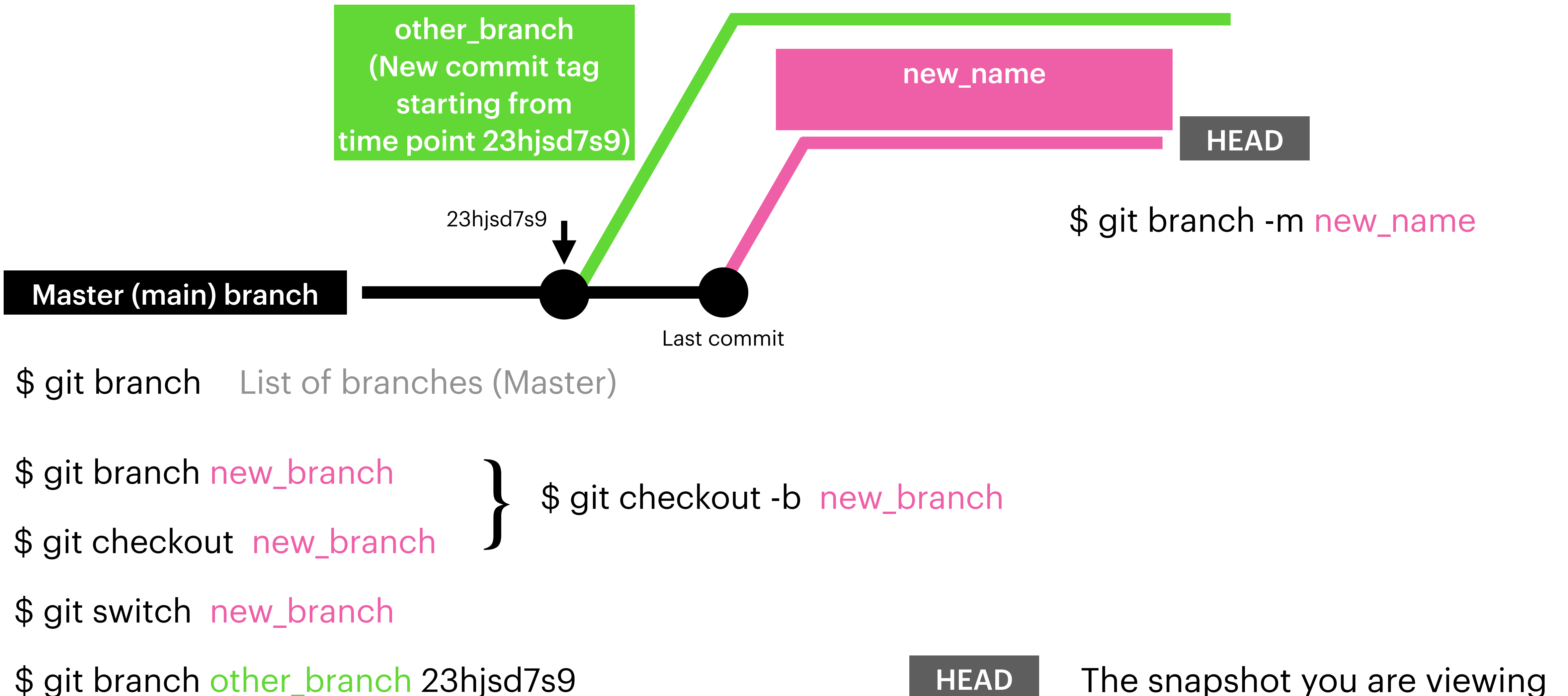
`$ git branch new_branch`  
`$ git checkout new_branch` } `$ git checkout -b new_branch`

