MUHAMMAD BIN IMRAN

F21-9340

SECTION – 6E

LAB NO 3

TASK NO 1
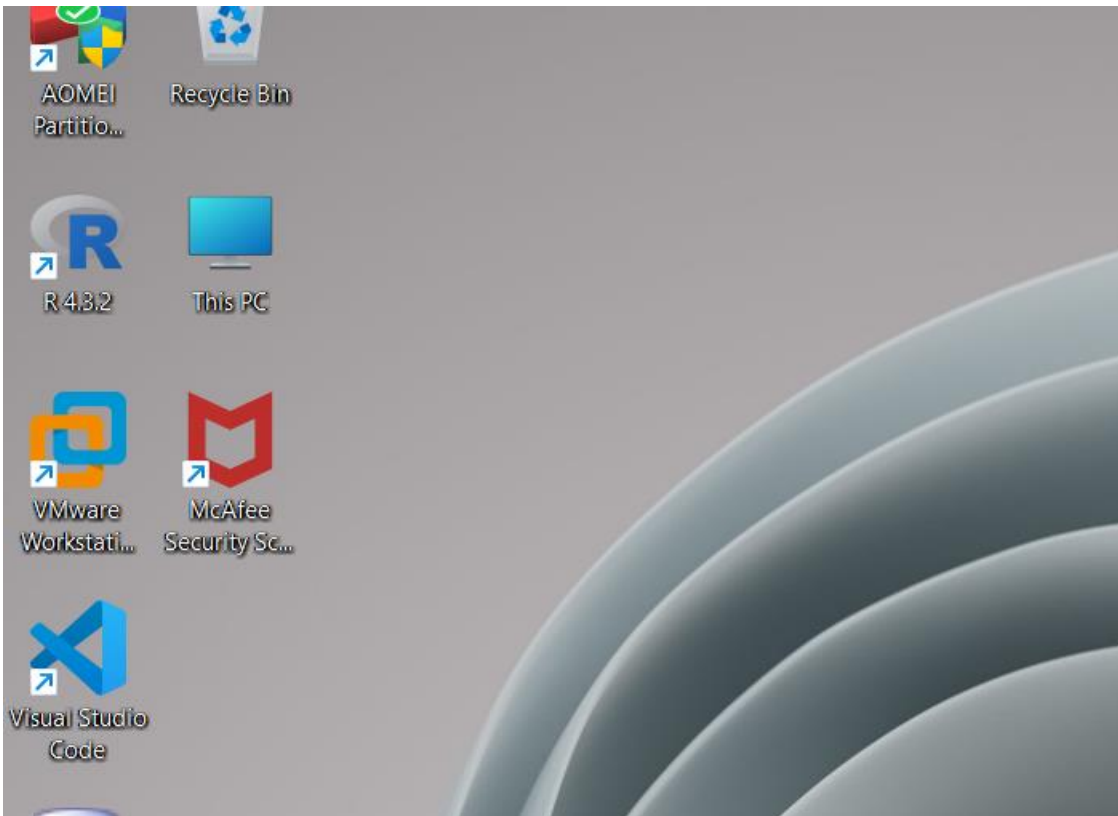