



B1- Unix and C Lab Seminar

B-CPE-100

Day 02

Shell language

v1.7



Day 02

Shell language

binary name: no binary
repository name: CPool_Day02_\$ACADEMICYEAR
repository rights: ramassage-tek
language: bash
group size: 1
compilation: via Makefile, including re, clean and fclean rules



- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- All the bonus files (including a potential specific Makefile) should be in a directory named *bonus*.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).



Create your repository at the beginning of the day and submit your work on a regular basis!



The Beginning

Resources

You will need a few resources in order to complete today's tasks.

Please download the files of the folder "resources" of the project on the intranet - next to this pdf.

In the following tasks' examples these files will be placed in a directory called **Day02**.



The directory's content is subject to change throughout the day. Remember to keep it up to date.

Task 01

how_many_are_we.sh



When dealing with a script, remember to set execution permission

Write a script, named `how_many_are_we.sh` that displays, give a city as an argument, the number of students in the city.

If no parameter is given, the script will display the total number of students.

In order to retrieve the data, use the following file: **students.csv**

The argument should always be correct and well-formatted:

```
Terminal
~/B-CPE-100> cat Day02/students.csv | ./how_many_are_we.sh ncy
```



When you're writing a script don't forget the **shebang**



Task 02

find_sh.sh

Write a script, named `find_sh.sh` that searches and displays for each file name ending by `.sh` within the current folder and each of its subfolders.

Task 03

count_files.sh

Write a script, named `count_files.sh` that displays the number of regular files in the current folder and each of its subfolders.



man find

Task 04

gotta_catch_them_all.sh

Write a script, named `gotta_catch_them_all.sh` that displays the number of people whose last names start with the string given in argument to your script.

Use the "passwd" file in Day02:

```
Terminal
~/B-CPE-100> cat Day02/passwd | ./gotta_catch_them_all.sh "martin"
```



PATH

Run your scripts from anywhere

In order to use your scripts from any location, you might want to create a folder named `my_scripts` in your home directory, `~/my_scripts` and then copy your useful scripts into that folder.

Commands that you use in a shell *must* be located in a folder that is listed in the **PATH** environment variable.

You will want to add your `~/my_scripts` folder to the **\$PATH** variable.

In order to do this, change the configuration of the `/.bashrc` file.



man env

Task 05

Encrypted

The task's content can be found in Day02, but it is encoded using a substitution cipher.

Here is the key: **LONEYTUSARFPDHIKZBCGJMQVWX**

The result can be obtained in just one command line!

Task 06

skip.sh

Write a script, named `skip.sh` that takes the output of the command `ls -l` and then, starting with the first one, only displays one row out of two.

```
Terminal
~/B-CPE-100> ls -l | ./skip.sh
```



Task 07

r_tacpy.sh

Write a script, named `r_tacpy.sh`, that retrieves the output of the command `cat passwd`, and then, starting with the second one, displays one line out of two by reversing each letter of each login. They will be sorted in reverse order, and will only save logins between `MY_LINE1` and `MY_LINE2`, separated by a comma, and ending with a point and a line break.



`MY_LINE1` and `MY_LINE2` are environment variables

Between lines 24 and 42 the result might be:

```
Terminal
~/B-CPE-100> z_iew, z_idauoj, z_hcinh, z_habsem_ante, z_guomah, z_girdor, z_farhca,
z_evuohc, z_ettorb, z_etset, z_etanok, z_elliap, z_ehkuob, zeek, zdud, z_dnarud, z_dahuob,
z_cdadah, z_azhral_ante.
```