`$ git switch new_branch`

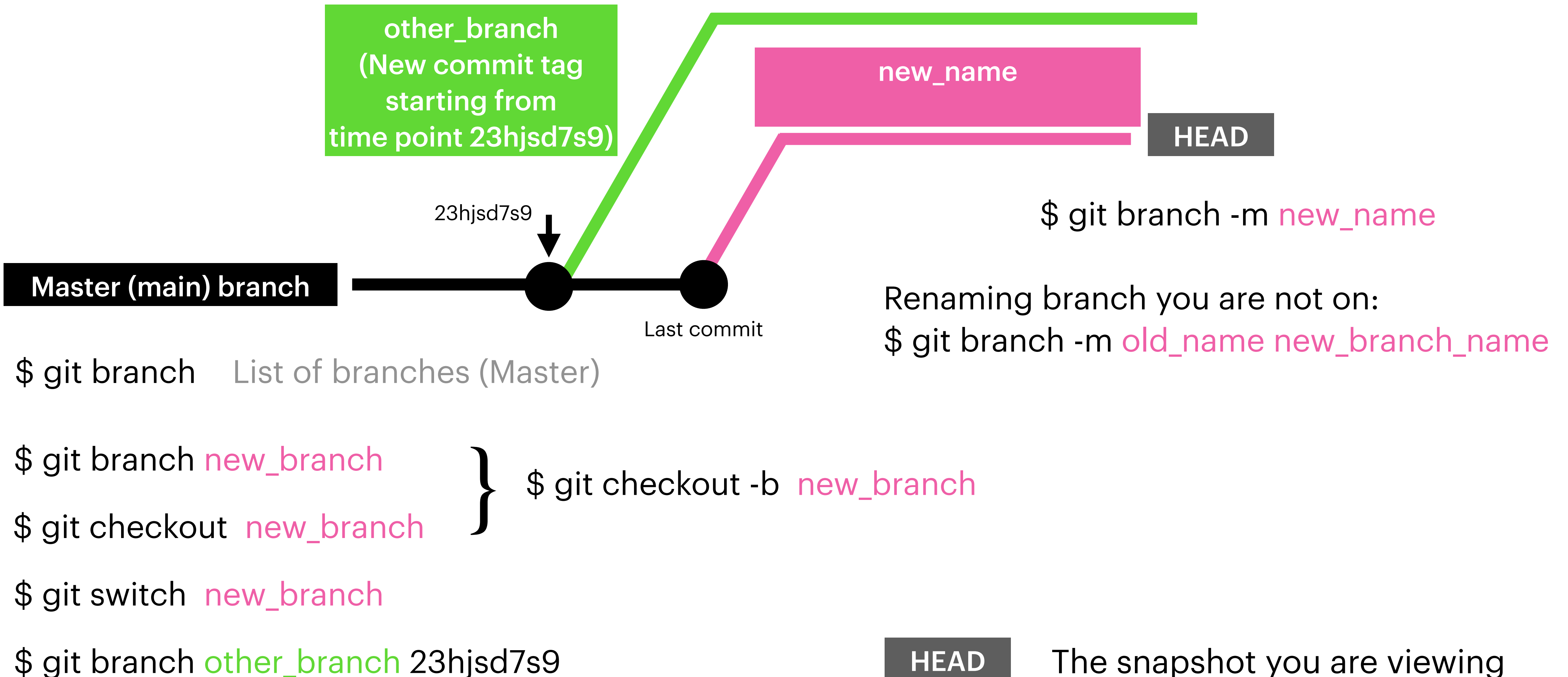
`$ git branch other_branch 23hjsd7s9`

**HEAD** The snapshot you are viewing

# Branching



# Branching





# Branching

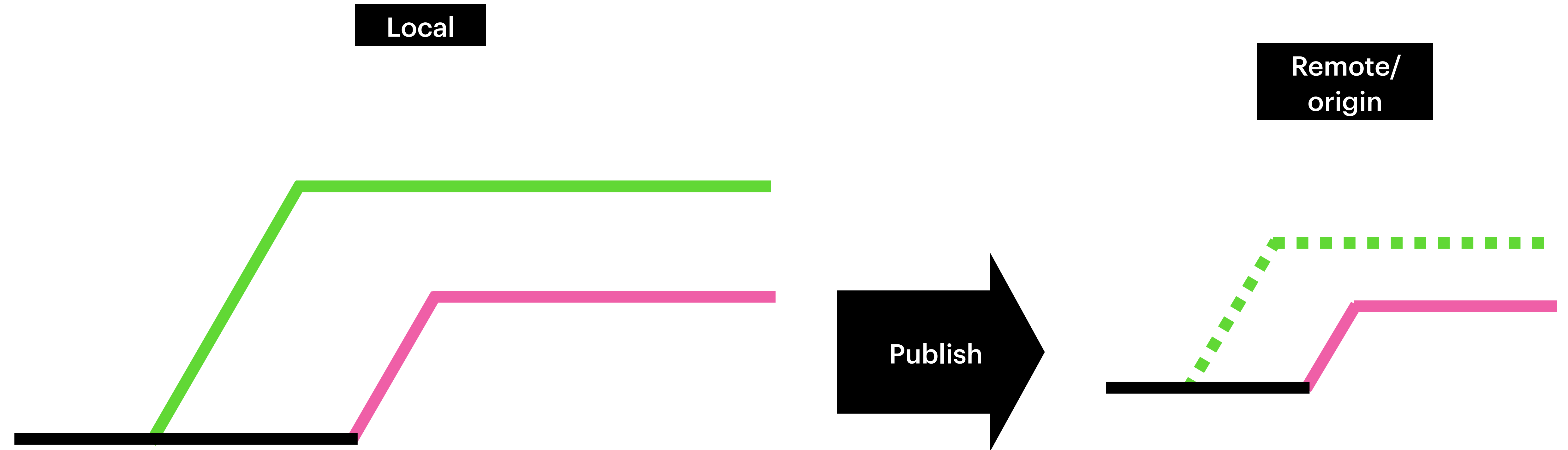
Connect local branch to remote

Local

Remote/  
origin

Publish

```
$ git push -u origin other_branch
```

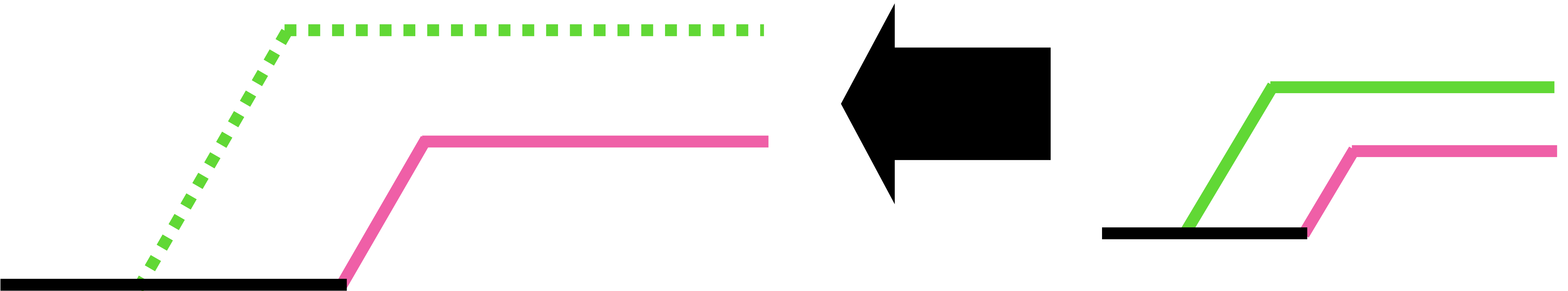


# Branching

Connect remote branch to local

Local

Remote/  
origin



```
$ git branch --track new-branch origin/new-branch
```

```
$ git checkout --track origin/new-branch
```

