

SIMPLE SHELL

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Important decisions and functions:

- It is required to implement a unix shell program.
- A shell is simply a program that conveniently allows you to run other programs.
- The function “Char input()”:
 - Read command line and add ‘\0’ to convert it to string.
- The function “char parser(char command_line)”:
 - Parse command line into arguments and check for background process flag.
- The function “void execute_command(char arguments)”:
 - Executing command arguments by forking child process.
- The function “void interrupt_handler()”:
 - Logging child process ended into logger when receiving SIGCHLD.

Sample runs:

```
simple shell
ls
'>'  c      log.txt  obj      'simple shell.layout'
7    e      m      'simple shell.cbp'  x
bin  file2  main.c  'simple shell.depend'
ls -l
total 36
-rwxrwxr-x 1 omar omar 84 7 16:11 '>'
-rwxrwxr-x 1 omar omar 0 7 14:47 7
drwxr-xr-x 3 omar omar 4096 6 18:53 bin
-rwxrwxr-x 1 omar omar 0 7 16:00 c
-rwxrwxr-x 1 omar omar 0 7 16:00 e
-rw-rw-r-- 1 omar omar 0 9 22:45 file2
-rw-rw-r-- 1 omar omar 325 10 00:49 log.txt
-rwxrwxr-x 1 omar omar 0 7 14:20 m
-rw-r--r-- 1 omar omar 1345 10 00:00 main.c
drwxr-xr-x 3 omar omar 4096 6 18:53 obj
-rw-rw-r-- 1 omar omar 1022 6 18:45 'simple shell.cbp'
-rw-rw-r-- 1 omar omar 174 10 00:12 'simple shell.depend'
-rw-rw-r-- 1 omar omar 356 8 16:17 'simple shell.layout'
-rwxrwxr-x 1 omar omar 184 9 22:23 x
```

simple shell

```
ls  
'>'  c      log.txt  obj      'simple shell.layout'  
7    e      m      'simple shell.cbp'   x  
bin  file2  main.c  'simple shell.depend'
```

```
firefox &
```

```
No Command
```

System Monitor

FileViewSettingsHelp

Process TableSystem Load

End Process...

Quick search

All Processes, Tree

Tools

Name	Username	CPU %	Memory	Shared Mem	Window Title	Download	U
systemd	root	4%	3'272 K	1'320 K			
ibus-x11	omar		17'444 K	40'612 K			
ibus-daemon	omar		3'348 K	7'884 K			
ibus-gconf	omar		21'416 K	40'406 K			
ibus-m17n	omar		20'008 K	03'102 K			
ibus-pipe	omar		824 K	1'306 K			
ibus-udache	omar		706 K	1'316 K			
systemd	omar	4%	2'000 K	1'176 K			
code	omar	2%	47'906 K	71'900 K	main.c [sim...		
	omar		4'048 K	7400 K			
	omar		188 K	2'400 K			
	omar		72 K	028 K			
	omar		74 K	020 K			
	omar		102'716 K	143'106 K	Mozilla Fire...		
	omar		40'420 K	108'432 K			
	omar		24'792 K	90'020 K			
	omar		10'904 K	77'740 K			
	omar	zombie					
nautilus	omar		24'202 K	48'100 K	simple shell		
gnome-shell	omar	2%	237'044 K	123'792 K			
	omar	2%	31'232 K	99'106 K	System Mo...		

Show Applications

198 processes

CPU: 1%

Mem: 1'016,6 MiB

Swap: 0 B / 2,0 GiB