B4 - Network Programming

B-NWP-400

my FTP

File Transfer Protocol Server

{EPITECH.}

my FTP

binary name: myftp
repository name: NWP_myftp_$ACADEMICYEAR
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).

All the standard C library is authorized except **recv**, **send** and **all system calls that make a socket non-blocking**.

The goal of this project is to create a **FTP server**.
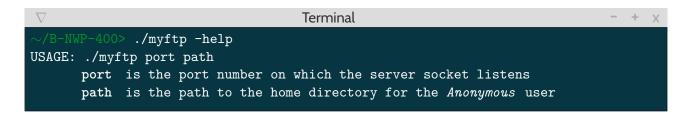You MUST implement the given protocol (bonuses must be RFC959 compliant).
You MUST implement request sequences that are explained in the protocol (more information could be find in RFC959).
The network communication will be achieved through the use of TCP sockets.

Server

```
 ▽                              Terminal                         −  +  x
~/B-NWP-400> ./myftp -help
USAGE: ./myftp port path
      port  is the port number on which the server socket listens
      path  is the path to the home directory for the Anonymous user
```

The server MUST be able to handle several clients at the same time by using **select** for command manage-ment and **fork** for data transfer.
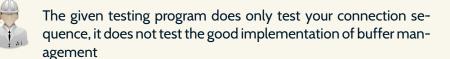
> A good use of **select** is expected for both reading and writing on sockets.
> Any bad use of **select** would cause point loss

The server MUST have an authentication with an *Anonymous* account and an empty password.

Data transfers MUST use *active* or *passive* mode, as explained in the bootstrap.

> Use the given program to see if your connection sequence is available.
>
> > The given testing program does only test your connection se-quence, it does not test the good implementation of buffer man-agement
>
> Use netcat on Epitech's FTP server in order to find out how it works.

Bonuses

Here is a list of possible bonuses;

- an FTP client with the following commands: ls, pwd, cd, get and put
- lcd + lpwd + lls
- mget + mput
- rights management
- a different home directory for each use account
- handle "bin" and "asc" modes
- automatic completion for get
- automatic completion for put

and as a super bonus:

- total compliance with the RFC.