

S O F T W A R E ARCHITECTURE

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Lab 1 Intro to labs Teams organization Git GitHub Wikidata

Intro to labs

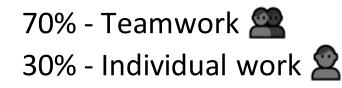
What are we going to do in these sessions?

Design and develop an online game of questions and answers that are automatically generated using Wikidata.

Resources?

- <u>http://arquisoft.gihub.io</u>: course documents.
- <u>Virtual Campus</u>
- WIQ Lab <u>specification</u>
- Project github <u>repositories</u>.

Lab assessment?

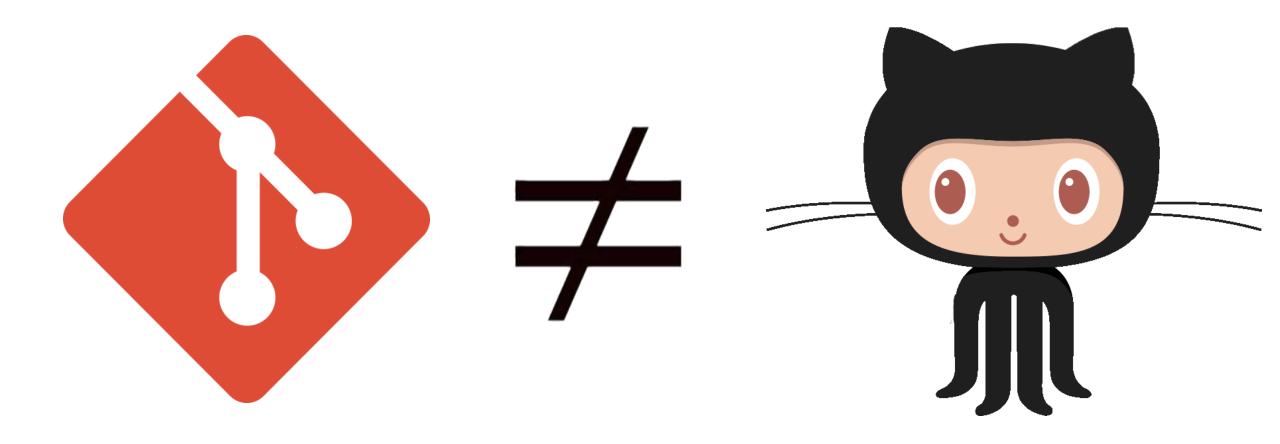




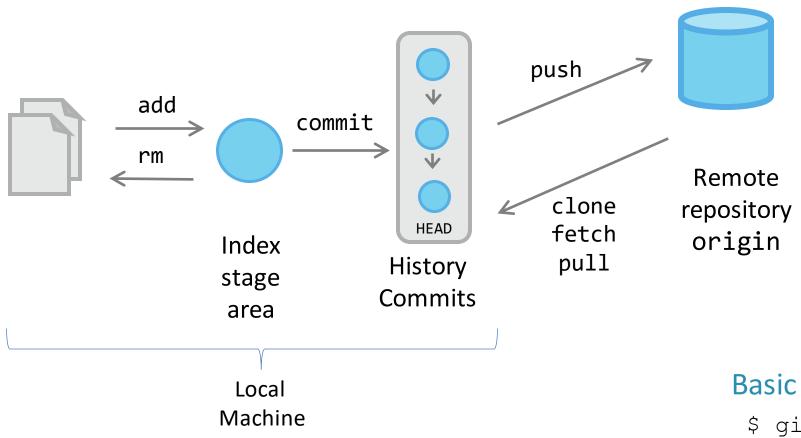
Meeting minutes

- Each lab session == group meeting.
 - Other meetings allowed out of lab sessions
- Mandatory to create minutes of each meeting
- Wiki section of each repository will be used to record minutes
- Minimal mandatory format :
 - 🖵 Date 🌅
 - Participant list 2
 - \Box Agreements about work assignment for next session (open issues) \heartsuit
 - lacksquare Review state of tasks from past meetings lacksquare
 - Links to Issues and Pull requests 🔗
 - $\hfill\square$ Short description of decisions taken
 - Preferrable to include links architecture decision records (<u>https://adr.github.io/</u>)





O Git



Basic workflow

- \$ git init
- \$ git clone urlRepository
- \$ git add .
- \$ git commit -m "message"
- \$ git push origin master

– Git

Working with branches

Create a branch:

\$ git checkout -b branch1
Check our current branch:

\$ git branch

Change to another branch:

\$ git checkout **master**

See differences from branchs

\$ git diff --stat master branch1
Merge branch:

\$ git checkout master

\$ git merge --no-ff branch1

Remove branch:

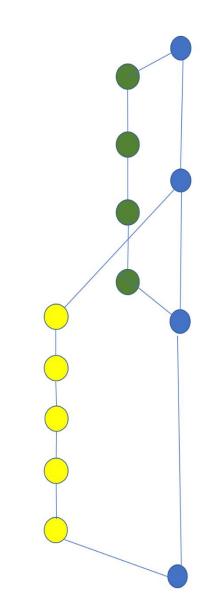
\$ git branch -d branch1

Create the develop branch:

\$ git checkout -b develop

Push it to the remote repository:

\$ git push origin develop



Git Branching strategies

- Several strategies whose success depends on several factors.
 - See: <u>https://martinfowler.com/articles/branching-patterns.html</u>
- Some popular patterns:
 - Git-flow, by Vincent Driessen, 2010: <u>A successful Git branching model</u>
 - <u>GitHub Flow</u> strategy
 - Trunk based development: <u>https://trunkbaseddevelopment.com/</u>



Pull Request

Steps

New branch

```
$ git flow feature start RE1 develop #option 1
```

```
$ git checkout -b feature-RE1 develop #option 2
```

Add your name inside the *Collaborator* section in your *README.md* file Send your local changes

- \$ git add .
- \$ git commit

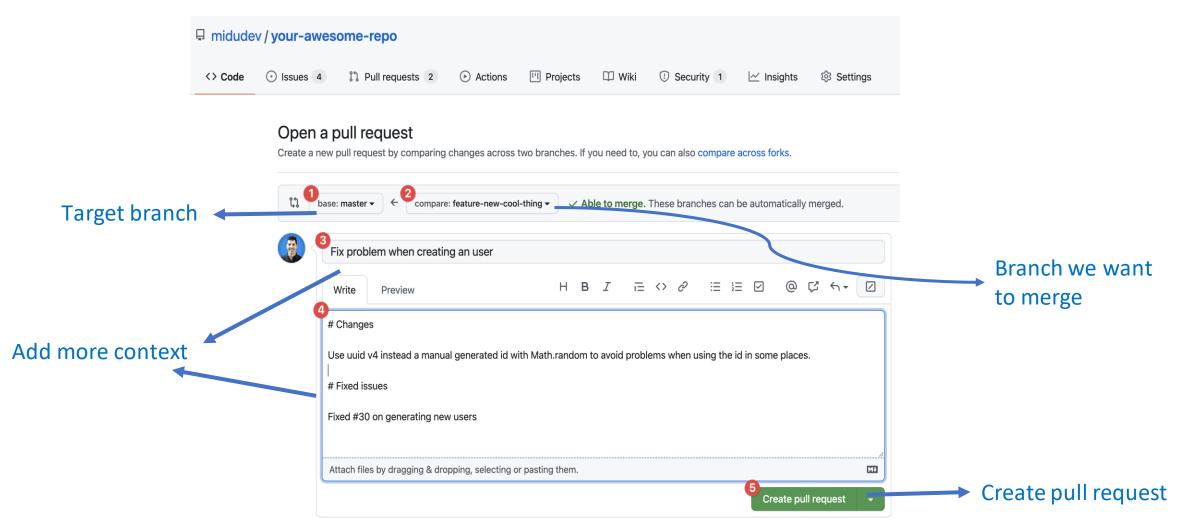
Submit your changes to remote

```
$ git push --set-upstream origin feature-RE1
```

Go to github and ask for a pull request

🕝 5 commits	🖗 3 branches	🗇 0 packages	♡ 0 releases
Your recently pushed branches:			
ဖို develop (about 1 hour ago)			្សិ Compare & pull request
feature/RE1 (1 minute ago)			រ៉ាំ Compare & pull request





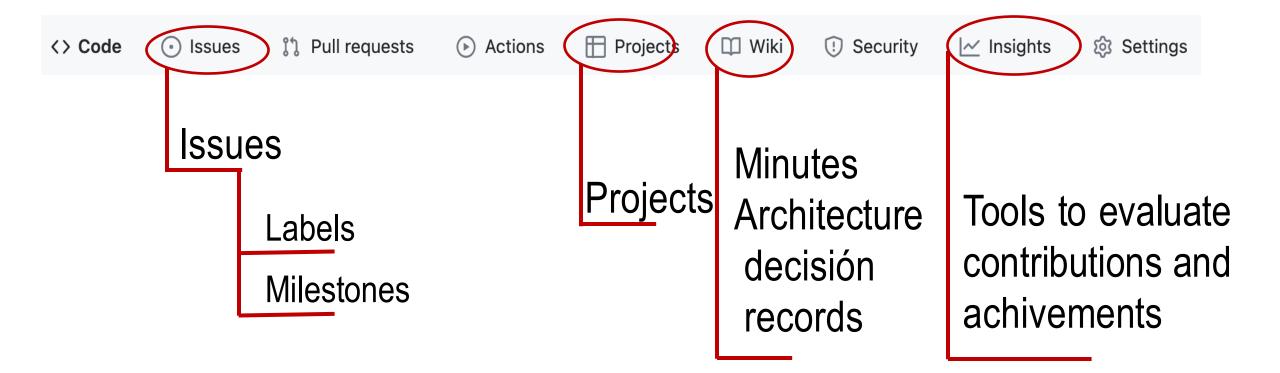
GitHub as a Project management tool

Advantages of Project management

- Project planning (future)
- More control over current project's state (present)
 - \circ Detect bottlenecks.
 - Share work load between team members.
 - Current problems.
- Report achievements (Past).
 - Evaluate each member's contributions to the project