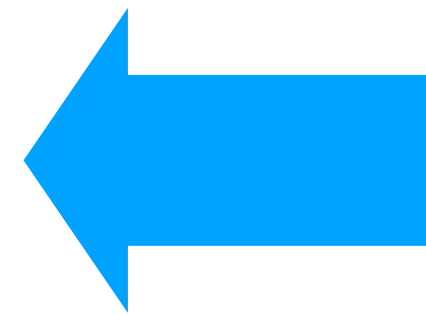
# Branching

## Sync local/remote branches

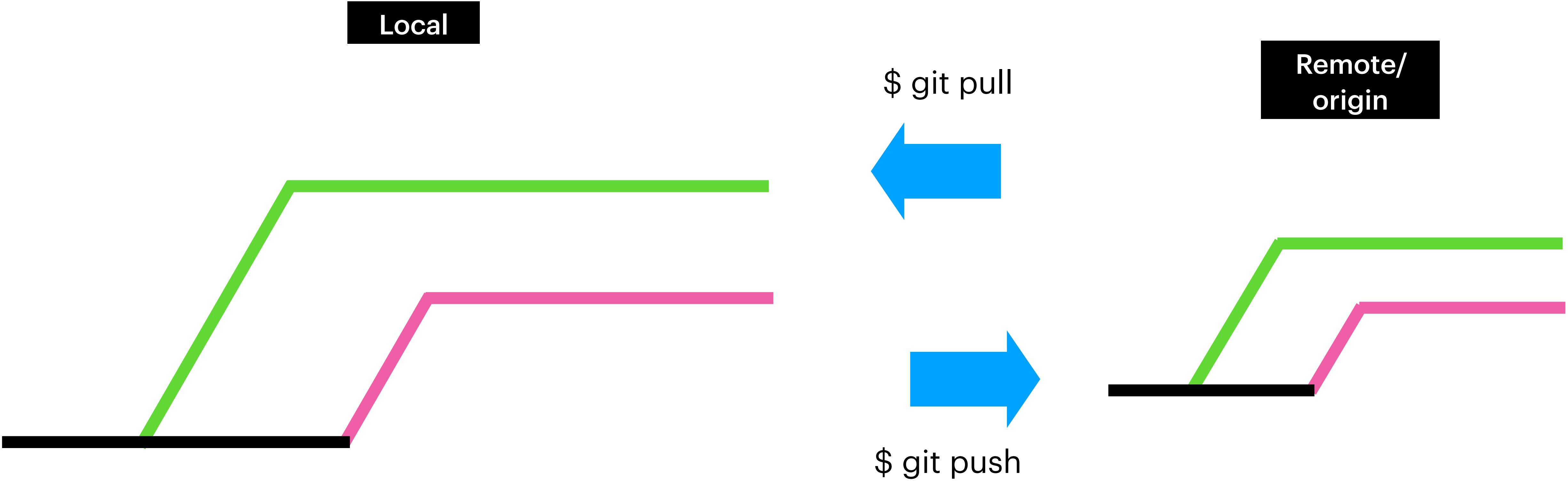
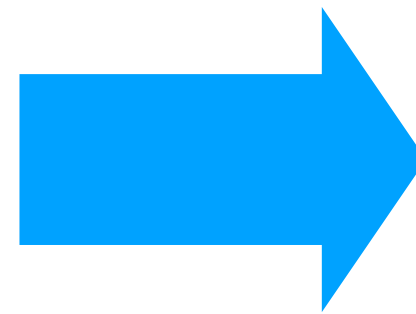
Local

