



Alexandria University
Faculty of Engineering
Computer and Systems Engineering Department

Report lab 1

Simple Shell

Name: Salma Samir Elgammal

ID: 31

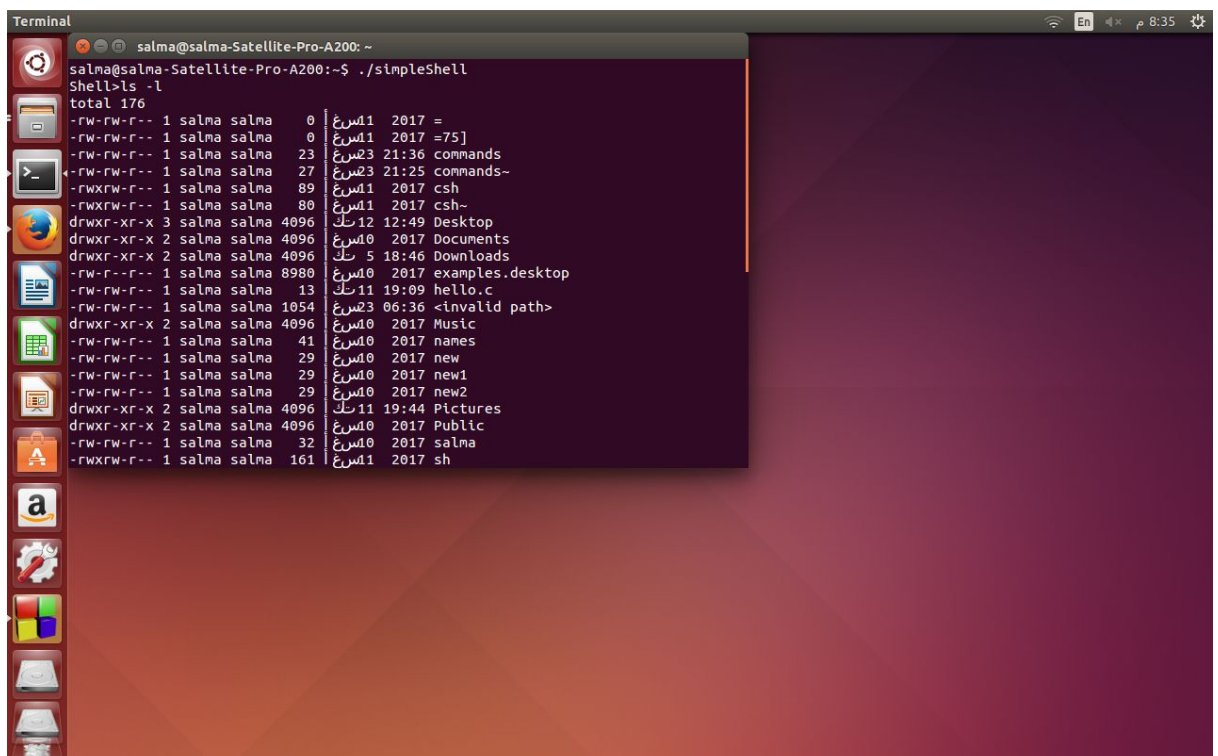
- Description

The program consists of while loop which call main functions such as

“parsing”, “process”, “background” and “cdCommand”.

