

TP1

The course homepage is here :

<http://www.lsv.ens-cachan.fr/~schwoon/enseignement/systemes/ws1415/>.

You will find the slides from the course and some other files for the exercise there.
Details of shell commands can be obtained from the manual page (the `man` command).

1 Programming the IAS

At the following URL you will find a program that allows to simulate the IAS machine. Download and install the program. In case of need, you may erase it again after this exercise session.

<http://www.cs.colby.edu/djskrien/IASSim/>

(This address is also accessible by googling for *IAS simulator*.)

Using the instructions given during the course and on the website, write and run programs solving the following tasks :

1. As a simple first exercise, write a program that reads words from two memory locations, stores their sum in a third location, then halts.
2. Modify your program so that it sums up all the words in a continuous memory block until one of them is 0. (You may have to use self-modifying code for this.)
3. Computes the squares i^2 , for $i = 1, \dots, n$ (where n is given in some memory location) and store them in sequential locations.

2 The Unix shell

These are some simple first exercises with the Unix shell. Further instructions will be given during the TP.

1. Start a shell (using the desktop interface) and familiarise yourself with it. For instance, list the contents of your directories (`ls`). Change the current directory (`cd`). Try copying, renaming, or erasing files, or moving them across directories (`cp, mv, rm`). Move on when you feel sufficiently sure of these basics.
2. Download the file `tp1files.zip` from the course homepage and extract it into its own directory.

3. The command `convert file1 -thumbnail 200x200 file2` will take the image in `file1` and create a thumbnail from it stored in `file2`. Using a `for` loop, create such thumbnails from the four images that you received such that the resulting files are called, e.g., `small-be.jpg` etc.
4. The file `lesbleus.txt` contains the results of the French football team since its foundation. Each line contains the date, the opponent, information about the occasion (e.g., `F` for friendly match, `WC` for World Cup) and the score (French goals first). Find out how to use `sort` to find the highest-scoring matches. Use `grep` to show only the World Cup matches. Combine the two. Figure out how many of these matches were played (`wc`).
5. (Advanced) Figure out how many matches were won, lost, etc (`awk`).