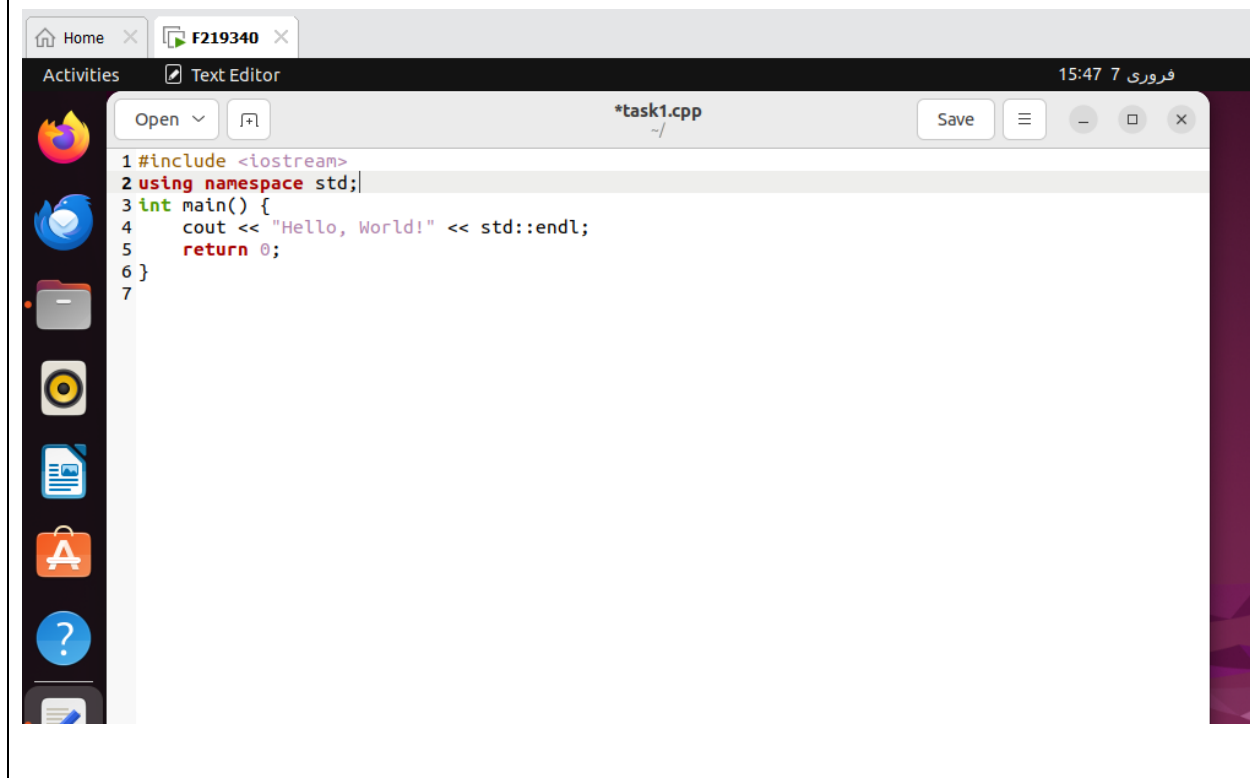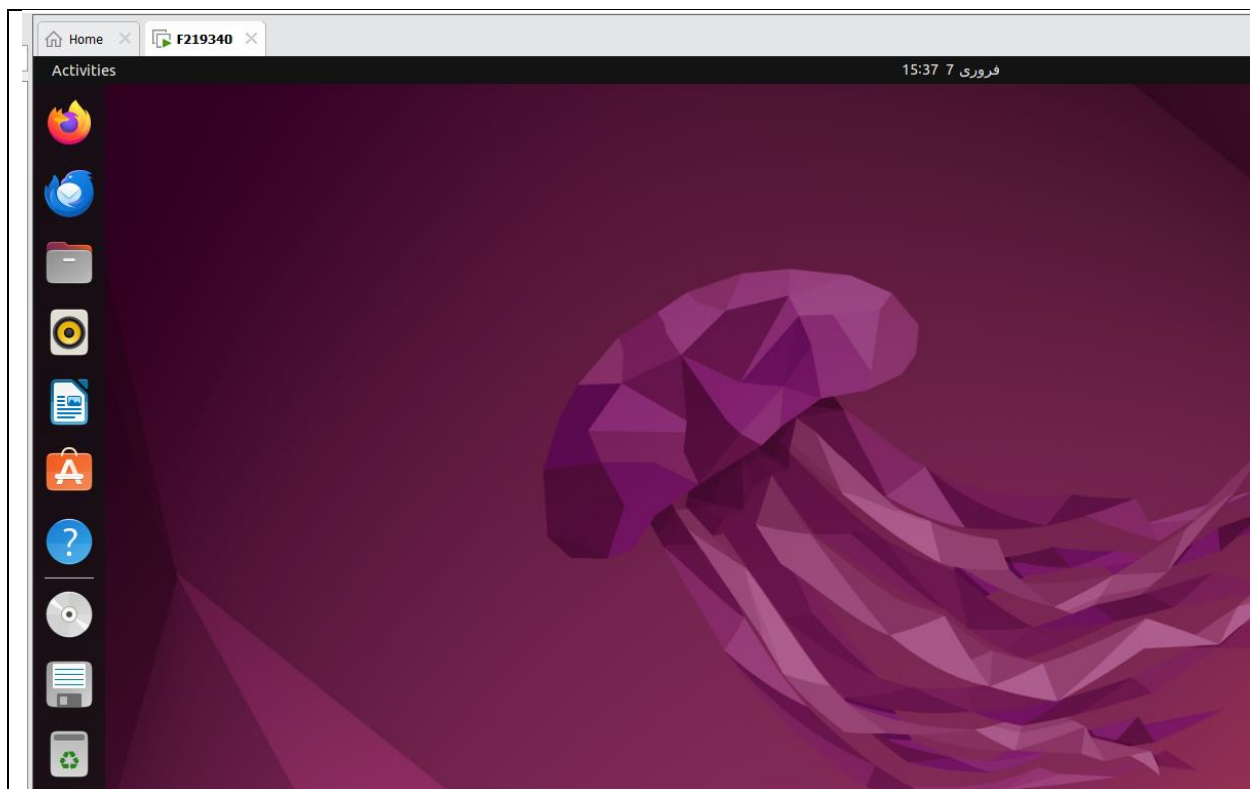
*task1.cpp
~/

