

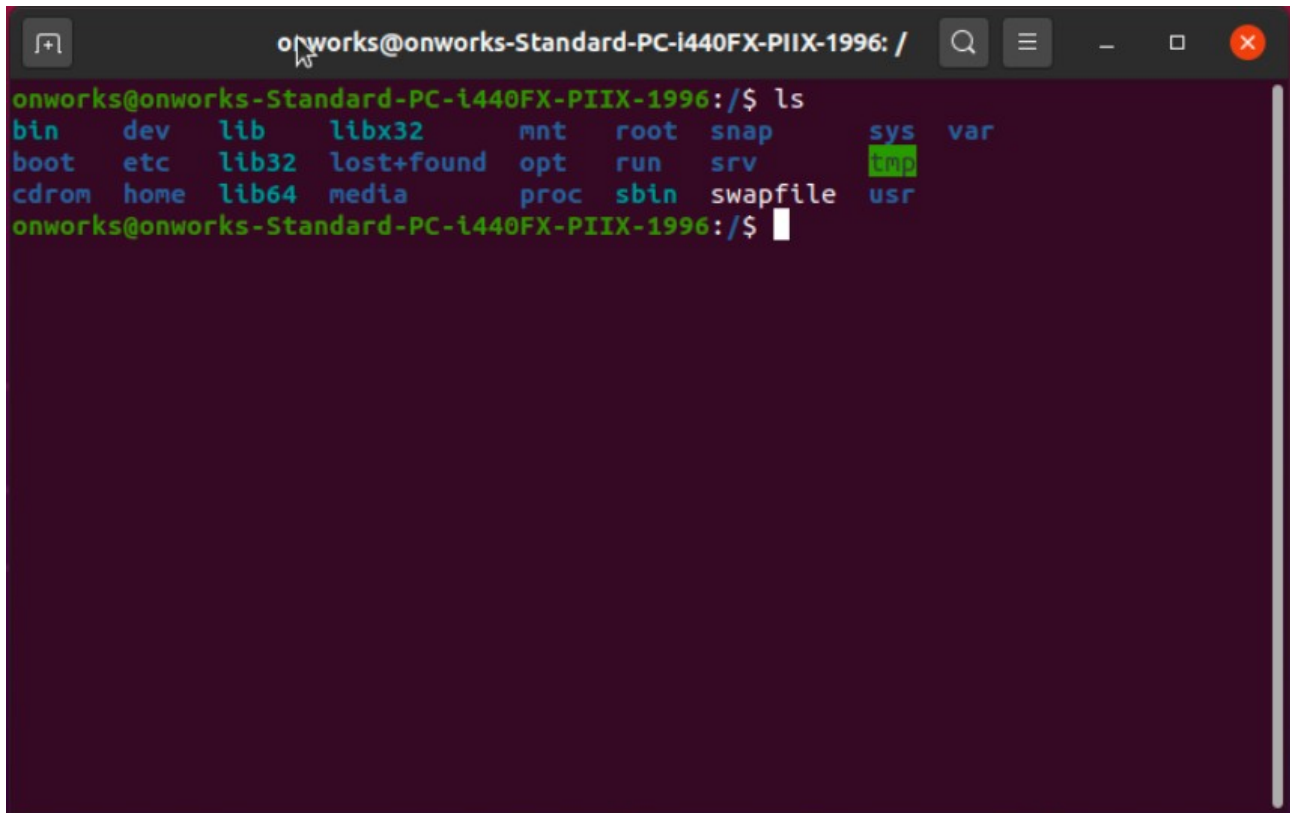
Abubakkar Abdullah

20p-0045

**Section: Operating
Systems BCS-4A**

Lab Task: 1

“LS Command”