Remote/  
origin

\$ git pull

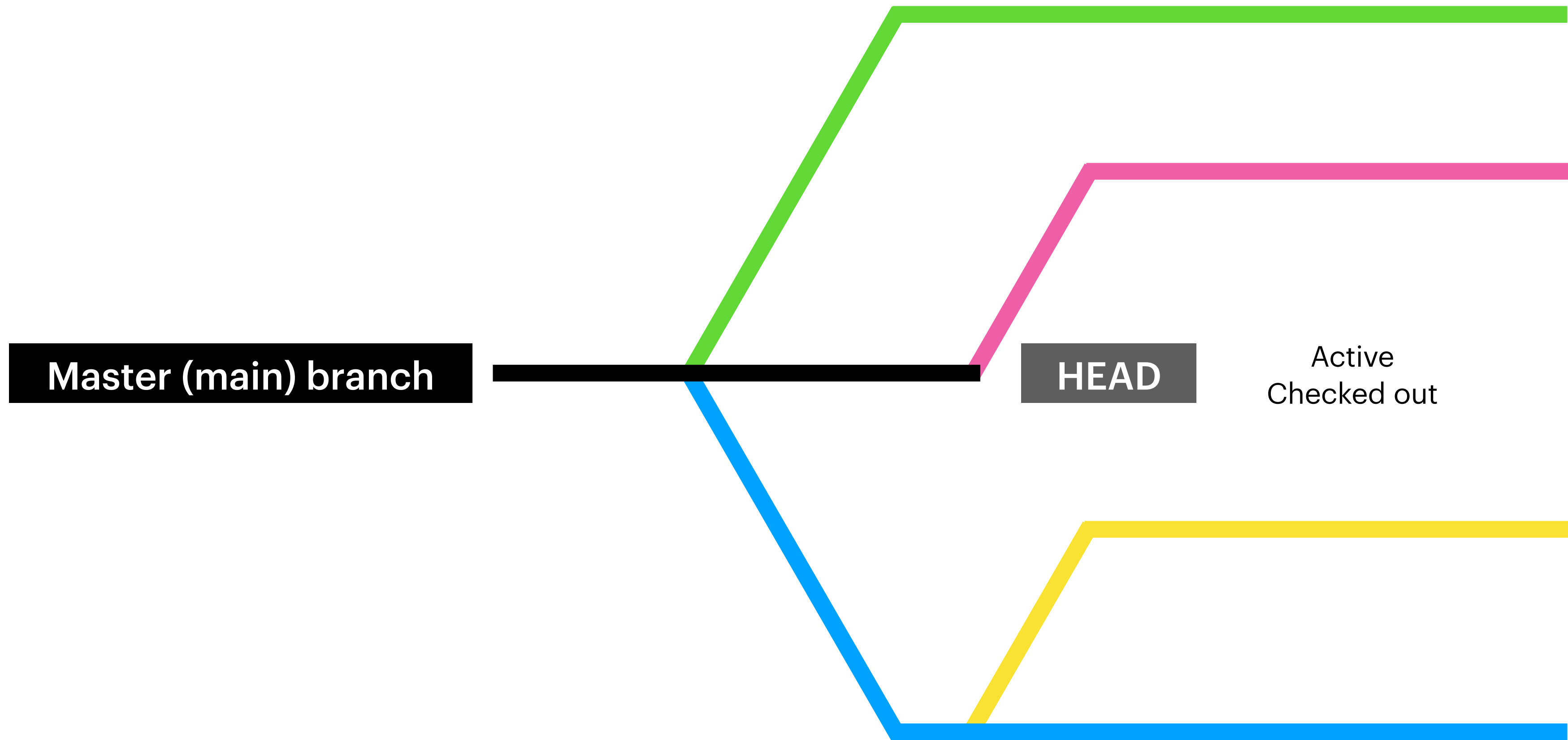


\$ git push



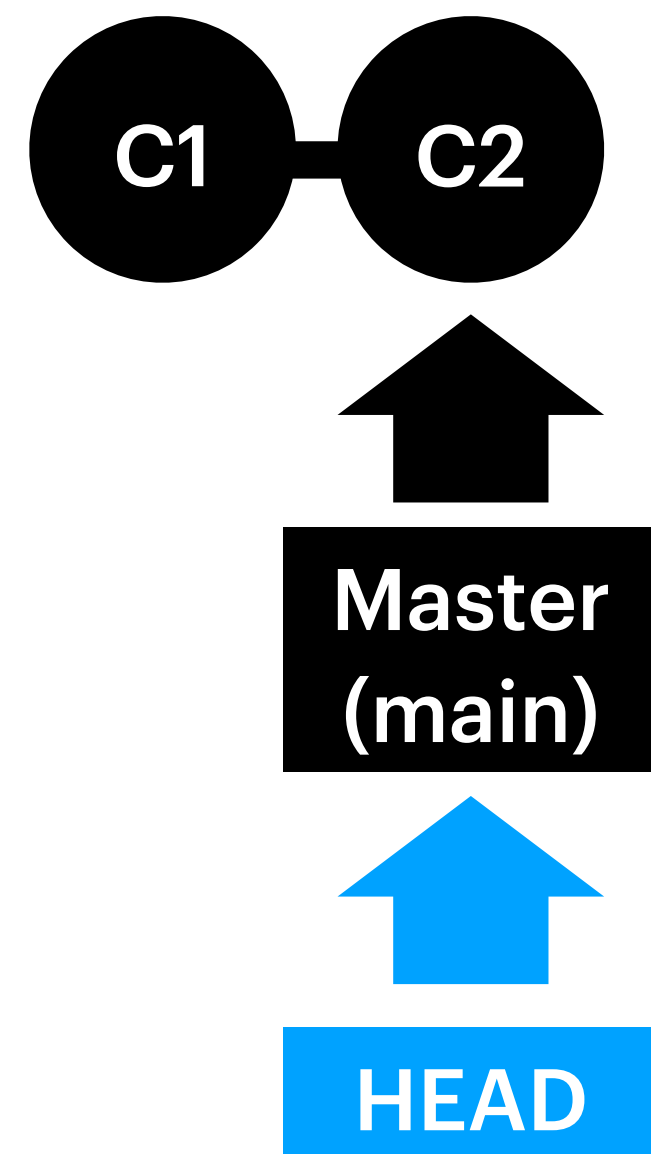
# Branching

Branches can advance independently



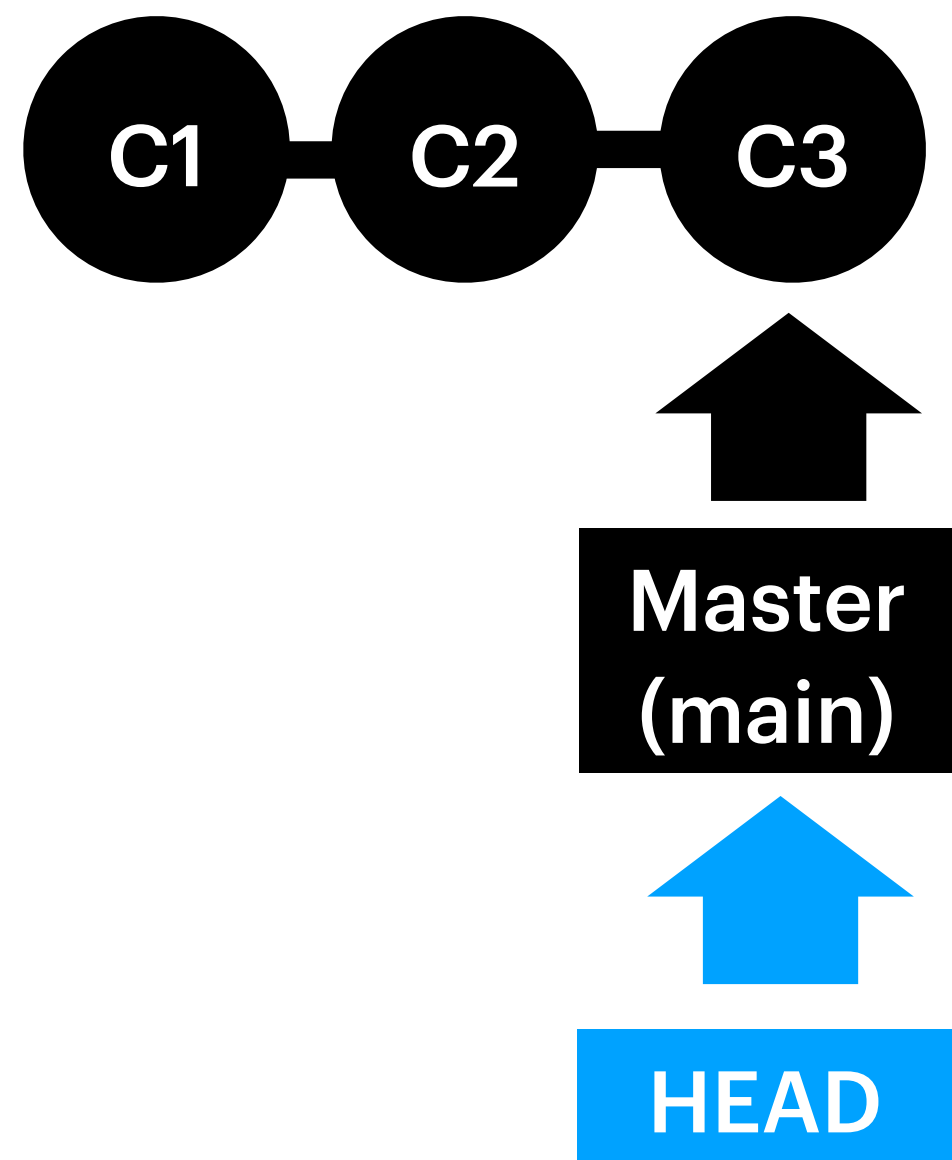
# Branching

## Merge



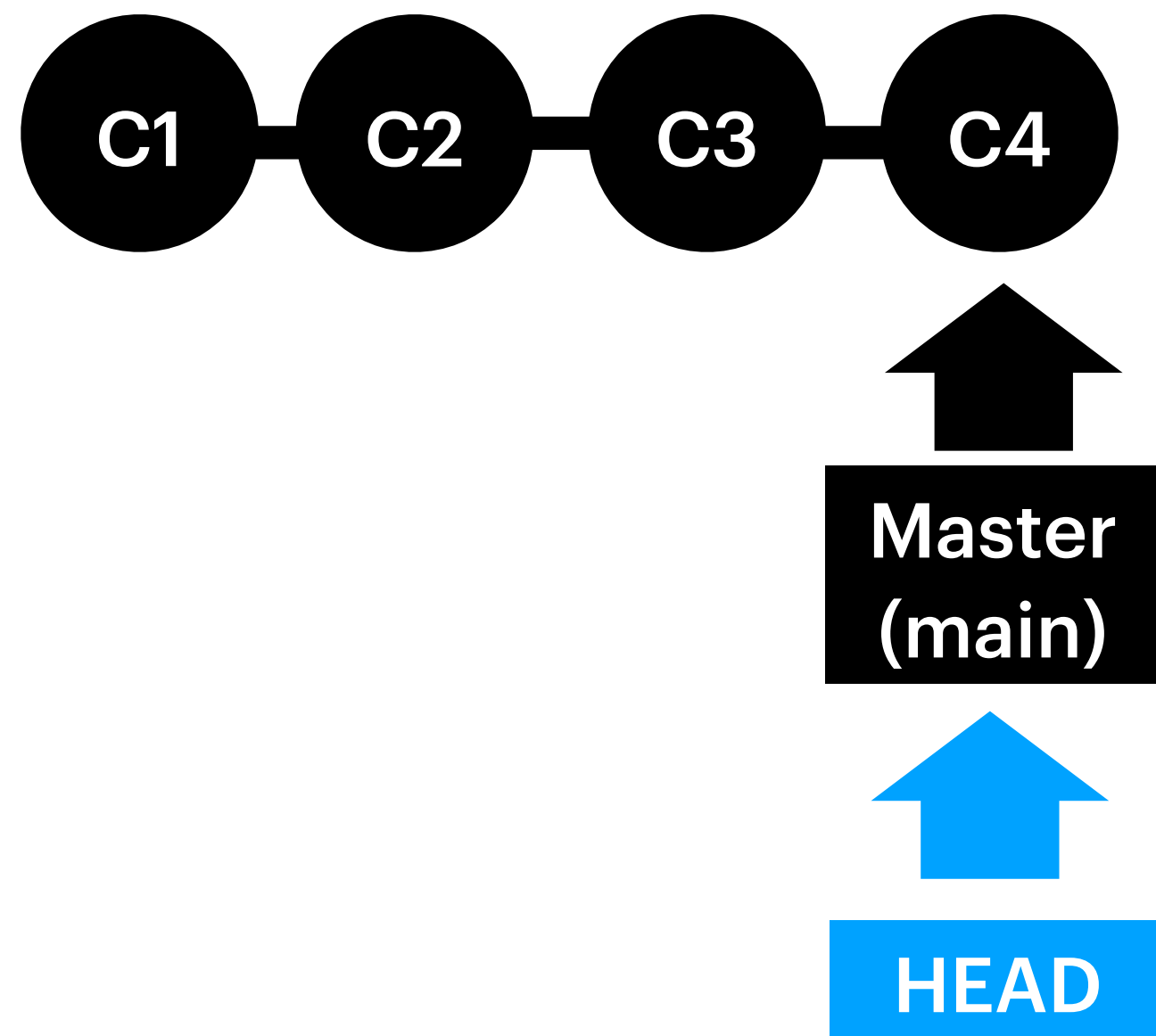
