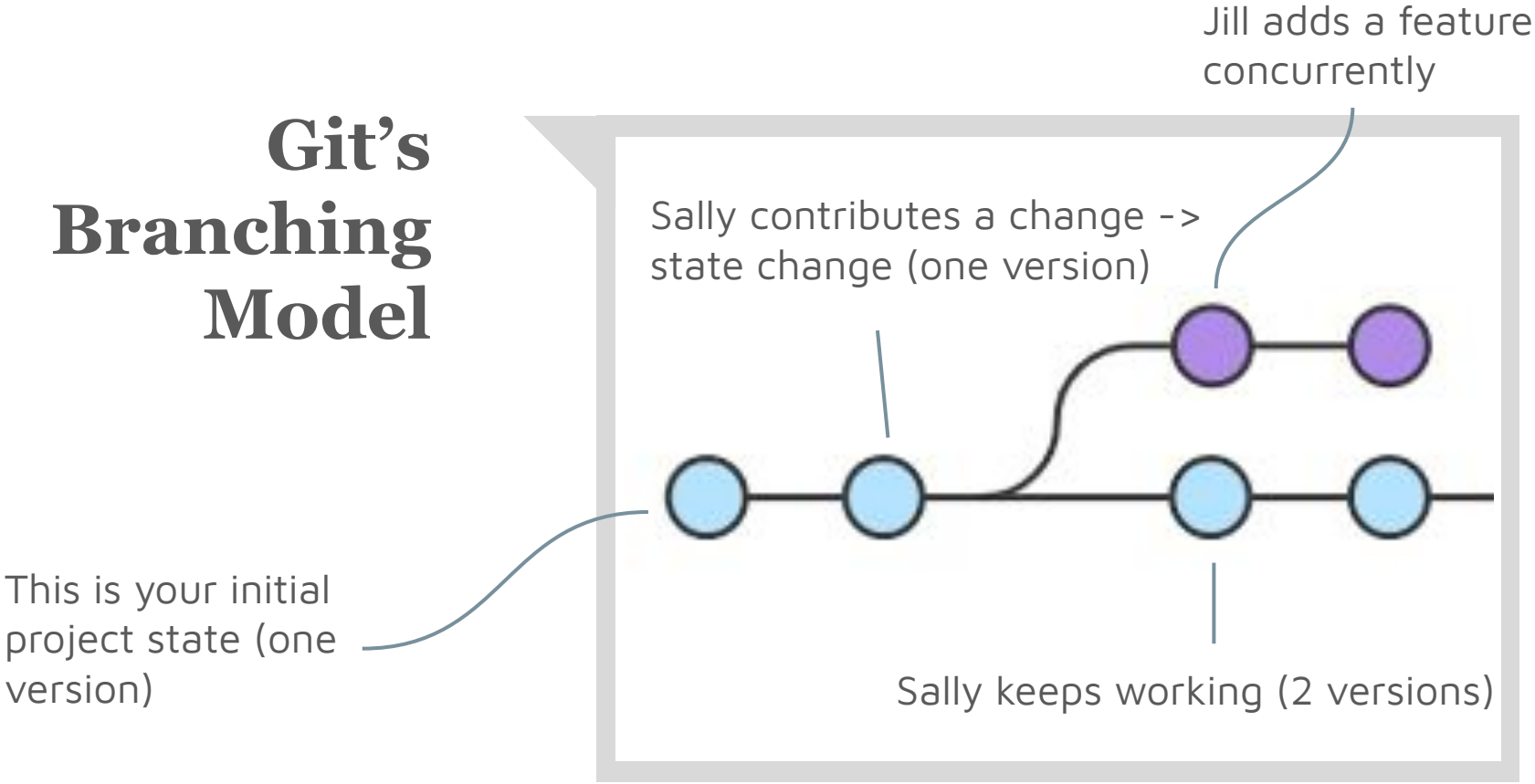
Git for Beginners

an RCOS workshop
by Hannah Lim

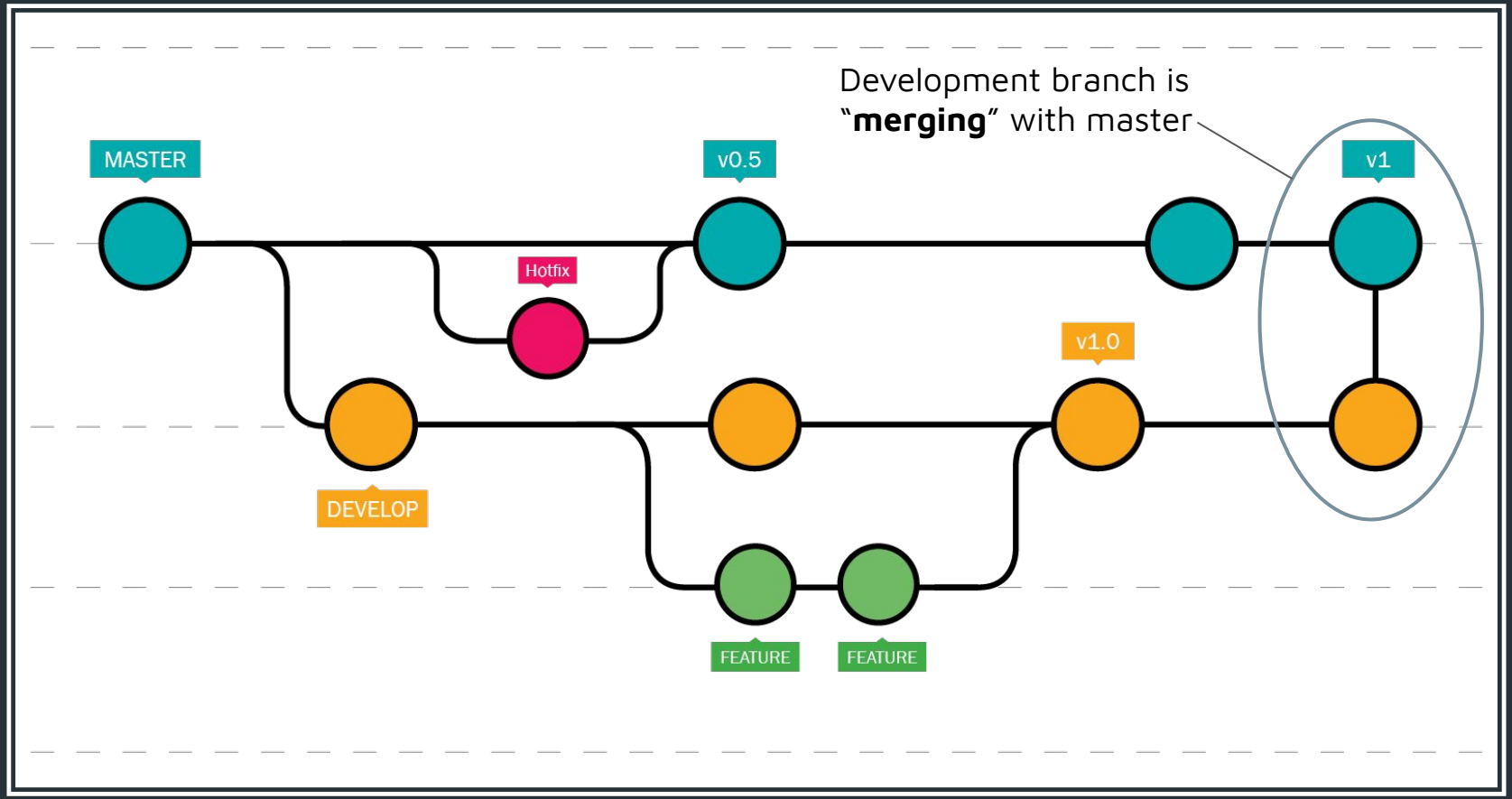
What is Git?

- Version control software
- Tracks changes in any set of files
- Takes snapshots of your project state
- Widely used in industry/classes
- GitHub is a cloud-based web platform that uses Git collaboratively

Git's Branching Model



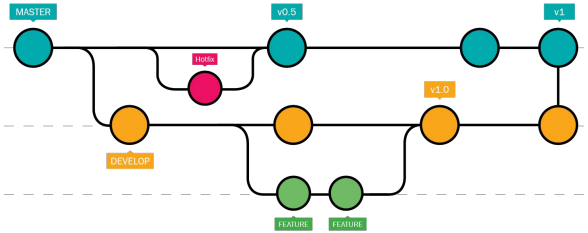
And now, some terminology

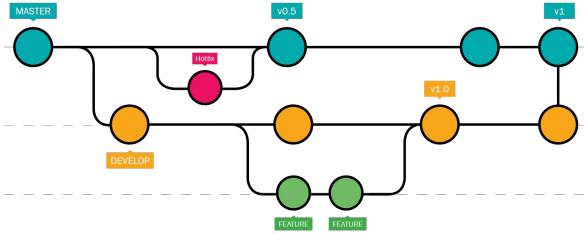

Development branch is
"merging" with master
MASTER
v0.5
v1
Hotfix
v1.0
DEVELOP
FEATURE
FEATURE

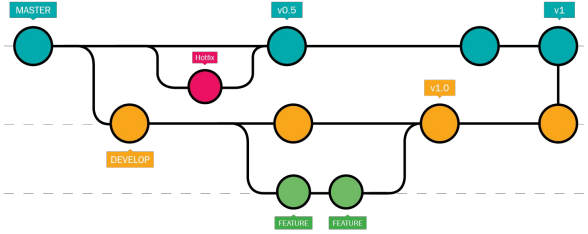
Now consider a more complicated example

