

COURSE INFORMATION

Email:

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Office hour:

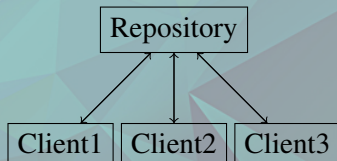
Every Tuesday at 15:00

GIT

Bernardo Cuteri

WHAT'S GIT

- Git is a software for version control
- It allows groups of developers (clients) to work simultaneously on multiple files
- Files are stored in a shared online repository and copies are stored locally on clients



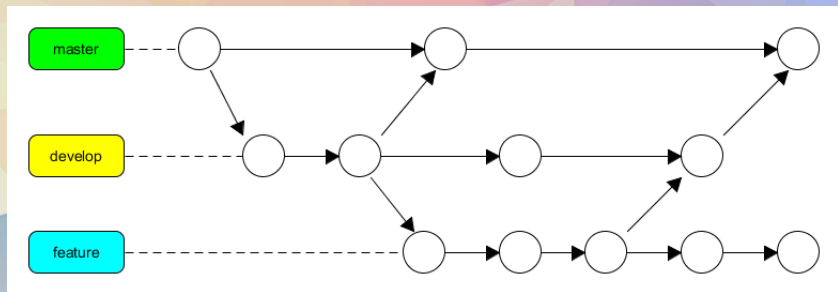
Some client operations:

- Create a working copy of the files as they are in the online repository
- Edit the local copy of the files offline
- Commit the changes with a commit message that specifies what has been changed
- Push its copy to the central repository

Commits are like snapshots of the code accompanied with a message. Commits can be reverted and users can select what files to commit and what files have to be excluded from.

GIT BRANCHING

Git is based on a branching system



- Each row is a branch
- Circles represent commits
- A new branch can be created as a copy of another branch
- Arrows moving back to an older branch are merges
- *master* is the initial and default branch in git

BRANCHES AND COMMANDS

Branches can be:

- Remote
- Local

Clients work on local branches and can synchronize them with remote branches:

- `git pull`
 - Updates your working copy (working branch) with any changes from the remote repository
- `git add`
 - Adds a file(s) you want to share
- `git commit`
 - Commits your changes to your local working copy
- `git push`
 - Pushes local committed changes to the remote repository. Note: if someone else has pushed its code to the remote repository after we performed the last pull, then we have to perform another pull, otherwise we can not push.

BASIC COMMANDS (2)

- `git status`
 - Compares the local branch (working copy) with the copy of the corresponding remote branch
- `git branch`
 - Lists, creates or deletes branches.
- `git checkout name`
 - Moves to another branch or to a specific commit. It can also be used to create and move to a new branch at once.

BASIC COMMANDS (3)

- Much more!
- git stash
- git merge
- ...
- Take a look at:
<https://www.youtube.com/watch?v=ZDR433b0HJY>

- Let's create a new account on a free git hosting service:
 - <https://github.com/>