

Assignment : 02

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Solution of Part A:

ls

```
Sharishth@12041370 $ ls  
a.out  partA.c  partB.c  partC.c  README  REPORT.docx
```

mkdir

```
Sharishth@12041370 $ mkdir folder
```

cd

```
Sharishth@12041370 $ cd folder
```

touch and rm

```
Sharishth@12041370 $ touch file1
```

```
Sharishth@12041370 $ rm -r folder
```

ps

```
Sharishth@12041370 $ ps
  PID TTY          TIME CMD
 1698 pts/0    00:00:20 zsh
 13349 pts/0    00:00:00 a.out
 13435 pts/0    00:00:00 ps
```

netstat

```
Sharishth@12041370 $ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
udp        0      0 shar.iitbhilai.a:bootpc 10.1.72.7:bootps       ESTABLISHED
udp        0      0 sharlsp.iitbhila:bootpc 10.1.72.7:bootps       ESTABLISHED
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags               Type           State         I-Node      Path
unix    2      [ ]                   DGRAM                    25192        /run/user/1000/systemd/notify
unix    2      [ ]                   DGRAM                    93156        /run/wpa_supplicant/wlan0
unix    2      [ ]                   DGRAM                    93160        /run/wpa_supplicant/p2p-dev-wlan0
unix    3      [ ]                   DGRAM        CONNECTED     19555        /run/systemd/notify
unix    2      [ ]                   DGRAM                    19573        /run/systemd/journal/syslog
unix   15      [ ]                   DGRAM        CONNECTED     19579        /run/systemd/journal/dev-log
unix    7      [ ]                   DGRAM        CONNECTED     19581        /run/systemd/journal/socket
unix    3      [ ]                   SEQPACKET    CONNECTED     28246        @0000a
unix    3      [ ]                   SEQPACKET    CONNECTED     28248        @0000b
unix    2      [ ]                   DGRAM                    22190        @00007
```

Solution of Part B:

Extended the code to run ls && ls

```
Sharishth@12041370 $ ls && ls
ls: cannot access '&&': No such file or directory
ls: cannot access 'ls': No such file or directory
```

Screen shot before extending the code

```
Sharishth@12041370 $ ls && ls
a.out partA.c partB.c partC.c README REPORT.docx
a.out partA.c partB.c partC.c README REPORT.docx
```

Screen shot after extending the code

ps -aux | grep "bash"

```
Sharishth@12041370 $ ps -aux | grep "bash"
Sharishth@12041370 $ sharish+ 14312 0.0 0.0 6296 2224 pts/0 S+ 13:01 0:00 grep "bash"
```

ps -aux | grep sh | grep bash

```
Sharishth@12041370 $ ps -aux | grep sh | grep bash
Sharishth@12041370 $ sharish+ 14294 0.0 0.0 6296 2244 pts/0 S+ 13:00 0:00 grep bash
```

ls | wc -l

```
Sharishth@12041370 $ ls | wc -l
Sharishth@12041370 $ 6
```

sudo apt update && sudo apt upgrade

```
Sharishth@12041370 $ sudo apt update && sudo apt upgrade
[sudo] password for sharishth:
Hit:1 http://packages.microsoft.com/repos/code stable InRelease
Hit:2 https://download.docker.com/linux/debian bullseye InRelease
Hit:3 https://dl.yarnpkg.com/debian stable InRelease
Hit:4 https://deb.opera.com/opera-stable stable InRelease
Hit:6 https://download.sublimetext.com apt/stable/ InRelease
Hit:5 http://ftp.free.fr/pub/kali kali-rolling InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
W: https://download.docker.com/linux/debian/dists/bullseye/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
W: https://deb.opera.com/opera-stable/dists/stable/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
W: https://download.sublimetext.com/apt/stable/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

Solution of Part C:

Extended the code to support file redirection

ls > a

```
Sharishth@12041370 $ ls > a
ls: cannot access '>': No such file or directory
ls: cannot access 'a': No such file or directory
```

Before

```
Sharishth@12041370 $ ls
a.out partA.c partB.c partC.c README REPORT.docx
Sharishth@12041370 $ ls > a
Sharishth@12041370 $ cat a
a
a.out
partA.c
partB.c
partC.c
README
REPORT.docx
```

After

ls -al > list.txt

```
Sharishth@12041370 $ ls -al > list.txt
Sharishth@12041370 $ cat list.txt
total 116
drwxr-xr-x 2 sharishth sharishth 4096 Mar 12 13:34 .
drwxr-xr-x 3 sharishth sharishth 4096 Mar 12 13:32 ..
-rw-r--r-- 1 sharishth sharishth 51 Mar 12 13:33 a
-rwxr-xr-x 1 sharishth sharishth 22904 Mar 12 13:32 a.out
-rw-r--r-- 1 sharishth sharishth 0 Mar 12 13:34 list.txt
-rw-r--r-- 1 sharishth sharishth 9872 Mar 12 01:58 partA.c
-rw-r--r-- 1 sharishth sharishth 12341 Mar 12 13:31 partB.c
-rw-r--r-- 1 sharishth sharishth 14894 Mar 12 13:32 partC.c
-rw-r--r-- 1 sharishth sharishth 298 Mar 12 13:19 README
-rw-r--r-- 1 sharishth sharishth 31865 Mar 12 01:33 REPORT.docx
Sharishth@12041370 $ _
```

cat < list.txt

```
Sharishth@12041370 $ cat < list.txt
total 116
drwxr-xr-x 2 sharishth sharishth 4096 Mar 12 13:34 .
drwxr-xr-x 3 sharishth sharishth 4096 Mar 12 13:32 ..
-rw-r--r-- 1 sharishth sharishth 51 Mar 12 13:33 a
-rwxr-xr-x 1 sharishth sharishth 22904 Mar 12 13:32 a.out
-rw-r--r-- 1 sharishth sharishth 0 Mar 12 13:34 list.txt
-rw-r--r-- 1 sharishth sharishth 9872 Mar 12 01:58 partA.c
-rw-r--r-- 1 sharishth sharishth 12341 Mar 12 13:31 partB.c
-rw-r--r-- 1 sharishth sharishth 14894 Mar 12 13:32 partC.c
-rw-r--r-- 1 sharishth sharishth 298 Mar 12 13:19 README
-rw-r--r-- 1 sharishth sharishth 31865 Mar 12 01:33 REPORT.docx
Sharishth@12041370 $ _
```