A terminal window titled "onworks@onworks-Standard-PC-i440FX-PIIX-1996: /" showing the output of the 'ls' command. The output lists the contents of the root directory in a color-coded, multi-column format. The prompt "onworks@onworks-Standard-PC-i440FX-PIIX-1996:/\$" is visible at the bottom of the terminal.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ ls
bin    dev    lib    libx32  mnt    root   snap   sys    var
boot   etc    lib32  lost+found  opt    run    srv     tmp
cdrom  home   lib64  media    proc   sbin   swapfile  usr
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$
```

-

-

“MAN LS”

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: /
LS(1) User Commands LS(1)
NAME
    ls - list directory contents
SYNOPSIS
    ls [OPTION]... [FILE]...
DESCRIPTION
    List information about the FILES (the current directory by default).
    Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-
    fied.

    Mandatory arguments to long options are mandatory for short options
    too.

    -a, --all
        do not ignore entries starting with .

    -A, --almost-all
        do not list implied . and ..

Manual page ls(1) line 1 (press h for help or q to quit)
```

-
-

PWD Command

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ pwd
/home/onworks/Desktop
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$
```

-
-
-
-
-

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~/Desktop
Hi How are you
black.txt (END)
```

•

•

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ uname
Linux
```

•

•

•

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ uname -a
Linux onworks-Standard-PC-i440FX-PIIX-1996 5.4.0-54-generic #60-Ubuntu SMP Fri
Nov 6 10:37:59 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ uname -s
Linux
```

•

•

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ uname -n
onworks-Standard-PC-i440FX-PIIX-1996
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ uname -r
5.4.0-54-generic
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$ hostname
onworks-Standard-PC-i440FX-PIIX-1996
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Desktop$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: /
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ ls
bin    dev    lib    libx32  mnt    root  snap    sys    var
boot  etc    lib32  lost+found  opt    run    srv      tmp
cdrom  home  lib64  media    proc   sbin  swapfile  usr
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ cd home
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/home$ cd ..
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ ls
bin    dev    lib    libx32  mnt    root  snap    sys    var
boot  etc    lib32  lost+found  opt    run    srv      tmp
cdrom  home  lib64  media    proc   sbin  swapfile  usr
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ cd home
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/home$ ls
onworks
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/home$ cd onworks
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Pictures  snap      Videos
Documents  Music      Public    Templates
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd Pictures
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/Pictures$ cd /
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$ ls
bin    dev    lib    libx32  mnt    root  snap    sys    var
boot  etc    lib32  lost+found  opt    run    srv      tmp
cdrom  home  lib64  media    proc   sbin  swapfile  usr
onworks@onworks-Standard-PC-i440FX-PIIX-1996:/$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir Helloworld
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Music      Public  Templates
Documents  Helloworld  Pictures  snap    Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

- ```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir Helloworld
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop Downloads Music Public Templates
Documents Helloworld Pictures snap Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ rmdir Helloworld
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop Documents Downloads Music Pictures Public snap Templates Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

- ```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ touch wow.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ nano wow.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ grep Adam wow.txt
Hi Adam
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

- ```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat wow.txt
Hi Adam
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

- ```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ nano wow.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sort wow.txt
Ali is a good boy
Hi Adam
Where are you
Zone is near
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

