



SHELL PROGRAMMING

ASSIGNMENT -8

SUBMITTED BY:

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Enrollment no - R200220083

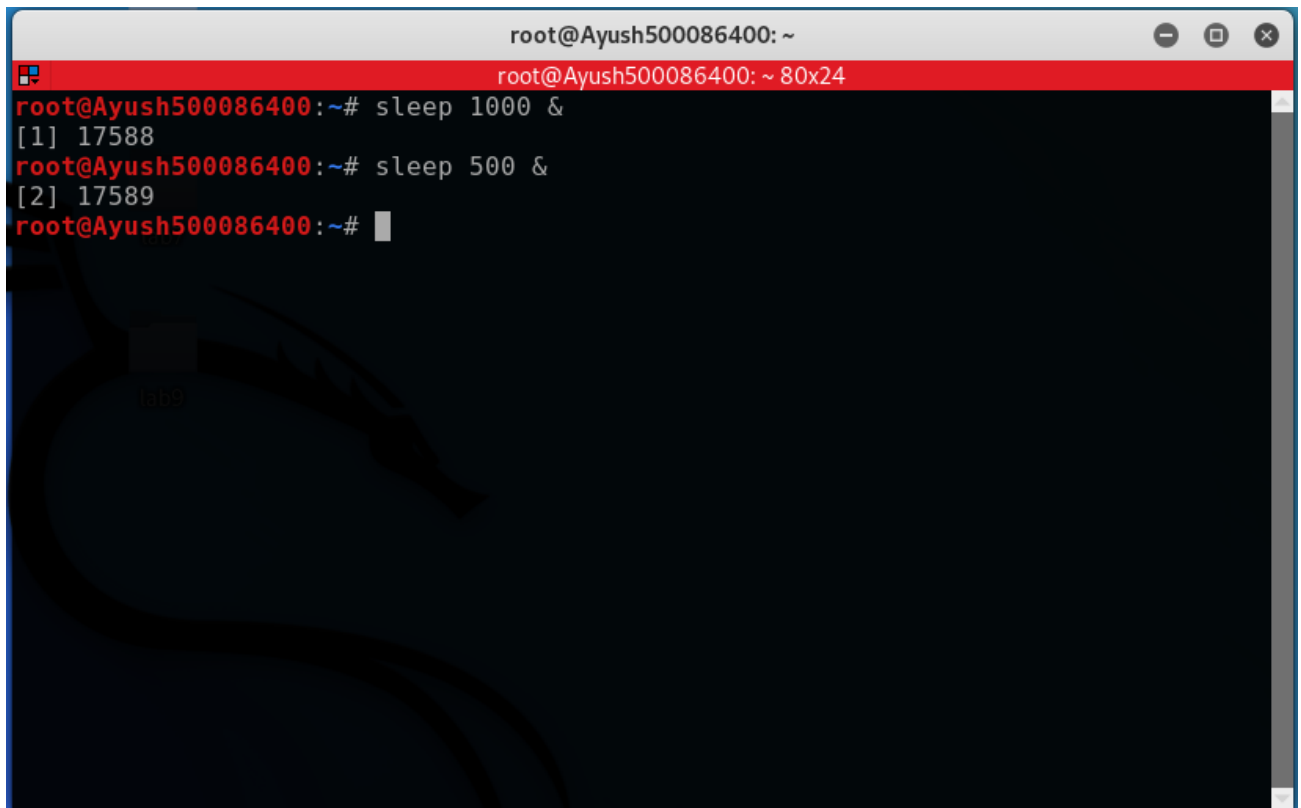
B.C.A -I.O.T.

SUBMITTED TO:

Dr. Dhiviya Rose

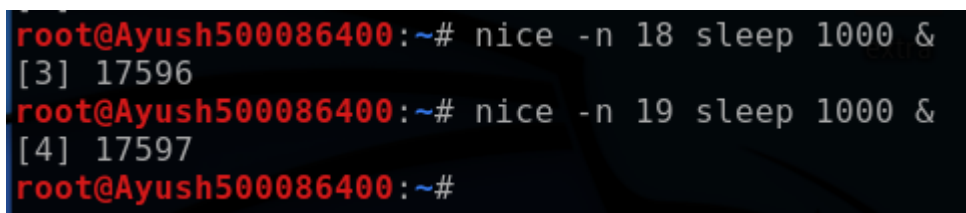
Assignment Content

1. Create two running processes p1 & p2.

A terminal window titled 'root@Ayush500086400: ~' with a red title bar. The window shows the execution of two 'sleep' commands in the background. The first command is 'sleep 1000 &' which returns '[1] 17588'. The second command is 'sleep 500 &' which returns '[2] 17589'. The prompt 'root@Ayush500086400:~#' is visible at the bottom. A faint dragon watermark is visible in the background.

```
root@Ayush500086400: ~  
root@Ayush500086400: ~ 80x24  
root@Ayush500086400:~# sleep 1000 &  
[1] 17588  
root@Ayush500086400:~# sleep 500 &  
[2] 17589  
root@Ayush500086400:~#
```

2. Assign high priority to process p1 and low priority to process p2.

A terminal window showing the execution of 'nice' commands to adjust the priority of the background processes. The first command is 'nice -n 18 sleep 1000 &' which returns '[3] 17596'. The second command is 'nice -n 19 sleep 1000 &' which returns '[4] 17597'. The prompt 'root@Ayush500086400:~#' is visible at the bottom. A faint dragon watermark is visible in the background.

```
root@Ayush500086400:~# nice -n 18 sleep 1000 &  
[3] 17596  
root@Ayush500086400:~# nice -n 19 sleep 1000 &  
[4] 17597  
root@Ayush500086400:~#
```

