

Lab Assignment 1

Fall Semester 2019

March 13th

1 Goals

In this lab assignment you will become familiarized with the fundamental technologies of the web; HyperText Transfer Protocol (HTTP), and HyperText Markup Language (HTML). Moreover, you will practice the use of some fundamental tools in the course, such as Git and the terminal, in the work environment based on Ubuntu Linux.

2 Initial Steps

In order to do this activity you must have an user account at GitHub. Create your own account at www.github.com using your institutional email @miuandes.cl. Once you have created your account, go to the site of GitHub Classroom available for this activity: <https://classroom.github.com/a/ytqcp3F9>

Then, you must clone the repository from GitHub Classroom so that you can work on the activity. For this, you may open a terminal window, and issue the following commands

```
# switch to the /tmp directory, or desktop
cd /tmp # or cd ~/Desktop
git clone #place the url for the repository here.
```

The initial project will contain a README file where you can write your responses to the questions posed in the following activity. Use any text editor to your avail in Ubuntu, including the RubyMine IDE we will start using next week. You will need to commit the changes to your README file and push your local repository back to GitHub.

```
# do this while in the project directory
git commit -a -m "Your commit message here"
# push changes in your local repository to your personal repository in GitHub
git push origin master
```

3 Activity

The site Hacker News is developed by the world's largest startup accelerator, called YCombinator. It is constantly updated with news of interest for developers, software engineers, entrepreneurs, etc.

1. Access the following site with Google Chrome <https://news.ycombinator.com/>
2. Activate the developer tools on Google Chrome. For this, you may click on View menu → Developer → Developer Tools, or use a keyboard shortcut. On Windows, F12, or Ctrl + Shift + I should work.
3. Activate the “Elements” tab. Observe the page’s code and describe the structure. To do so, you can view the text of the news headings that appears on Hacker News, and search in the code where the text appears. Identify the HTML tags in each case. Explain the use of each type of tag.
4. Activate the tab “Sources”. To the left the subtab “Network” should be activated. You will find the icon of a folder called “Top”, and under that, an icon of a cloud called `news.ycombinator.com`. When you open the cloud icon, you will see a complete list of the files that are downloaded by the web browser in order to display the web page. Describe each one of the files.
5. Activate the tab “Network”, and reload the page by pressing the F5 key. There will appear a list of files distinct from what you have seen in “Sources”. In the list there is a column labeled Type, and the value in each case is “xhr”. Search on Google for “xhr request” and research what it is about. At what moment were these files loaded by the web browser?
6. Activate the tab “Security”. The browser has connected to this site securely. To do so, the web browser has needed to download a certificate that allows a secure connection. Find out what entity (certifying authority) emitted the certificate used by the web site, and the expiration date of the certificate.

4 Way of Working

This work must be done individually. The submission must consist of the **README** file available in the base GitHub project, complete with the answers to parts 2-6 of the above mentioned instructions. Control of attendance to this session will be done through the hand in of the work done in the personal repository of GitHub. That is to say, if you do not hand in your work, your attendance to this session of the laboratory will not be counted.