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CSC-415-02

Assignment 3 - Simple Shell

Description: In my program of a simple shell, I have implemented the fork() call starting a child process and returning back into the parent process, factored in error checking when reading user input and if it reaches EOF, if the fork returns a -1 integer, if the user wants to exit the shell(program), buffer overflow checking, and loading parameters before we start the child process. There are 3 files, the header, the corresponding C file, and the main C file. At the beginning of each child process, it will print out the current PID and the return status.

Compilation: Everything was coded, built, and ran on Ubuntu VM.

Sample Output:

```
student@student-VirtualBox:~/Documents/GitHub/assignment-3-simple
-shell-kchan438$ make run
./chan_kevin_HW3_main
prompt$ls
Child 5198 and with status 5
chan_kevin_HW3_main      Makefile         simple_shell.h
chan_kevin_HW3_main.c  README.md         simple_shell.h.gch
chan_kevin_HW3_main.o  simple_shell.c  simple_shell.o
prompt$ip
Child 5199 and with status 5198
Usage: ip [ OPTIONS ] OBJECT { COMMAND | help }
       ip [ -force ] -batch filename
where  OBJECT := { link | address | addrlabel | route | rule | ne
igh | ntable |
                  tunnel | tuntap | maddress | mroute | mrule |
monitor | xfrm |
                  netns | l2tp | fou | macsec | tcp_metrics | to
ken | netconf | ila |
                  vrf | sr }
       OPTIONS := { -V[ersion] | -s[tatistics] | -d[etails] | -r[
esolve] |
                   -h[uman-readable] | -iec |
                   -f[amily] { inet | inet6 | ipx | dnet | mpls
| bridge | link } |
                   -4 | -6 | -I | -D | -B | -0 |
                   -l[oops] { maximum-addr-flush-attempts } | -b
r[ief] |
                   -o[neline] | -t[imestamp] | -ts[hort] | -b[at
ch] [filename] |
                   -rc[vbuf] [size] | -n[etns] name | -a[ll] | -
c[olor]}
prompt$mv
Child 5200 and with status 5199
mv: missing file operand
Try 'mv --help' for more information.
prompt$nano
Child 5201 and with status 5200
```

```
Child 5200 and with status 5199
mv: missing file operand
Try 'mv --help' for more information.
prompt$nano
Child 5201 and with status 5200
prompt$exit
Child 5202 and with status 5201
student@student-VirtualBox:~/Documents/GitHub/assignment-3-simple
-shell-kchan438$
```