# Complementos Sobre Linguagens de Programação (2019/20)

## Lab work Nº 1 - Due: 11 Oct. 2019

1. Choose three software projects from previous courses, at least written using three different programming languages (Python, JAVA and C/C++), to be used in this project.

2. Study the Git Handbook available at https://guides.github.com/introduction/git-handbook/

3. Create an account at github.com and after that a three new repositories where you should add all the source code that you choose from previous courses. Take into consideration the structure of your repository (example: folders `src/` `docs/` …).

4. Explore the GIT capabilities performing some changes on your software (both team members) through the use of branches, merges, history, pull requests, among others. In the end, you should present in your report a map of all these interactions.

5. Study the use of Doxygen following the official tutorial available at http://www.doxygen.nl/manual/index.html. In particular, pay attention to the configuration file and the documentation of the code.

6. Document your code from the first exercise and generate the corresponding documentation in HTML. Add the documentation to your repositories.

7. Study the use of Docker containers following the next very simple tutorial: https://ancantu.github.io/SCICLD2019/docs/docker_containers/docker_containers.html

8. Try to create your own Docker container based on the repository available at: https://github.com/TACC/taccster18_Cloud_Tutorial/tree/master/classifier. You can find

there a complete Dockerfile for the classify_image application as well as the necessary scripts and supporting files.

9. Create a docker image for each one of the projects. Upload the image to docker hub and ask to another group to test it.

10. Elaborate a short report where you describe all the relevant steps and decisions taken in all the items of the work. The evaluation process will take into consideration the interaction with GIT, the quality of the documentation and the usability of your docker images.