3. Display the top command to see the process.

```
top - 11:44:45 up 1 day, 4:29, 1 user, load average: 0.21, 0.10, 0.02
Tasks: 199 total, 1 running, 198 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.3 us, 1.3 sy, 0.0 ni, 97.3 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 3895.7 total, 1859.9 free, 1004.6 used, 1031.3 buff/cache
MiB Swap: 974.0 total, 974.0 free, 0.0 used. 2621.1 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1423	root	20	0	4263532	423112	139864	S	2.7	10.6	17:06.26	gnome-s+
1309	root	20	0	369892	132104	63696	S	2.0	3.3	5:44.10	Xorg
13765	root	20	0	575356	72300	44260	S	0.7	1.8	0:27.72	termina+
15918	root	20	0	0	0	0	I	0.3	0.0	0:07.81	kworker+
1	root	20	0	166300	11668	8512	S	0.0	0.3	0:16.70	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.16	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.16	rcu_par+
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker+
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_perc+
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tas+
11	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tas+
12	root	20	0	0	0	0	S	0.0	0.0	0:00.77	ksoftir+
13	root	20	0	0	0	0	I	0.0	0.0	0:09.01	rcu_sch+
14	root	rt	0	0	0	0	S	0.0	0.0	0:01.16	migrati+
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
16	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
17	root	rt	0	0	0	0	S	0.0	0.0	0:02.56	migrati+
18	root	20	0	0	0	0	S	0.0	0.0	0:02.03	ksoftir+
20	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker+
23	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kdevtmp+
24	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
25	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	inet_fr+
26	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kauditd
28	root	20	0	0	0	0	S	0.0	0.0	0:00.12	khungta+
29	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_rea+
30	root	0	-20	0	0	0	I	0.0	0.0	0:00.04	writeba+
31	root	20	0	0	0	0	S	0.0	0.0	0:07.94	kcompact

- Reassign the priority by low to p1 and high to p2.

```
root@Ayush500086400:~# ps -l
```

F	S	UID	PID	PPID	C	PRI	NI	ADDR	SZ	WCHAN	TTY	TIME	CMD
0	S	0	17586	13765	0	80	0	-	1787	-	pts/1	00:00:00	bash
0	S	0	17588	17586	0	80	0	-	1338	-	pts/1	00:00:00	sleep
0	S	0	17589	17586	0	80	0	-	1338	-	pts/1	00:00:00	sleep
0	S	0	17596	17586	0	98	18	-	1338	-	pts/1	00:00:00	sleep
0	S	0	17597	17586	0	99	19	-	1338	-	pts/1	00:00:00	sleep
4	R	0	17603	17586	0	80	0	-	2482	-	pts/1	00:00:00	ps

```
root@Ayush500086400:~#
```

- Display the top command to show the priority.

```

top - 11:44:57 up 1 day, 4:29, 1 user, load average: 0.18, 0.10, 0.02
Tasks: 199 total, 1 running, 198 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.5 us, 0.0 sy, 0.0 ni, 99.5 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 3895.7 total, 1859.9 free, 1004.6 used, 1031.3 buff/cache
MiB Swap: 974.0 total, 974.0 free, 0.0 used. 2621.1 avail Mem

```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1423	root	20	0	4263532	423120	139864	S	0.7	10.6	17:06.32	gnome-s+
17598	root	20	0	10552	4104	3312	R	0.7	0.1	0:00.06	top
1309	root	20	0	369892	132104	63696	S	0.3	3.3	5:44.13	Xorg
13765	root	20	0	575356	72300	44260	S	0.3	1.8	0:27.74	termina+
1	root	20	0	166300	11668	8512	S	0.0	0.3	0:16.70	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.16	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.16	rcu_par+
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker+
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_perc+
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tas+
11	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tas+
12	root	20	0	0	0	0	S	0.0	0.0	0:00.77	ksoftir+
13	root	20	0	0	0	0	I	0.0	0.0	0:09.01	rcu_sch+
14	root	rt	0	0	0	0	S	0.0	0.0	0:01.16	migrati+
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
16	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
17	root	rt	0	0	0	0	S	0.0	0.0	0:02.56	migrati+
18	root	20	0	0	0	0	S	0.0	0.0	0:02.04	ksoftir+
20	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker+
23	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kdevtmp+
24	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
25	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	inet_fr+
26	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kauditd
28	root	20	0	0	0	0	S	0.0	0.0	0:00.12	khungta+
29	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_rea+
30	root	0	-20	0	0	0	I	0.0	0.0	0:00.04	writeba+
31	root	20	0	0	0	0	S	0.0	0.0	0:07.94	kcompac+

```

top - 11:46:04 up 1 day, 4:30, 1 user, load average: 0.20, 0.12, 0.03
Tasks: 199 total, 1 running, 198 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.5 us, 0.2 sy, 0.0 ni, 99.3 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 3895.7 total, 1858.3 free, 1004.9 used, 1032.6 buff/cache
MiB Swap: 974.0 total, 974.0 free, 0.0 used. 2619.7 avail Mem

```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1423	root	20	0	4264684	424300	141032	S	0.3	10.6	17:07.56	gnome-shell
17532	root	20	0	0	0	0	I	0.3	0.0	0:00.12	kworker/1:0-events
1	root	20	0	166300	11668	8512	S	0.0	0.3	0:16.70	systemd