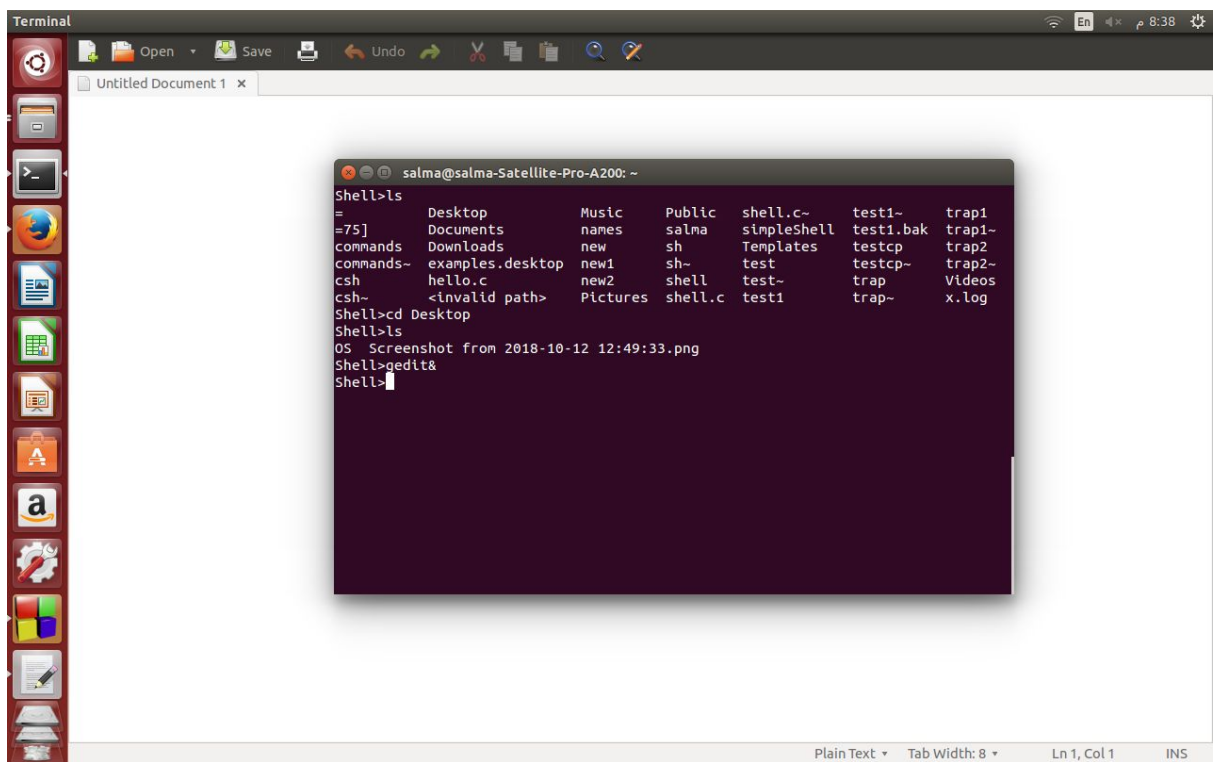
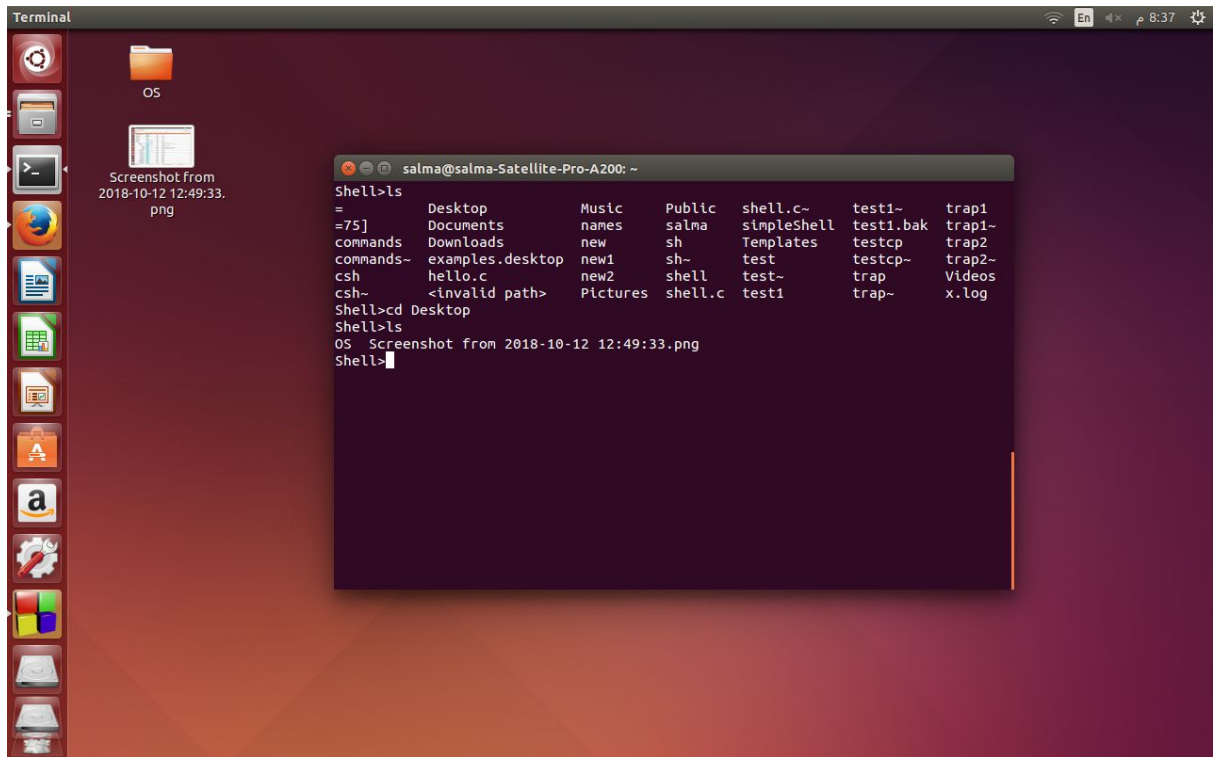
It starts with reading the command then parse it, then if the command ends with ‘&’ sign, we call background function. Else we call process function.