Open ⌄   [+]   Save

```cpp
1 #include <iostream>
2 using namespace std;
3 int main() {
4     cout << "Hello, World!" << std::endl;
5     return 0;
6 }
7
```

```
muhammad@f219340-virtual-machine:~$ cd Desktop
muhammad@f219340-virtual-machine:~/Desktop$ chmod +x task2.c
muhammad@f219340-virtual-machine:~/Desktop$ ./task2
Hello World!muhammad@f219340-virtual-machine:~/Desktop$
```

TASK NO 2
Catenation of two text files located on the desktop.


```
muhammad@f219340-virtual-machine:~/Desktop$ cat file1.txt
Muhammad Bin Imran

muhammad@f219340-virtual-machine:~/Desktop$ cat file2.txt
F21-9340

muhammad@f219340-virtual-machine:~/Desktop$ cat file1.txt file2.txt
Muhammad Bin Imran

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muhammad@f219340-virtual-machine:~/Desktop$
```
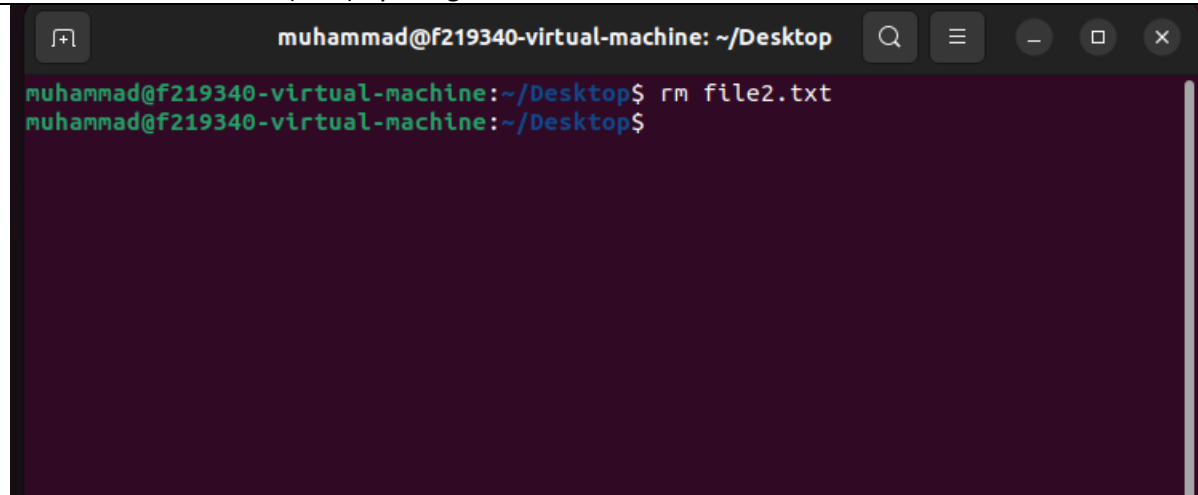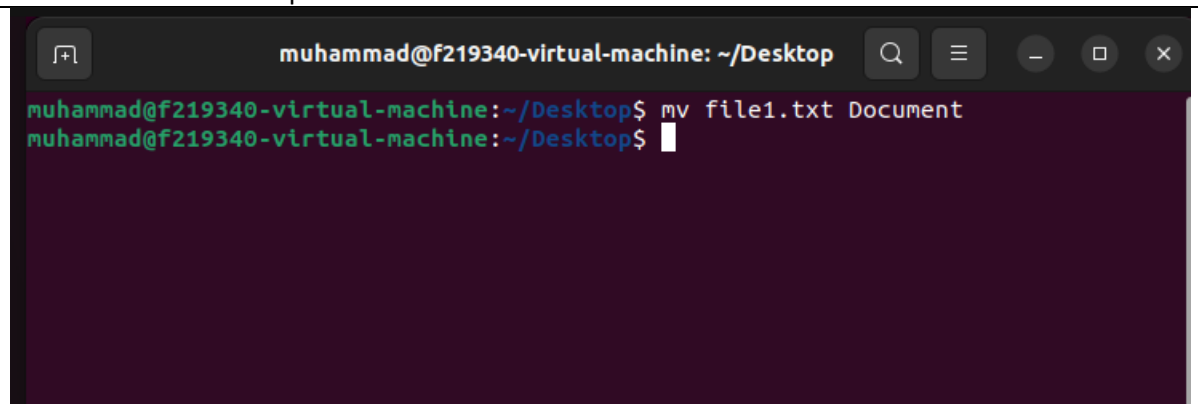
Deletion of the text file(file2) by using a command rm command

