

Git, the workflow, and GitHub for PTIN

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Advanced Network Architectures Lab

Outline

- What is Git?
 - Repositories, commits, and other magical stuff.
 - Online famous repository platforms.
- Follow the flow
 - Common operations.
 - An image that is worth more than ten billion words.
- The GitHub awesome platform
- PTIN GitHub usage

What is GIT?

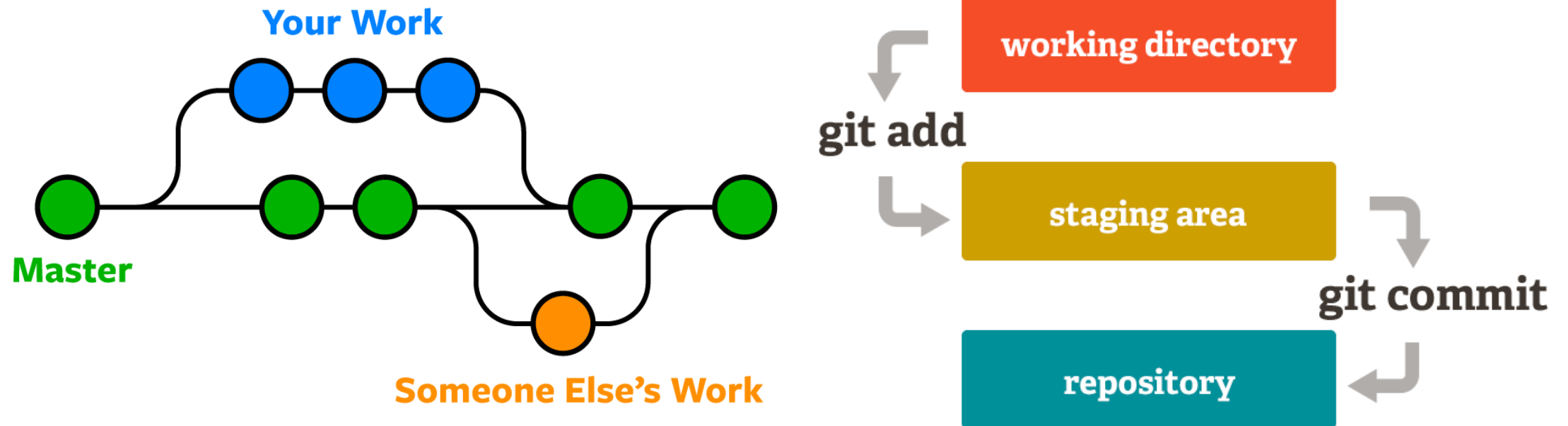


- GIT = "the stupid content tracker" - Linus Torvalds
 - Distributed version-control system for tracking changes in source code during software development.
 - It can be used to track changes in any set of files.
 - Allows and encourages you to have multiple local branches that can be entirely independent of each other.
- <https://git-scm.com/docs/git>
- <https://git-scm.com/about>

What is GIT?

- **Repository:** Directory where all the data/code is stored and versioned.
- **Commit:** Snapshot of the set of files modified/added/removed at a particular point in time.
- **Branch:** Diverge from the main line of development and continue to do work without messing with that main line. (<https://git-scm.com/book/en/v2/Git-Branching-Branches-in-a-Nutshell>).
- **Tag/Label:** Tag specific points in a repository's history as being important (<https://git-scm.com/book/en/v2/Git-Basics-Tagging>).

What is GIT?



What is GIT?