-

-

-

-

-


```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ head data.txt  
  PPID    PID    PGID    SID TTY      TPGID STAT  UID   TIME  COMMAND  
    0      2      0      0 ?          -1 S      0   0:00  [kthreadd]  
    2      3      0      0 ?          -1 I<     0   0:00  \_ [rcu_gp]  
    2      4      0      0 ?          -1 I<     0   0:00  \_ [rcu_par_gp]  
    2      5      0      0 ?          -1 I      0   0:01  \_ [kworker/0:0-mm_  
percpu_wq]  
    2      6      0      0 ?          -1 I<     0   0:00  \_ [kworker/0:0H-kb  
lockd]  
    2      7      0      0 ?          -1 I      0   0:00  \_ [kworker/u4:0-ev  
ents_unbound]  
    2      8      0      0 ?          -1 I<     0   0:00  \_ [mm_percpu_wq]  
    2      9      0      0 ?          -1 S      0   0:00  \_ [ksoftirqd/0]  
    2     10      0      0 ?          -1 I      0   0:19  \_ [rcu_sched]  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ tail data.txt  
    903    910    903    903 ?          -1 Sl     1000  0:00  \_ /usr/libexec/ibu  
s-dconf  
    903    911    903    903 ?          -1 Sl     1000  0:00  \_ /usr/libexec/ibu  
s-ui-gtk3  
    903    912    903    903 ?          -1 Sl     1000  0:01  \_ /usr/libexec/ibu  
s-extension-gtk3  
    903   1063    903    903 ?          -1 Sl     1000  0:01  \_ /usr/libexec/ibu  
s-engine-simple  
    1     915    903    903 ?          -1 Sl     1000  0:00  /usr/libexec/ibus-x1  
1 --kill-daemon  
    1    1284   1284   1284 ?          -1 Ssl    121   0:00  /usr/libexec/colord  
    1    1405   1405   1405 ?          -1 Ssl     0   0:00  /usr/libexec/fwupd/f  
wupd  
    1    2434   2434   2434 ?          -1 Ss      0   0:00  /bin/sh /usr/lib/apt  
/apt.systemd.daily update  
    2434   2442   2434   2434 ?          -1 S      0   0:00  \_ /bin/sh /usr/lib  
/apt/apt.systemd.daily lock_is_held update  
    2442   2522   2434   2434 ?          -1 Rl      0  21:20  \_ /usr/bin/pyt  
hon3 /usr/bin/unattended-upgrade --download-only  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ stat -L data.txt
  File: data.txt
  Size: 17778          Blocks: 40          IO Block: 4096   regular file
Device: 805h/2053d    Inode: 1708642     Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/ onworks)   Gid: ( 1000/ onworks)
Access: 2023-01-31 18:28:03.008000000 +0100
Modify: 2023-01-31 18:27:55.324000000 +0100
Change: 2023-01-31 18:27:55.324000000 +0100
 Birth: -
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ free KB
              total        used        free      shared  buff/cache   available
Mem:           2990612       1092824        742096         8052       1155692       1716760
Swap:          1435264           0        1435264

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ free byte
              total        used        free      shared  buff/cache   available
Mem:           2990612       1092796        742064         8052       1155752       1716772
Swap:          1435264           0        1435264

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ free GB
              total        used        free      shared  buff/cache   available
Mem:           2990612       1092796        742064         8052       1155752       1716772
Swap:          1435264           0        1435264

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ free MB
              total        used        free      shared  buff/cache   available
Mem:           2990612       1093048        741804         8052       1155760       1716520
Swap:          1435264           0        1435264
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ uptime
18:32:21 up 28 min,  1 user,  load average: 1,11, 1,22, 1,06
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

top:


```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
top - 18:32:51 up 29 min, 1 user, load average: 1,07, 1,20, 1,06  
Tasks: 179 total, 3 running, 174 sleeping, 2 stopped, 0 zombie  
%Cpu(s): 0,3 us, 15,3 sy, 35,0 ni, 49,3 id, 0,0 wa, 0,0 hi, 0,0 si, 0,2 st  
MiB Mem : 2920,5 total, 724,4 free, 1067,4 used, 1128,7 buff/cache  
MiB Swap: 1401,6 total, 1401,6 free, 0,0 used. 1676,3 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
4697	root	39	19	275032	106716	69760	R	100,0	3,6	2:52.16	unattended-upgr
86	root	20	0	0	0	0	I	0,3	0,0	0:00.58	kworker/u4:1-e+
649	onworks	20	0	519064	60800	37960	S	0,3	2,0	0:15.71	Xorg
1052	onworks	20	0	4130752	315512	115720	S	0,3	10,6	0:30.47	gnome-shell
3467	onworks	20	0	964200	52572	39752	S	0,3	1,8	0:07.80	gnome-terminal-
1	root	20	0	101836	11548	8420	S	0,0	0,4	0:01.93	systemd
2	root	20	0	0	0	0	S	0,0	0,0	0:00.00	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	0:00.00	rcu_par_gp
5	root	20	0	0	0	0	I	0,0	0,0	0:01.38	kworker/0:0-ev+
6	root	0	-20	0	0	0	I	0,0	0,0	0:00.00	kworker/0:0H-k+
7	root	20	0	0	0	0	I	0,0	0,0	0:00.24	kworker/u4:0-e+
8	root	0	-20	0	0	0	I	0,0	0,0	0:00.00	mm_percpu_wq
9	root	20	0	0	0	0	S	0,0	0,0	0:00.09	ksoftirqd/0
10	root	20	0	0	0	0	R	0,0	0,0	0:19.42	rcu_sched
11	root	rt	0	0	0	0	S	0,0	0,0	0:00.04	migration/0
12	root	-51	0	0	0	0	S	0,0	0,0	0:00.00	idle_inject/0
14	root	20	0	0	0	0	S	0,0	0,0	0:00.00	cpuhp/0
15	root	20	0	0	0	0	S	0,0	0,0	0:00.00	cpuhp/1
16	root	-51	0	0	0	0	S	0,0	0,0	0:00.00	idle_inject/1