muhammad@f219340-virtual-machine: ~/Desktop

muhammad@f219340-virtual-machine:~/Desktop$ rm file2.txt
muhammad@f219340-virtual-machine:~/Desktop$

Move file1 from desktop to Document Folder

muhammad@f219340-virtual-machine: ~/Desktop

muhammad@f219340-virtual-machine:~/Desktop$ mv file1.txt Document
muhammad@f219340-virtual-machine:~/Desktop$ █

File 1 only has 1 line of text. The head command reads the first line from the text file, the tail command reads the last line from the file, the sort command sorts the unsorted text in the file, and the grep command finds the string from the text file.

The Ls command shows all the files in the current position and the pwd command shows the current directory.

The Mkdir command creates a new directory rmdir removes the directory.

The cd command points the points the location of the text file and more command show the content of the file.

The whatis command gives the brief description of the directory and list all the directory contents.

```
MKDIR(1)                        User Commands                        MKDIR(1)

NAME
       mkdir - make directories

SYNOPSIS
       mkdir [OPTION]... DIRECTORY...

DESCRIPTION
       Create the DIRECTORY(ies), if they do not already exist.

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

       -m, --mode=MODE
              set file mode (as in chmod), not a=rwx - umask

       -p, --parents
              no error if existing, make parent directories as needed

       -v, --verbose
              print a message for each created directory

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

```
muhammad@f219340-virtual-machine: ~/Desktop

muhammad@f219340-virtual-machine:~/Desktop$ whatis ls
ls (1)                  - list directory contents
muhammad@f219340-virtual-machine:~/Desktop$
```

"who" command displays the login name, date and terminal."whoami" command shows the user name. The" date" command shows the current time. The"clear" command clears all the whole screen. The"touch" command creates a new file and the "exit" command exits the machine.In this I give clear and exit command start with the capital letter that does not work

```
muhammad@f219340-virtual-machine:~$ cd Desktop
muhammad@f219340-virtual-machine:~/Desktop$ whatis ls
ls (1)                 - list directory contents
muhammad@f219340-virtual-machine:~/Desktop$ who
muhammad tty2          2024-02-07 16:10 (tty2)
muhammad@f219340-virtual-machine:~/Desktop$ whoami
muhammad
muhammad@f219340-virtual-machine:~/Desktop$ Date
Command 'Date' not found, did you mean:
  command 'gate' from snap gate (9.3)
  command 'kate' from snap kate (23.08.4)
  command 'kate' from deb kate (4:21.12.3-0ubuntu1)
  command 'late' from deb late (0.1.0-14)
  command 'date' from deb coreutils (8.32-4.1ubuntu1)
See 'snap info <snapname>' for additional versions.
muhammad@f219340-virtual-machine:~/Desktop$ echo

muhammad@f219340-virtual-machine:~/Desktop$ touch
touch: missing file operand
Try 'touch --help' for more information.
muhammad@f219340-virtual-machine:~/Desktop$ su
Password:
su: Authentication failure
muhammad@f219340-virtual-machine:~/Desktop$
```

"passwd" command give the access to change the password

