

Course COMP-8567
 Instructor Dr. B. Boufama
 Assignment 07
 Due date Aug. 10, 11.59pm

Aug. 1, 2020

Translate the pseudo-code below into a C program to act like your own basic shell that processes single or multiple commands entered by the user. In particular, the program assembles and executes each command (do not implement piping). The commands/programs location can be anywhere in **\$PATH** and might have arguments.

Examples of input lines entered by the user :

ls -F

ls -F; date ; echo Hello

In particular,

- Your program should assemble and execute each command from the input line.
- You should only use Unix I/O system calls.
- You can run the provided executable for a demonstration.

The pseudo-code

```
While(1)
  read command line from user          // Use Unix read/write system calls
  if ( line == "exit" or CTR-D )
    - print "Bye Bye" and terminate shell

  for each command
    - assemble command args in a vector    // You can use strtok()
    - duplicate current process (fork)      // as a helper
    - child should exec to the new program
    - parent process waits for its child to terminate
    - parent prints a message with pid and returned status of
    - finished child process
```