

Tecnologías Multimedia - Study Guide - Milestone 1: Git, GitHub and the Fork-and-Branch Git Workflow

Vicente González Ruiz - Depto Informática - UAL

September 9, 2020

1. Description

To work in the InterCom project [6] you will need to understand the basics of Git and GitHub, and how to make a copy of a repo(sitory) (by forking it) to know how to ask for changes in the parent repo (by performing pull-requests).

2. What you have to do?

1. Have a look the Git [3, 2] and the GitHub [4] websites. If you don't have a GitHub account, please, create one. Otherwise, you will not be able to contribute to the Intercom project.
2. Create a test project at GitHub using your account. See [1].
3. Revise **The Fork and Branch Git Workflow** [5]. Basically, this “protocol” explains that to contribute to a repo hosted by GitHub you need to do:
 - (a) A fork, which is basically a copy of the original (“parent”) repo. Such repo is yours and the one thing that distinguish it from a repo created by yourself is that there is a link to the parent repo.
 - (b) Use branches (that can be understand like parallel states or views of your repo) to keep always stable the *master* branch of your repo. Such branches can be:
 - i. *Feature branches*, that use to be quite short in time and they are aimed to develop new functionality or to debug.

- ii. *Developing branches*, which are used exactly for the same objectives that the feature branches, but usually live forever (like the master branch). If you are continuously working on a repo, probably you will use a developing branches.

4. Make a fork of the **InterCom** project.
5. Download (clone) your copy of Intercom (select the Git protocol, not https nor download a zip file).
6. Do some modification to your local repo. For example, create and add a file named `deleteme` or something similar (you can also propose some more useful modification).
7. Commit and push the changes. If you have not uploaded a public SSH key (and the private key is not properly installed in your computer), the GitHub server should have requested your username and password, and this is something that will happen with every push.
8. To avoid this repetitive input of your login information at GitHub, you need **to identify you at GitHub** using **public-key cryptography**.

You need to own (as said before) a pair of keys, one public and other private, and upload the public one to GitHub.

9. The first step in this process is to check whether you already have a pair of keys (if your are using the just installed Xubuntu distribution, obviously you don't). Simply revise your `$HOME/.ssh` directory with

```
ls -l ~/.ssh
```

3. Timming

You should reach this milestone at most in one week.

4. Deliverables

None.

5. Resources

- [1] Github - the Hello World guide.
- [2] Git - Book.
- [3] Git.
- [4] GitHub.
- [5] The Fork and Branch Git Workflow.
- [6] The students of Tecnologías Multimedia at the UAL. The InterCom project.