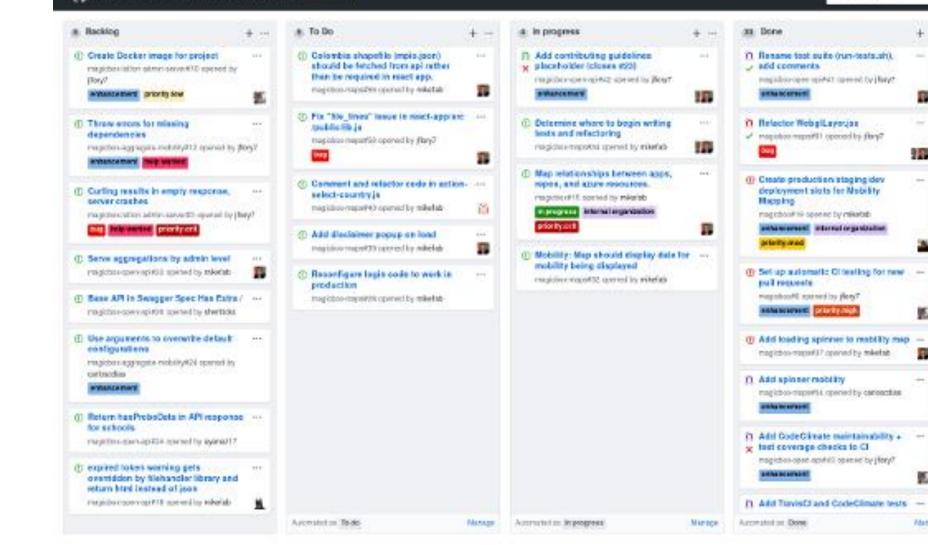


Some tools provided by github for Project management





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GitHub

Project tab

- It is possible to create KanBan projects
- Automate workflow managing also issues and pull requests
- It is possible to create different dashboards (docs, backend,...)

		Create a new project Coordinate, track, and update your work in one place, so projects stay transparent and on schedule.	
<> Code 💿 Issues 👔 Pull requests 🕞 Actions 🧲	Projects ····	Project board name	
Projects	New project	Project board name Description (optional)	
Q is:open	Sort -		
Closed	Sort		ĥ
		Project template	Automation
There aren't any projects yet	t	Save yourself time with a pre-configured project board template Template: None -	options
		Create project	





They are like post-it in a Kanban project

Each problem, task or even question related with the Project can have a issue.

They use Markdown.

Recommended to write only the necessary to understand the issue. You can add pictures or links

It is the main part of a Project and can be used to understand the state of the project.

An Issue can be related with other entities in a github repo.

