

Adam is working in an IT company. He has been given a task to reduce the load of a system by killing some of the processes running in the LINUX operating system. Which commands will he use to complete the given task with the help of the following operation?

```
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ ps aux
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ ps aux
USER        PID %CPU %MEM    VSZ   RSS TTY      STAT START  TIME COMMAND
root          1  0.0  0.1 21776 12388 ?        Ss  16:38  0:00 /sbin/init
root          2  0.0  0.0  3120  1920 ?        Sl  16:38  0:00 /init
root          7  0.0  0.0  3136  1796 ?        Sl  16:38  0:00 plan9 --control-socket 7 --log-level 4 --server-fd 8
root         53  0.0  0.2 66748 18660 ?        S<s 16:38  0:00 /usr/lib/systemd/systemd-journald
root        113  0.0  0.0 25136  6272 ?        Ss  16:38  0:00 /usr/lib/systemd/systemd-udevd
systemd+     124  0.0  0.1 21456 12032 ?        Ss  16:38  0:00 /usr/lib/systemd/systemd-resolved
systemd+     125  0.0  0.0  91024  7808 ?        Ssl 16:38  0:00 /usr/lib/systemd/systemd-timesyncd
root        188  0.0  0.0  4236  2432 ?        Ss  16:38  0:00 /usr/sbin/cron -f -P
message+    189  0.0  0.0  9592  4864 ?        Ss  16:38  0:00 @dbus-daemon --system --address=systemd: --nofork --n
root        196  0.0  0.1 17964  8320 ?        Ss  16:38  0:00 /usr/lib/systemd/systemd-logind
root        198  0.0  0.1 1756096 12032 ?       Ssl 16:38  0:00 /usr/libexec/wsl-pro-service -vv
root        214  0.0  0.0  3160  1920 hvc0      Ss+ 16:38  0:00 /sbin/agetty -o -p -- \u --noclear --keep-baud - 1152
syslog      217  0.0  0.0 222508  4992 ?       Ssl 16:38  0:00 /usr/sbin/rsyslogd -n -iNONE
root        220  0.0  0.0  3116  1792 tty1      Ss+ 16:38  0:00 /sbin/agetty -o -p -- \u --noclear - linux
root        227  0.0  0.2 107028  22528 ?      Ssl 16:38  0:00 /usr/bin/python3 /usr/share/unattended-upgrades/unatt
root        349  0.0  0.0  3128   768 ?        Ss  16:38  0:00 /init
root        350  0.0  0.0  3144  1024 ?       S+  16:38  0:00 /init
saniya     351  0.0  0.0  6076  5120 pts/0      Ss  16:38  0:00 /bin/bash
root        449  0.0  0.0  6692  4224 pts/1      Ss  16:40  0:00 /bin/login -f
saniya     488  0.0  0.1 20308 11008 ?       Ss  16:40  0:00 /usr/lib/systemd/systemd --user
saniya     490  0.0  0.0  21152  3520 ?       S  16:40  0:00 (sd-pam)
saniya     513  0.0  0.0  6056  4864 pts/1      S+ 16:40  0:00 -bash
saniya     656  0.0  0.0  8280  4096 pts/0      R+ 16:52  0:00 ps aux
```

Kill Processes by name

```
saniya      359    293  0 17:21 pts/1    00:00:00 -bash
polkitd     681      1  0 17:27 ?        00:00:00 /usr/lib/polkit-1/polkitd --no-debug
saniya     816    292  0 17:37 pts/0    00:00:00 ps -ef
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ pkill saniya
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$ ps -ef|saniya
saniya: command not found
saniya@LAPTOP-FSOUOMFO:/mnt/c/Windows/System32$
```

Kill a single process at a time with the given process

PID

```
saniya@LAPTOP-FSOUOMFO:~$ ps -ef | grep firefox
saniya      421     298  0 17:24 pts/0    00:00:00 grep --color=auto firefox
saniya@LAPTOP-FSOUOMFO:~$ pkill firefox
saniya@LAPTOP-FSOUOMFO:~$ killall chrome
chrome: no process found
saniya@LAPTOP-FSOUOMFO:~$ ps -ef | grep chrome
saniya      435     298  0 17:27 pts/0    00:00:00 grep --color=auto chrome
saniya@LAPTOP-FSOUOMFO:~$ kill 3456
-bash: kill: (3456) - No such process
saniya@LAPTOP-FSOUOMFO:~$ kill -9 3456
-bash: kill: (3456) - No such process
```

Write a program for process creation using C

```
saniya@LAPTOP-FSOUOMFO:~$ nano process.c
saniya@LAPTOP-FSOUOMFO:~$ nano process.c
saniya@LAPTOP-FSOUOMFO:~$ gcc process.c -o process
saniya@LAPTOP-FSOUOMFO:~$ ./process
Parent Process
PID = 567
Child Process
PID = 568
PPID = 350
saniya@LAPTOP-FSOUOMFO:~$ |
```

Orphan Process

```
saniya@LAPTOP-FSOUOMFO:~$ nano orphan.c
saniya@LAPTOP-FSOUOMFO:~$ gcc orphan.c -o orphan
saniya@LAPTOP-FSOUOMFO:~$ ./orphan
Parent exiting
saniya@LAPTOP-FSOUOMFO:~$ Child PID=596 PPID=350
|
```

Zombie Process

```
nano zombie.c
saniya@LAPTOP-FSOUOMFO:~$ gcc zombie.c
saniya@LAPTOP-FSOUOMFO:~$ ./a.out
Child exiting
Parent running
```