

# B1 - Unix System Programming

B-PSU-100

## my\_ls

LiSting command-like





# my\_ls

binary name: my\_ls

language: C

compilation: via Makefile, including re, clean and fclean rules



- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.
- 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).

You must recode the `ls [-lRdrt] [FILE]` command.

Options can be given in either order:

```
Terminal
~/B-PSU-100> ./my_ls -l -t
...
~/B-PSU-100> ./my_ls -lRt
...
~/B-PSU-100> ./my_ls -lt -R -t
```

It must be possible to pass a list of files/folders as parameters:

```
Terminal
~/B-PSU-100> ./my_ls -l /dev /usr/sbin
...
~/B-PSU-100> ./my_ls -l -r file1 file2
...
```



Handling the column formatting without the `-l` option would be considered as a bonus point, as well as **sorting** and **coloring**.

As a bonus, you could also handle others options, such as `-uFgf`.



## AUTHORIZED FUNCTIONS

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The only system calls allowed are the following ones:

- opendir, readdir, closedir, stat, lstat, write
- getpwuid, getgrgid, time, ctime, readlink,
- malloc, free, perror, strerror, exit.

## EXAMPLES

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```
Terminal
~/B-PSU-100> ./my_ls -l -R
.:
total 12
drwxr-xr-x 2 student student 4096 Nov 13 15:38 dir
-rw-r--- 1 johan johan 0 Nov 13 15:39 '#test#'
-rw-r--- 1 johan johan 22 Nov 13 15:39 test
-rw-r--- 1 johan johan 15 Nov 13 15:39 test~

./dir:
total 0
-rw-r-r- 1 student student 0 Nov 13 15:38 test
```

```
Terminal
~/B-PSU-100> ls -la
total 24
drwxr-xr-x 4 johan johan 4096 Nov 13 16:11 .
drwxr-xr-x 12 johan johan 4096 Nov 13 15:39 ..
drwxr-xr-x 2 student student 4096 Nov 13 15:38 dir
drwxr-xr-x 2 johan johan 4096 Nov 13 16:11 .hiddenfolder
-rw-r--- 1 johan johan 0 Nov 13 15:39 '#test#'
-rw-r--- 1 johan johan 22 Nov 13 15:39 test
-rw-r--- 1 johan johan 15 Nov 13 15:39 test~
```