GitLab

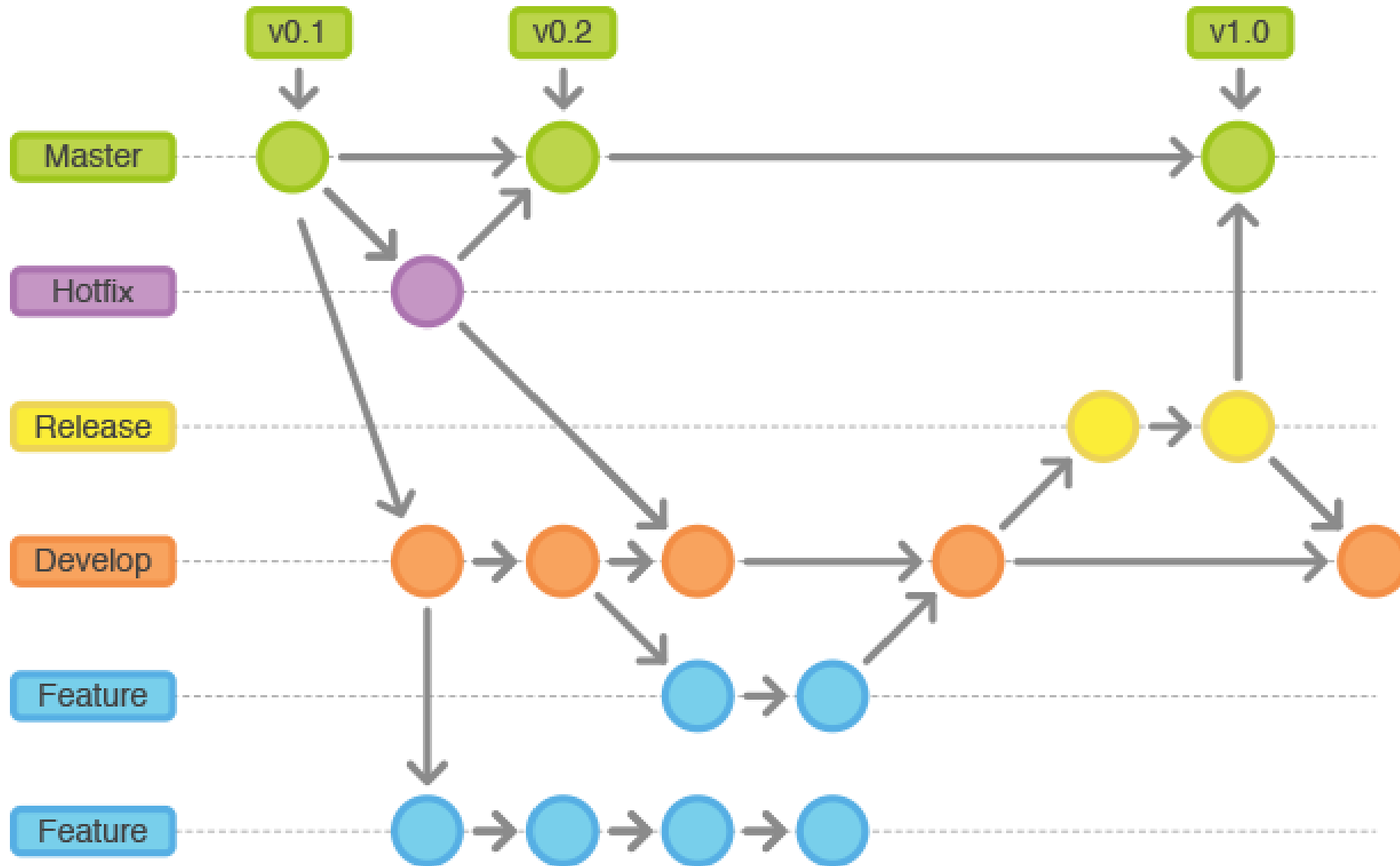


Follow the flow

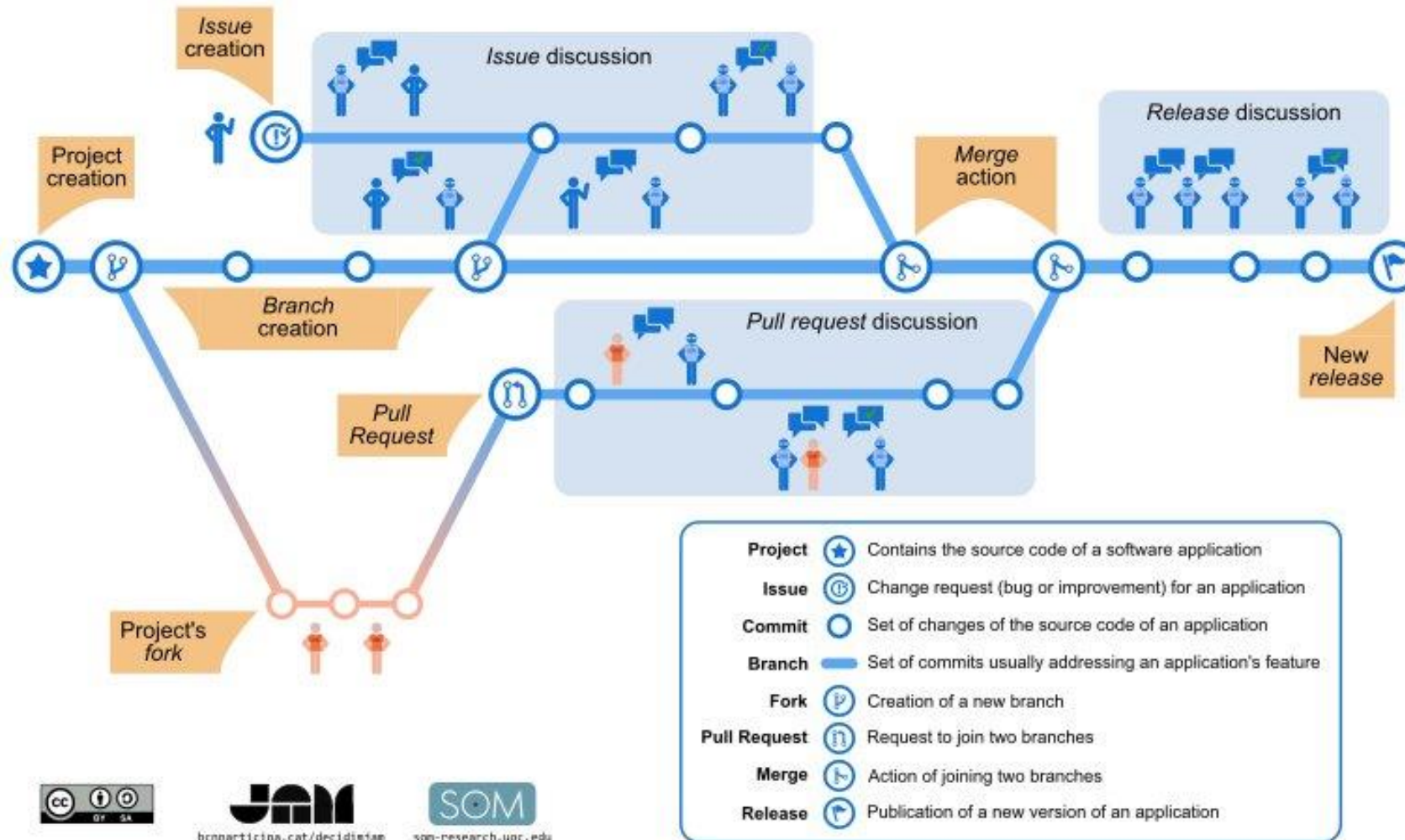
- **Git Workflow:** Recipe or recommendation for how to use Git to accomplish work in a consistent and productive manner.
 - We have only ONE master branch with the working version of our code
 - New features are added into new branches and merged into the master when tested.
 - A reduced set of people is in charge of keeping the master branch controlled and working, creating new labels when a new version is released.
- <https://www.atlassian.com/git/tutorials/comparing-workflows>
- <https://danielkummer.github.io/git-flow-cheatsheet/>

Follow the flow

- **Clone:** Download a copy of the repository.
 - **Fork:** Allows you to freely experiment with changes without affecting the original project.
- **Issue:** Discussion of a missing/non-working feature, improvement, or question.
- **Pull Request (PR):** Request permission to modify a branch with new changes.
- **Merge:** Integrate a branch into another.



How GitHub projects are developed? Where are the main discussion points?



The GitHub awesome platform



- Free, online, and easy to use.
 - Benefits for students: <https://education.github.com/>
- Largely integrated in most of the popular IDEs.
- Enormous amount of people collaborating.
- <https://help.github.com/en/github/getting-started-with-github/quickstart>

PTIN2020 / test_repo

Unwatch

1

Star

0

Fork

0

Code

Issues0

Pull requests0

Actions


Projects0

Wiki

Security

Insights

Settings



Test repo for learning

Manage topics

1 commit

1 branch

0 packages

0 releases

1 contributor

Branch: master


New pull request

Create new file


Upload files

Find file

Clone or download

 ALEJANDROJ19 Create README.md ...


Latest commit 8e9a7f3 now

 README.md

Create README.md


now

README.md



Welcome to this wonderful repository 😊

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https://github.com/PTIN2020/test_repo/tree/master

PTIN GitHub usage



- Cada equip té un repositori principal, però en pot crear més si fos necessari.
- Cada curs té un únic repositori de Documentació on ha d'estar la documentació agregada del projecte (per cada terminal).
- L'administració de cada repositori es responsabilitat de cada equip.
- Tots els repositoris han d'estar sota l'organització PTIN2020.
 - <https://github.com/PTIN2020>
- Per cada sprint, cal fer una release en el repositori.

