B4 - Unix System Programming

B-PSU-403

my FTP

Forks and FTP Servers

2.0

my FTP

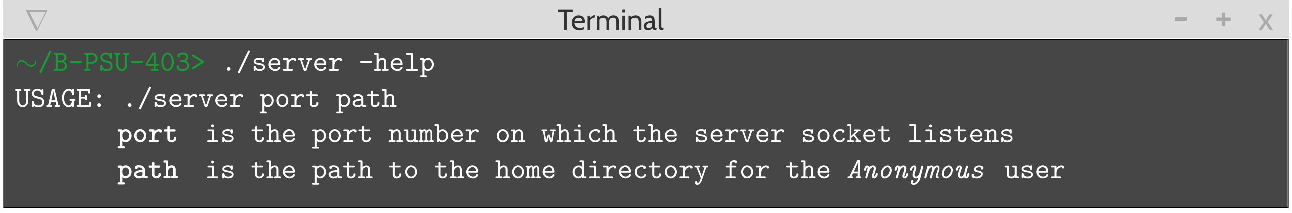
binary name:	myftp, server
group size:	1
repository name:	PSU_myftp_$ACADEMICYEAR
repository rights:	ramassage-tek
language:	C
compilation:	via Makefile, including re, clean and fclean rules

- 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).

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

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

Server



```
~/B-PSU-403> ./server -help
USAGE: ./server 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 a **fork**.

If you are very comfortable with **select**, you can use it.
However, you will have the opportunity to use it during the my_irc project.
Take advantage of this project to learn about a forking server.

If you chose to use **select**, do it correctly:
select for reading, select for writing, nonblocking server.
If your server is badly designed because you wanted to use **select**, you will lose points...

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.
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.