INTRODUCTION TO LINUX

LECTURE (8)

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Agenda

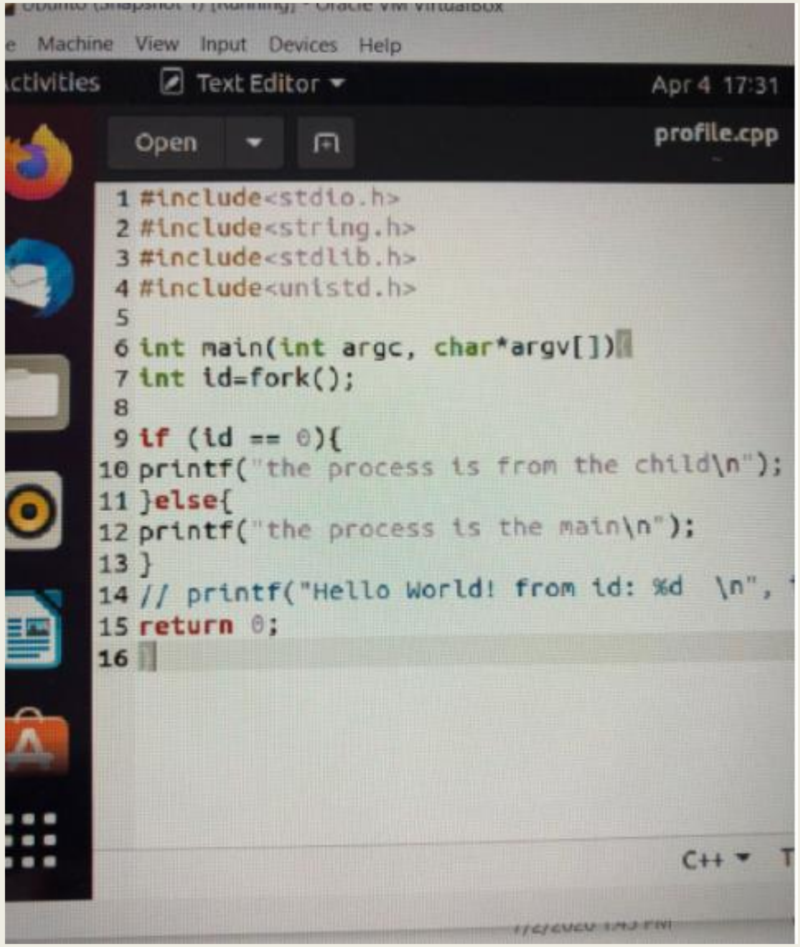
- process

Process definition:

- ***Program***: is a file exist on your device without being run.
- ***Process:*** a running program in your device.

As an administrator you must be able to control the process, to run, to pause, to stop, and to terminate it.

To create a process using C++



```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
#include<unistd.h>

int main(int argc, char*argv[])
int id=fork();

if (id == 0){
printf("the process is from the child\n");
}else{
printf("the process is the main\n");
}
// printf("Hello World! from id: %d  \n",
return 0;

```

Process ID

- Every process has a number, process I.D “PID”
- Every process has a parent which also has a number “PPID”