- Sample runs



A terminal window titled "Terminal" showing a shell prompt. The user has run the command `./simpleShell` and then `ls -l`. The output shows a directory listing with permissions, owner, group, size, and file name. The permissions are listed in two columns: the first column shows permissions for files (e.g., `-rw-rw-r--`) and the second column shows permissions for directories (e.g., `drwxr-xr-x`). The file names include `=`, `=75]`, `commands`, `commands~`, `csh`, `csh~`, `Desktop`, `Documents`, `Downloads`, `examples.desktop`, `hello.c`, `<invalid path>`, `Music`, `names`, `new`, `new1`, `new2`, `Pictures`, `Public`, `salma`, and `sh`.

```
salma@salma-Satellite-Pro-A200:~$ ./simpleShell
Shell>ls -l
total 176
-rw-rw-r-- 1 salma salma 0 11:11 2017 =
-rw-rw-r-- 1 salma salma 0 11:11 2017 =75]
-rw-rw-r-- 1 salma salma 23 11:23 2017 commands
-rw-rw-r-- 1 salma salma 27 11:23 2017 commands~
-rwxrwx-r-- 1 salma salma 89 11:11 2017 csh
-rwxrwx-r-- 1 salma salma 80 11:11 2017 csh~
drwxr-xr-x 3 salma salma 4096 12:12 2017 Desktop
drwxr-xr-x 2 salma salma 4096 10:10 2017 Documents
drwxr-xr-x 2 salma salma 4096 5:18 2017 Downloads
-rw-r--r-- 1 salma salma 8980 10:10 2017 examples.desktop
-rw-rw-r-- 1 salma salma 13 11:11 2017 hello.c
-rw-rw-r-- 1 salma salma 1054 11:23 2017 <invalid path>
drwxr-xr-x 2 salma salma 4096 10:10 2017 Music
-rw-rw-r-- 1 salma salma 41 10:10 2017 names
-rw-rw-r-- 1 salma salma 29 10:10 2017 new
-rw-rw-r-- 1 salma salma 29 10:10 2017 new1
-rw-rw-r-- 1 salma salma 29 10:10 2017 new2
drwxr-xr-x 2 salma salma 4096 11:11 2017 Pictures
drwxr-xr-x 2 salma salma 4096 10:10 2017 Public
-rw-rw-r-- 1 salma salma 32 10:10 2017 salma
-rwxrwx-r-- 1 salma salma 161 11:11 2017 sh
```



- ScreenShot from KSysguard

The screenshot shows the KSysguard application window with the 'Process Table' tab selected. The table lists various system processes, including system daemons and user applications. A terminal window is overlaid on the right side of the KSysguard window, showing a shell prompt and the execution of 'ksysguard' and 'firefox' commands.

Name	Username	CPU %	Memory	Shared Mem	Window Title
init	root	5%	1,080 K	2,500 K	
gnome-keyring-daemon	salma		6,760 K	7,984 K	
dbus-daemon	salma		268 K		
dbus-launch	salma		208 K	1,660 K	
avahi-daemon:	avahi		224 K	2,396 K	
colord	colord		3,140 K	7,596 K	
kerneloops	kerneloops		228		
dbus-daemon	messagebus		1,120		
lightdm	root	5%	632		
lightdm	root	5%	656		
init	salma	5%	692		
codeblocks	salma	2%	44,432		
firefox	salma	1%	559,068		
gnome-terminal	salma	2%	4,212		
bash	salma	2%	1,516		
simpleShell	salma	2%	56		
ksysg...	salma	2%	14,532		
ksysg...	salma		364		
firefox	salma	<i>zombie</i>			
gnome-pty-he...	salma		124		
gnome-session	salma		2,528		
compiz	salma		43,508		
nautilus	salma		11,108		
update-notifier	salma		8,804		
deja-dup-moni...	salma		6,764		
nm-applet	salma		5,884		
polkit-gnome-...	salma		4,004		
telepathy-indi...	salma		2,160		
unity-fallback...	salma		1,952		
zeitgeist-data...	salma		1,268		
evolution-calend...	salma		24,304 K	13,704 K	
unity-settings-da...	salma		21,244 K	20,548 K	
syndaemon	salma		184 K	2,144 K	
unity-panel-service	salma		11,244 K	20,212 K	

Terminal output:

```
salma@salma-Satellite-Pro-A200: ~  
Shell>ksysguard&  
Shell>firefox&  
Shell>
```

System Summary:

- 205 processes
- CPU: 7%
- Memory: 1,018.0 MiB / 2.0 GiB
- Swap: 292.0 KiB / 2.0 GiB