```
muhammad@f219340-virtual-machine:~/Desktop$ su
Password:
su: Authentication failure
muhammad@f219340-virtual-machine:~/Desktop$ passwd
Changing password for muhammad.
Current password:
New password:
BAD PASSWORD: The password is the same as the old one
New password:
BAD PASSWORD: The password is shorter than 8 characters
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a diction
ary word
passwd: Have exhausted maximum number of retries for service
passwd: password unchanged
muhammad@f219340-virtual-machine:~/Desktop$
```

"df" command shows the disk space usage.

```
muhammad@f219340-virtual-machine:~/Desktop$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
tmpfs              396352      1964    394388   1% /run
/dev/sda3        19946096 12597404   6310152  67% /
tmpfs             1981760         0   1981760   0% /dev/shm
tmpfs                5120         4      5116   1% /run/lock
/dev/sda2          524252      6220    518032   2% /boot/efi
tmpfs              396352       108    396244   1% /run/user/1000
/dev/sr1          4919592   4919592         0 100% /media/muhammad/Ubuntu 22.04.3
LTS amd64
/dev/sr0           159072    159072         0 100% /media/muhammad/CDROM
muhammad@f219340-virtual-machine:~/Desktop$ mkdir file
```

To Change file mode and add or remove permission of a file.

```
muhammad@f219340-virtual-machine:~/Desktop$ mkdir file
muhammad@f219340-virtual-machine:~/Desktop$ what is chmod
Command 'what' not found, did you mean:
  command 'jhat' from deb openjdk-8-jdk-headless (8u382-ga-1~22.04.1)
  command 'chat' from deb ppp (2.4.9-1+1ubuntu3)
  command 'wcat' from deb sac (1.9b5-3build1)
  command 'wham' from deb wham-align (0.1.5-8)
  command 'phat' from deb phat-utils (1.6-2build2)
Try: sudo apt install <deb name>
muhammad@f219340-virtual-machine:~/Desktop$ chmod a+x file
muhammad@f219340-virtual-machine:~/Desktop$
```

"chown" command change the owner of the file.

```
muhammad@f219340-virtual-machine: ~/Desktop

muhammad@f219340-virtual-machine:~/Desktop$ ls -l file1.txt
-rw-rw-r-- 1 muhammad muhammad 20 18:04 7  فروري file1.txt
muhammad@f219340-virtual-machine:~/Desktop$
```

"ps" command show process and "top" command show the statistics.

```
muhammad@f219340-virtual-machine: ~/Desktop

muhammad@f219340-virtual-machine:~/Desktop$ ps
    PID TTY          TIME CMD
   4480 pts/0    00:00:00 bash
   4561 pts/0    00:00:00 ps
muhammad@f219340-virtual-machine:~/Desktop$ top
```