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ iwconfig  
ens3      no wireless extensions.  
  
lo        no wireless extensions.
```

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ gzip data.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
' data.txt'      Desktop      Downloads   Pictures    snap        Videos
data.txt.gz     Documents   Music       Public      Templates   wow.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ gunzip data.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
' data.txt'      Desktop      Downloads   Pictures    snap        Videos
data.txt         Documents   Music       Public      Templates   wow.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$

```

-

-

PING:

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ping google.com
PING google.com (142.250.186.110) 56(84) bytes of data.
From _gateway (10.0.2.2) icmp_seq=1 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=2 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=3 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=4 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=5 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=6 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=7 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=8 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=9 Destination Net Unreachable
From _gateway (10.0.2.2) icmp_seq=10 Destination Net Unreachable
^C
--- google.com ping statistics ---
10 packets transmitted, 0 received, +10 errors, 100% packet loss, time 9167ms

```

-

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ nslookup google.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.186.110
Name:   google.com
Address: 2a00:1450:4001:829::200e

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$

```

-

-

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps
  PID TTY          TIME CMD
 3478 pts/0        00:00:00 bash
 4265 pts/0        00:00:00 top
 4983 pts/0        00:00:00 ps
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ netstat
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps -e
  PID TTY          TIME CMD
    1 ?           00:00:02 systemd
    2 ?           00:00:00 kthreadd
    3 ?           00:00:00 rcu_gp
    4 ?           00:00:00 rcu_par_gp
    5 ?           00:00:01 kworker/0:0-events
    6 ?           00:00:00 kworker/0:0H-kblockd
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps -f
UID          PID    PPID  C STIME TTY          TIME CMD
onworks      3478    3467  0 18:08 pts/0        00:00:00 bash
onworks      4265    3478  0 18:21 pts/0        00:00:00 top
onworks      5015    3478  0 18:37 pts/0        00:00:00 ps -f
```


-

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps -a
```

PID	TTY	TIME	CMD
649	tty2	00:00:16	Xorg
814	tty2	00:00:00	gnome-session-b
4063	pts/0	00:00:00	sudo
4265	pts/0	00:00:00	top
4842	pts/0	00:00:00	sudo
5009	pts/0	00:00:00	ps

-

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps
```

PID	TTY	TIME	CMD
3478	pts/0	00:00:00	bash
4265	pts/0	00:00:00	top
4983	pts/0	00:00:00	ps

-

-

VIM EDITOR CONCAT:

```
vim abubkkar.txt  
vim p20_0045.txt
```

-

```
cat abubkkar.txt p20_0045.txt >> Personal_Info.txt
```

-

-

-

-

-

```
~/Music$ cat abubkkar.txt
```

```
abubakkar abdullah  
batch 20  
bcs-4a
```

```
~/Music$ cat p20_0045.txt
```

```
p20_0045  
abduallahabubakkar425@gmail.com
```

```
~/Music$ cat Personal_Info.txt
```

```
p20_0045  
abduallahabubakkar425@gmail.com  
abubakkar abdullah  
batch 20  
bcs-4a  
p20_0045  
abduallahabubakkar425@gmail.com
```