- To display the current process:

```
Ps
```

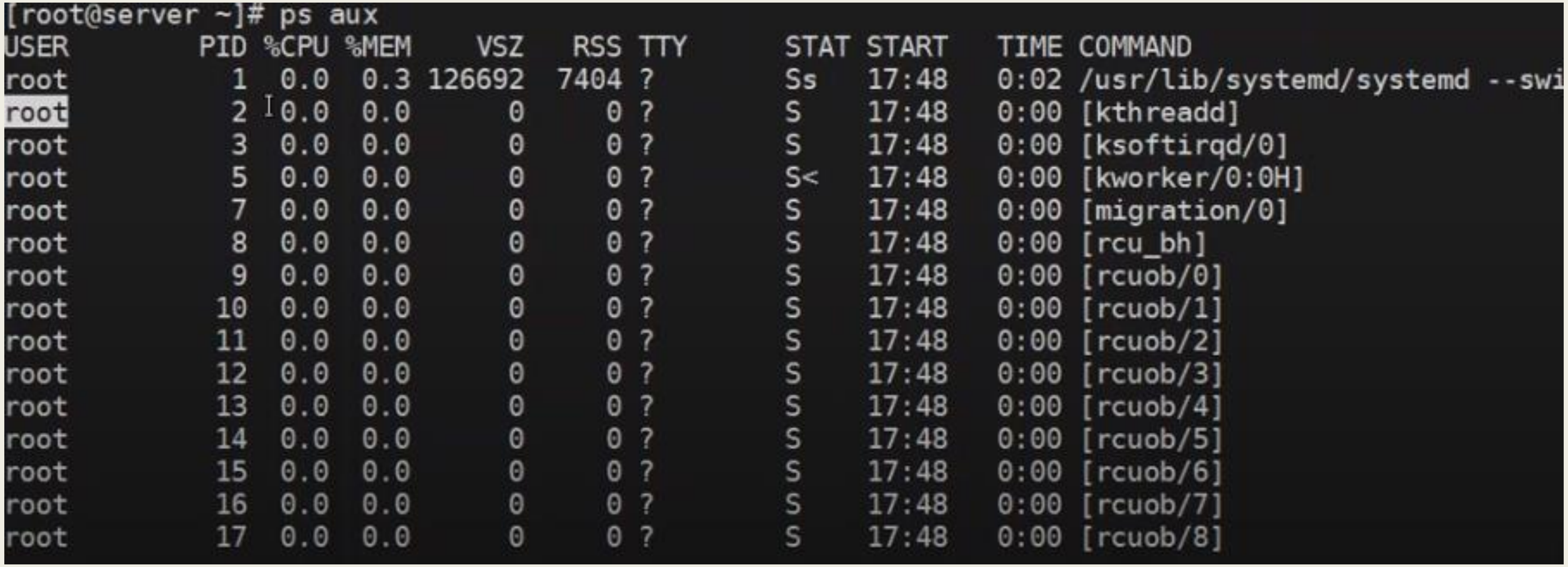
- To display the current process in all shells

```
Ps a
```

- To display more details

```
Ps aux
```

Process ID



```
[root@server ~]# ps aux
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.3 126692  7404 ?        Ss   17:48   0:02 /usr/lib/systemd/systemd --swi
root         2  0.0  0.0      0     0 ?        S    17:48   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        S    17:48   0:00 [ksoftirqd/0]
root         5  0.0  0.0      0     0 ?        S<   17:48   0:00 [kworker/0:0H]
root         7  0.0  0.0      0     0 ?        S    17:48   0:00 [migration/0]
root         8  0.0  0.0      0     0 ?        S    17:48   0:00 [rcu_bh]
root         9  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/0]
root        10  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/1]
root        11  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/2]
root        12  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/3]
root        13  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/4]
root        14  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/5]
root        15  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/6]
root        16  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/7]
root        17  0.0  0.0      0     0 ?        S    17:48   0:00 [rcuob/8]
```

To kill process

- Lab

Ps aux …..from you tty (tty3 =^f3)

^f4 ….to go to different tty

Login

Touch file1

Nano file1 ….. to write something

^f3 ….. to go to tty3

Ps aux ….to get the process id (nano file1)

Kill 7400 …. Put PID

^f4 ….to check the process been killed

<u>To force killing a process</u>

Nano file1 … to write something

^f3 ….. To go to tty3

Kill -9 7400 …. Put PID

^f4 ….to check the process been killed

To find a process and kill it

- If you have a running process but you need to stop it to save your resources for another application.

- Lab

^f4	….to go to different tty
Nano file1	….. to write something
^f3	….. to go to tty3
Pgrep nano	…..to find process id
Kill 7400	…. Put PID
^f4	….to check the process been killed

To find a parent of a process

- If you have a halted process but you need to stop, you can kill its parent.

- Lab

Pstree ….to know the parent

Pstree | less ….. to know the parent

Ps –ef | less …..to find parent process id

/ nano

Kill -9 3456 ….kill parent ID

It terminates the process and the parent.