# Branching

## Merge



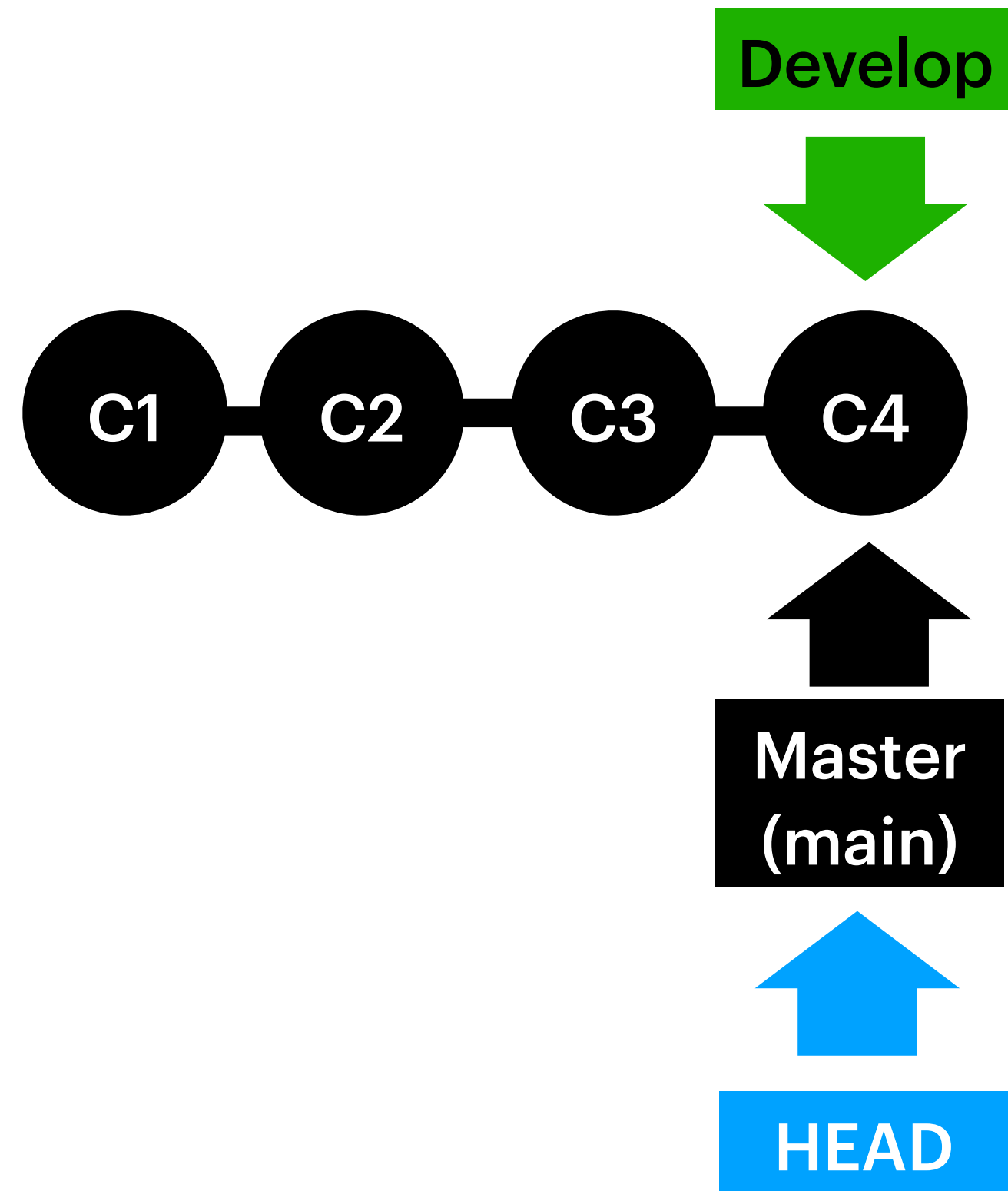
# Branching

## Merge



# Branching Merge

```
$ git branch Develop
```



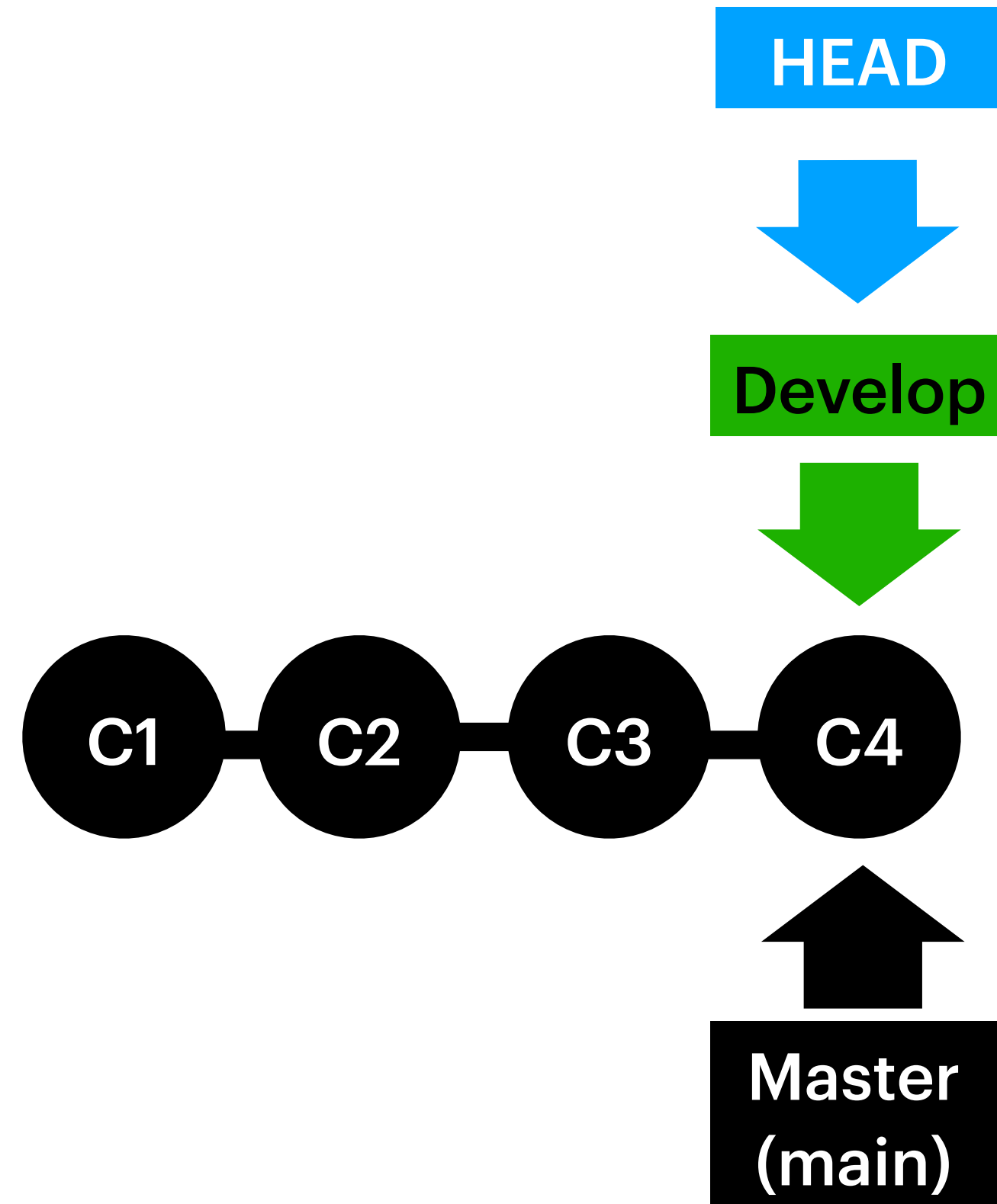


# Branching

## Merge

```
$ git branch Develop
```

```
$ git switch Develop