```
top - 18:23:11 up 53 min,  1 user,  load average: 0.03, 0.07, 0.11
Tasks: 297 total,   1 running, 296 sleeping,   0 stopped,   0 zombie
%Cpu(s):  5.5 us,  3.0 sy,  0.0 ni, 90.9 id,  0.0 wa,  0.0 hi,  0.5 si,  0.0 st
MiB Mem :   3870.6 total,   1562.2 free,    999.6 used,   1308.8 buff/cache
MiB Swap:   2140.0 total,   2140.0 free,      0.0 used.   2592.1 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1702 muhammad  20   0 4357260 264896 134732 S  15.6   6.7   1:16.47 gnome-s+
   1882 muhammad  20   0  315464  12096   7168 S   0.7   0.3   0:04.51 ibus-da+
     16 root      20   0       0      0      0 I   0.3   0.0   0:01.78 rcu_pre+
    234 root      20   0       0      0      0 I   0.3   0.0   0:01.09 kworker+
    556 systemd+  20   0   14828   6784   6016 S   0.3   0.2   0:04.31 systemd+
    580 root      20   0  317720   9216   7680 S   0.3   0.2   0:06.31 vmtoolsd
    778 root      20   0       0      0      0 I   0.3   0.0   0:01.94 kworker+
   1564 muhammad  20   0   14300  10240   4096 S   0.3   0.3   0:01.80 dbus-da+
   1956 muhammad  20   0  348172  29392  18436 S   0.3   0.7   0:03.21 ibus-ex+
   1969 muhammad  20   0  142992  39816  29348 S   0.3   1.0   0:05.60 vmtoolsd
   2123 muhammad  20   0  624164  14208  11776 S   0.3   0.4   0:00.78 xdg-des+
   2386 muhammad  20   0  493852  29432  21624 S   0.3   0.7   0:18.07 update-+
   4462 muhammad  20   0  554876  52636  40552 S   0.3   1.3   0:02.02 gnome-t+
   4562 muhammad  20   0   13564   4352   3456 R   0.3   0.1   0:00.21 top
      1 root      20   0  166680  11580   8252 S   0.0   0.3   0:29.06 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.04 kthreadd
      3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
```
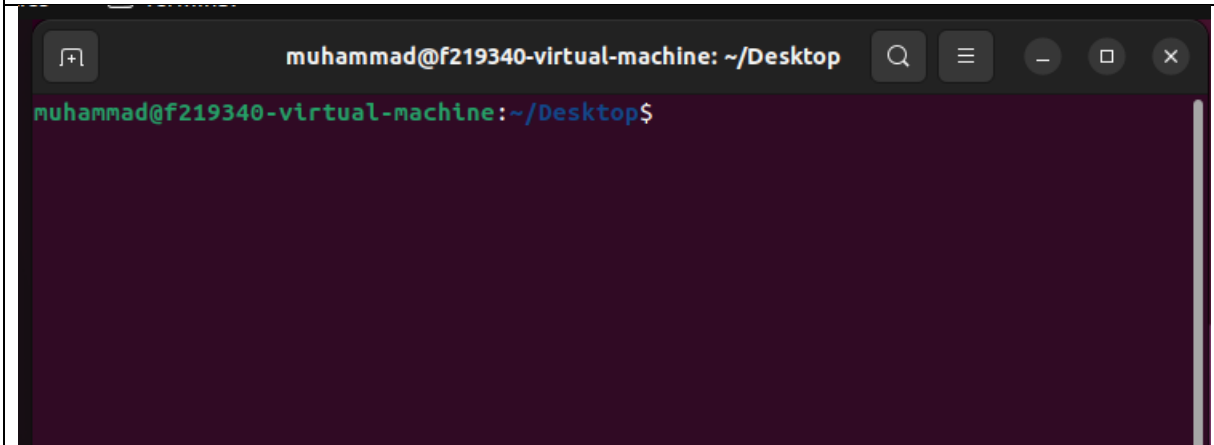
"KILL" command kill the operation by process id and "kill all " command kill all the roots.


```
muhammad@f219340-virtual-machine:~/Desktop$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill
-l [sigspec]
muhammad@f219340-virtual-machine:~/Desktop$ killall
Usage: killall [OPTION]... [--] NAME...
       killall -l, --list
       killall -V, --version

  -e,--exact          require exact match for very long names
  -I,--ignore-case    case insensitive process name match
  -g,--process-group  kill process group instead of process
  -y,--younger-than   kill processes younger than TIME
  -o,--older-than     kill processes older than TIME
  -i,--interactive    ask for confirmation before killing
  -l,--list           list all known signal names
  -q,--quiet          don't print complaints
  -r,--regexp         interpret NAME as an extended regular expression
  -s,--signal SIGNAL  send this signal instead of SIGTERM
  -u,--user USER      kill only process(es) running as USER
  -v,--verbose        report if the signal was successfully sent
  -V,--version        display version information
  -w,--wait           wait for processes to die
  -n,--ns PID         match processes that belong to the same namespaces
                      as PID
```

"Clear" command it clears the whole screen.