The fork model: the project files exist in three places

- Original remote project hosted by GitHub (**UPSTREAM**)
- Your remote fork (copy) of the project hosted by GitHub (**ORIGIN**)
- Your local version of your fork on your personal machine



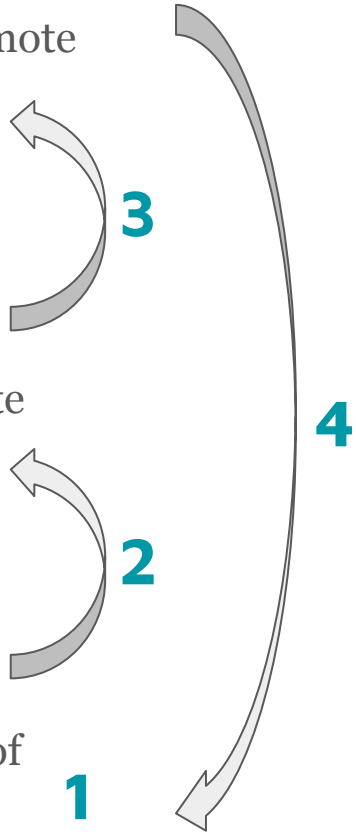




UPSTREAM:
Alexis's remote

ORIGIN:
your remote fork

LOCAL:
your copy of your fork



1) Make a change in your local copy
2) "**Push**" that change to your remote fork, the origin repo
3) Submit changes from your origin to your upstream repo by creating a "**Pull Request**"
4) "**Pull**" from the upstream to update your local copy again
5) Repeat

Let’s work a real example!