```

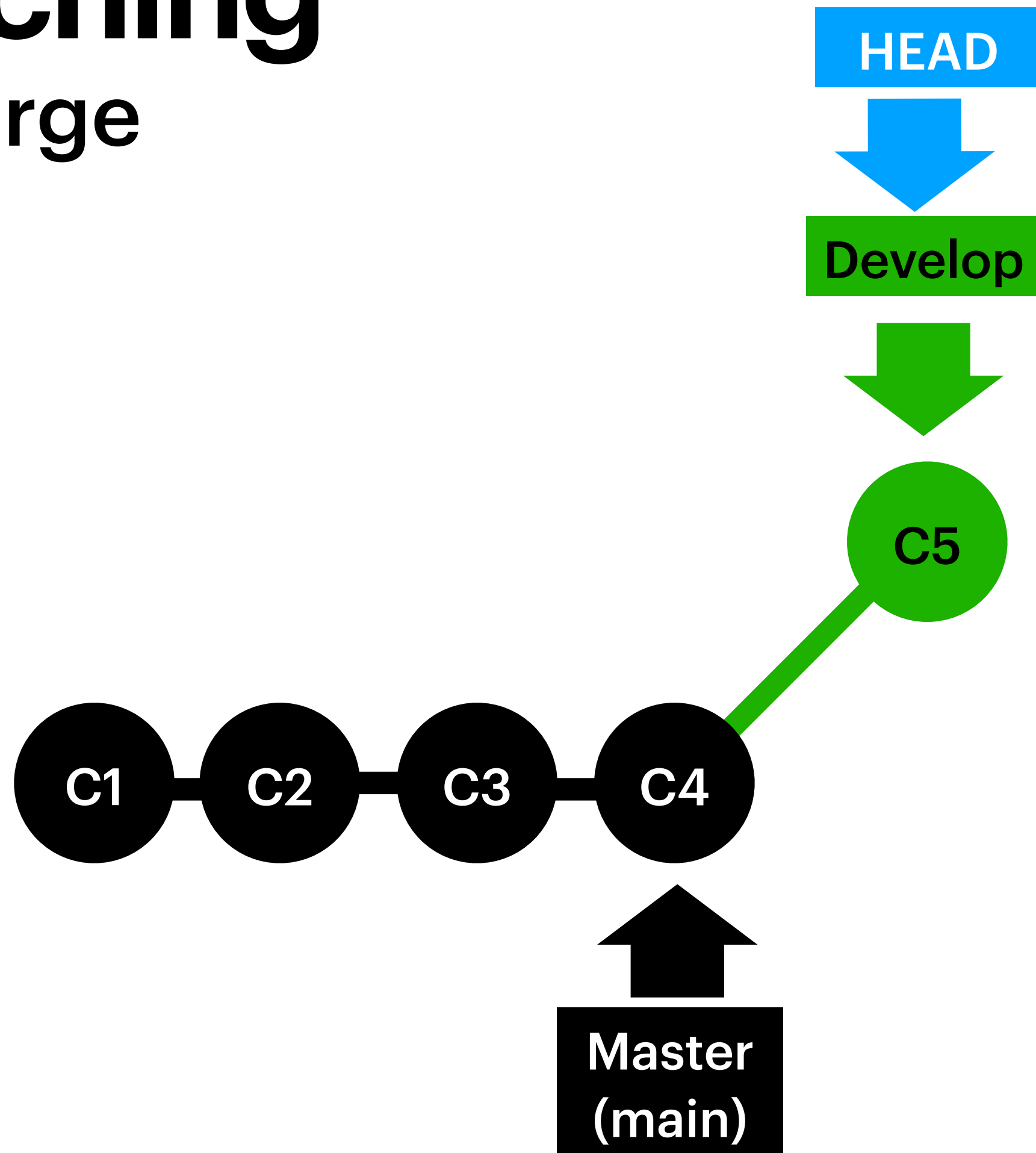


# Branching

## Merge

```
$ git branch Develop
```

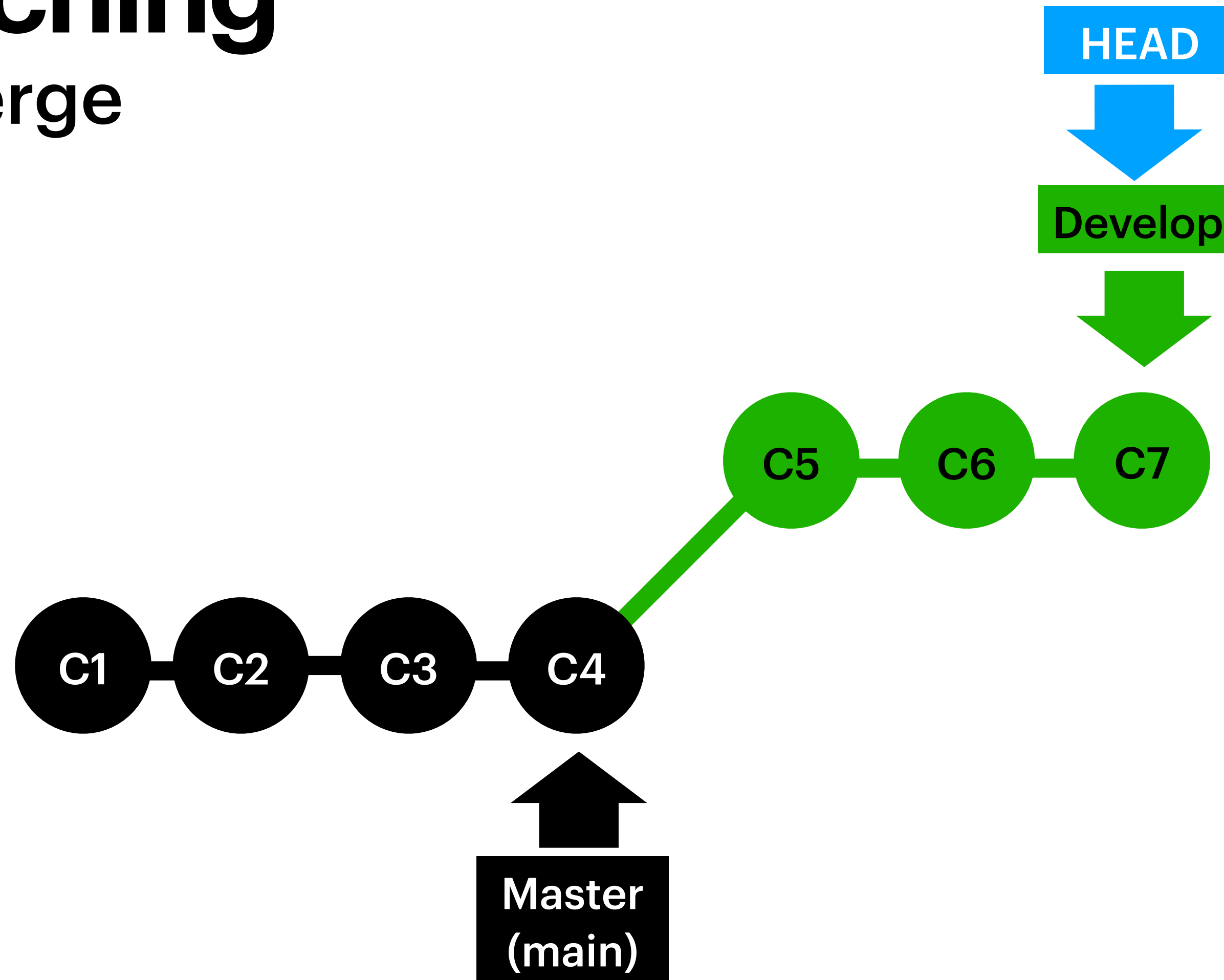
```
$ git switch Develop
```



# Branching Merge

```
$ git branch Develop
```

```
$ git switch Develop
```

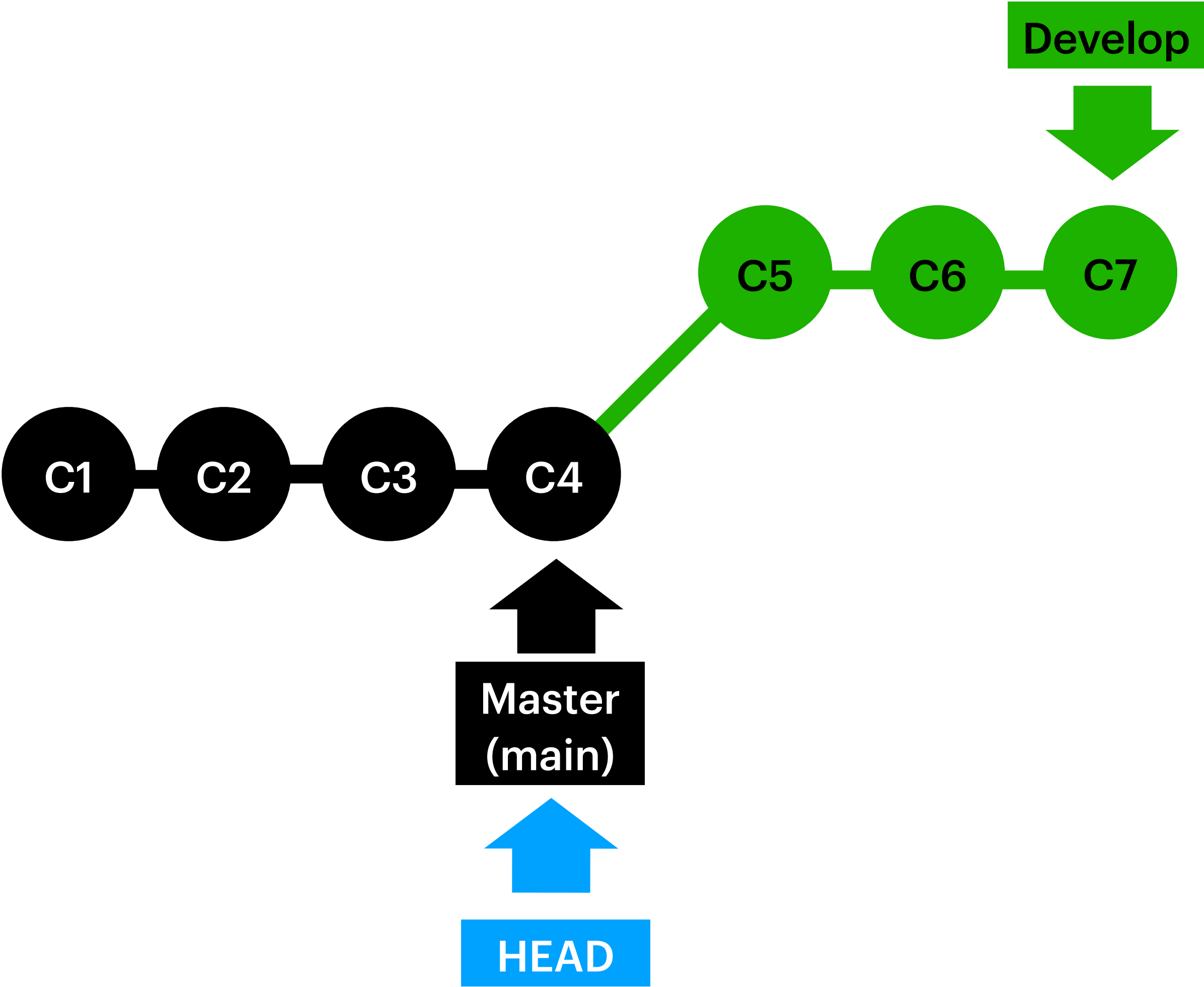