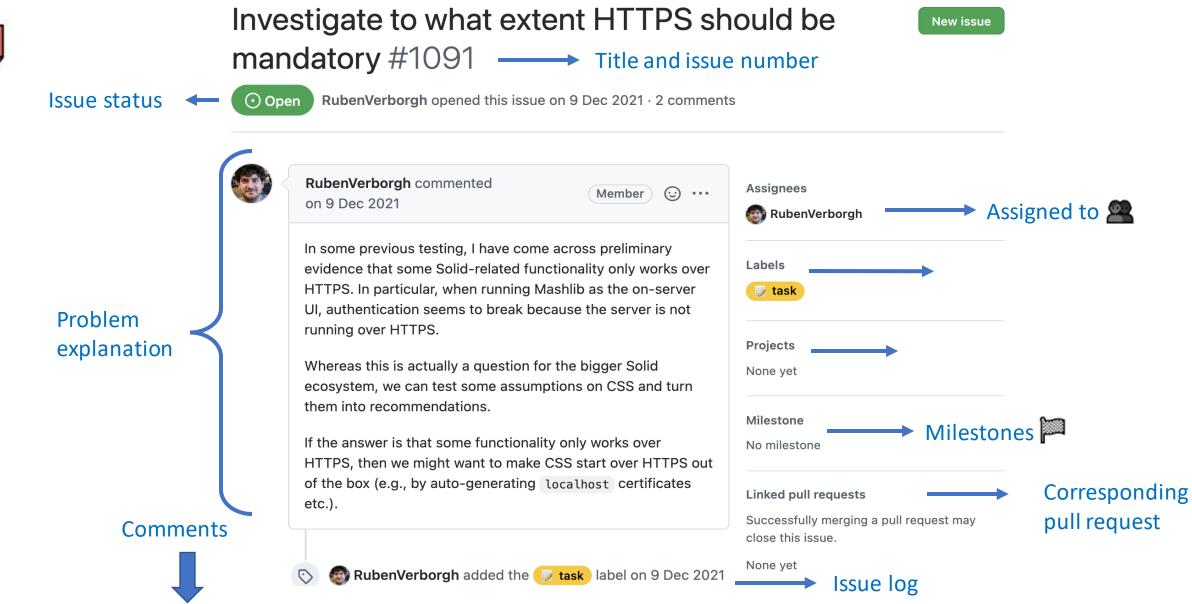
People **थ** Labels 📼

Milestones 🏴

(∑) => [♥ 📱 💬 🖂]

We only assess information that appears in the github repo

🔵 GitHub

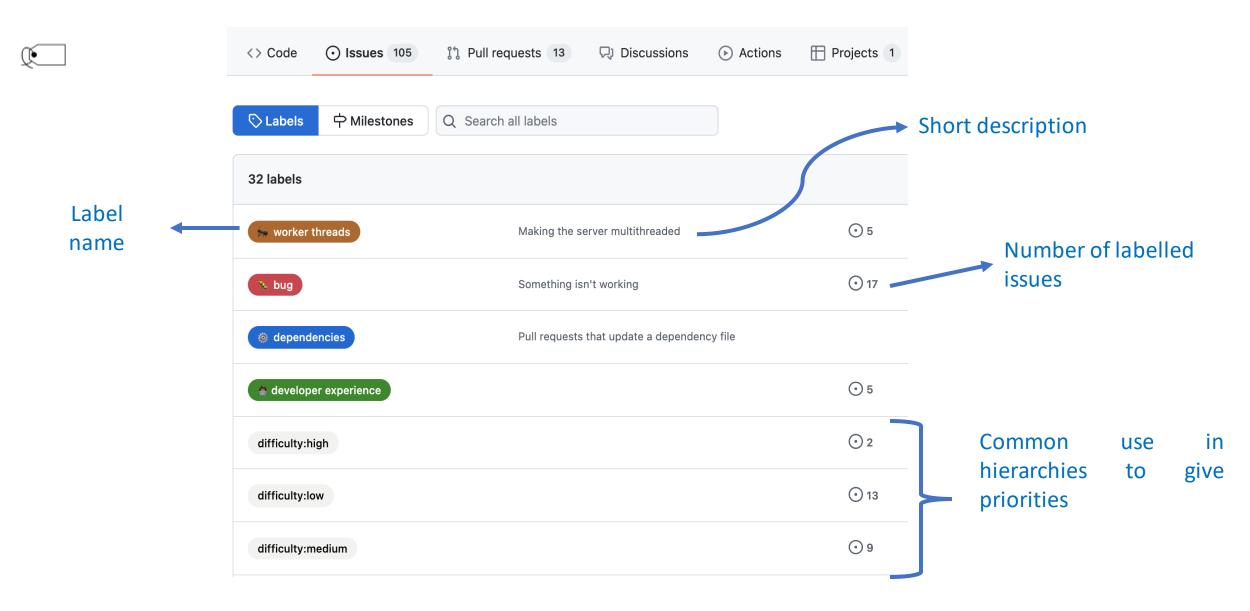




Labels 📼

- Labels can be used to catalog issues.
- Generic labels from GitHub
- You can create your own labels (backend, frontend, bbdd, hierarchies)
- You can personalize color and even use emojis .

🔵 GitHub



You can use arquisoft FAQ for questions

https://github.com/Arquisoft/faq/issues

- Share questions about the course
- It is allowed to add any issue that describes some question in either English or Spanish,
 - Anyone can contribute answering the question or adding any comment.
 - Contributors must follow a code of conduct that respects the ethical considerations from a University of Oviedo Course.
- The teachers can remove any issue or contribution that they consider inappropriate for the course.

Additional links

- Introduction to git <u>Git</u>.
- Quick reference from Pablo Gonzalez
- Short introducción a git (Hugo)
- Git: the simple guide
 - <u>https://rogerdudler.github.io/git-guide/index.html</u>
- learngitbranching.js.org

Additional Doc

- Miguel Angel Durán channel and his initial guide Aprendiendo Git.
- Youtube
- <u>Git explanation in 15 minutes</u>
- <u>Tutorial</u> for beginners
- <u>GitHub vs GitLab</u>

Wikidata

<u>https://www.wikidata.org/</u>