# Branching

## Merge

```
$ git branch Develop
```

```
$ git switch Develop
```

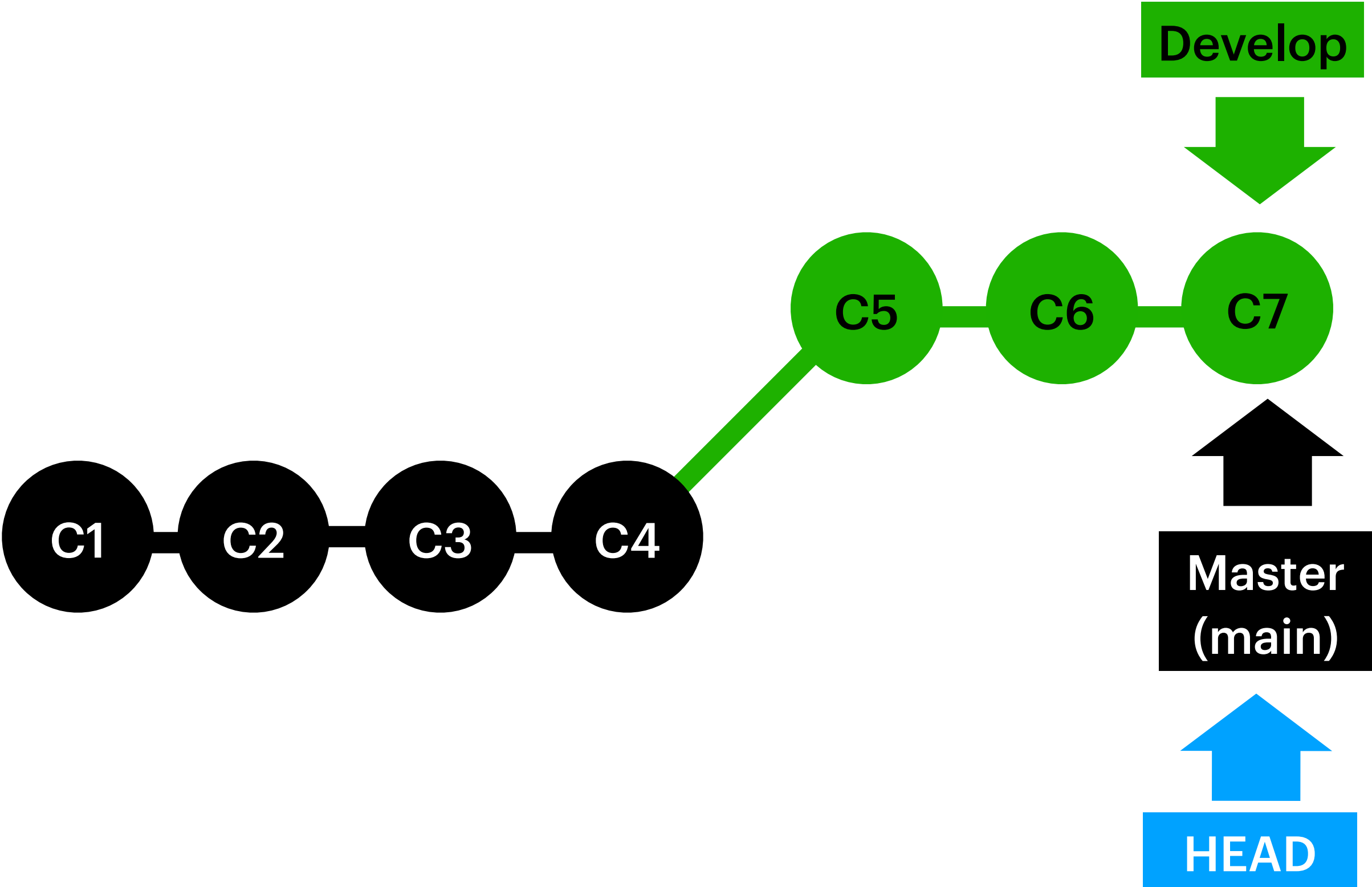


```
$ git switch Master
```

# Branching Merge

```
$ git branch Develop
```

```
$ git switch Develop
```



```
$ git switch Master
```

```
$ git merge Development
```

# git is not perfect

- Complex information model
  - It is complicated – and you need to know all of it
- Crazy command line syntax
- Documentation isn't good
- Burden of VCS maintenance pushed to contributors
- Unsafe version control