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Course	Operating system

Labe 07

Update Apt:

```
Hamza@Ubuntu:~$ sudo apt update
[sudo] password for Hamza:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

Install Dnf:

```
Hamza@Ubuntu:~$ sudo apt install dnf -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
dnf is already the newest version (4.14.0-4.1ubuntu1).
The following packages were automatically installed and are no longer required:
  libllvm19 linux-headers-6.14.0-27-generic linux-hwe-6.14-headers-6.14.0-27
  linux-hwe-6.14-tools-6.14.0-27 linux-image-6.14.0-27-generic
  linux-modules-6.14.0-27-generic linux-modules-extra-6.14.0-27-generic
  linux-tools-6.14.0-27-generic
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

Install Git:

```
Hamza@Ubuntu:~$ sudo apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.3).
The following packages were automatically installed and are no longer required:
  libllvm19 linux-headers-6.14.0-27-generic linux-hwe-6.14-headers-6.14.0-27
  linux-hwe-6.14-tools-6.14.0-27 linux-image-6.14.0-27-generic
  linux-modules-6.14.0-27-generic linux-modules-extra-6.14.0-27-generic
  linux-tools-6.14.0-27-generic
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

git --version:

```
Hamza@Ubuntu:~$ git --version
git version 2.43.0
```

Apt search git:

```
golang-github-altree-bigfloat-dev/noble 0.0~git20220102.38c8b72-2 all
  Additional operations for the standard library big.Float type (library)

golang-github-anacrolix-dms-dev/noble-updates,noble-security 1.5.0-2ubuntu0.24.0
4.3 all
  Go source for UPnP DLNA Digital Media Server

golang-github-anacrolix-envpprof-dev/noble 1.2.1-2 all
  configures Go's pprof and default HTTP mux

golang-github-anacrolix-ffprobe-dev/noble 1.0.1-1 all
  Go ffprobe wrapper

golang-github-anacrolix-fuse-dev/noble 0.2.0-2 all
  bazil.org/fuse with macOS support

golang-github-anacrolix-log-dev/noble 0.13.1-2 all
  context-style logging for Go (library)

golang-github-anacrolix-missinggo-bin-static/noble-updates,noble-security 2.1.0-
7ubuntu0.24.04.3 amd64
  Stuff that's missing in Go stdlib, or hasn't made it into its own repo.
```

List ls:

```
Hamza@Ubuntu:~$ cd /usr/bin
Hamza@Ubuntu:/usr/bin$ ls
'['                               nautilus-autorun-software
 aa-enabled                       nautilus-sendto
 aa-exec                          nawk
 aa-features-abi                  nc
 aconnect                         nc.openbsd
 acpidbg                          neqn
 add-apt-repository               netaddr
 addpart                          netcat
 addr2line                        networkctl
 airscan-discover                 networkd-dispatcher
 alsabat                          newgrp
 alsaloop                         ngettext
 alsamixer                        nice
 alsatplg                         nisdomainname
 alsaucm                          nl
 amidi                            nm
 amixer                           nm-applet
 apg                              nmcli
 apgbfm                           nm-connection-editor
 aplay                            nm-online
 aplaymidi                        nmtui
```

Upgrade git:

```
Hamza@Ubuntu:/usr/bin$ sudo apt upgrade git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.43.0-1ubuntu7.3).
Calculating upgrade... Done
The following packages were automatically installed and are no longer required:
  libllvm19 linux-headers-6.14.0-27-generic linux-hwe-6.14-headers-6.14.0-27
  linux-hwe-6.14-tools-6.14.0-27 linux-image-6.14.0-27-generic
  linux-modules-6.14.0-27-generic linux-modules-extra-6.14.0-27-generic
  linux-tools-6.14.0-27-generic
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

Gcc –version:

```
Hamza@Ubuntu:/usr/bin$ gcc --version
gcc (Ubuntu 13.3.0-6ubuntu2~24.04) 13.3.0
Copyright (C) 2023 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```

Nano hello.cpp:

```
Hamza@Ubuntu:~$ nano hello.cpp
```

C++ code:

```cpp
#include<stdio.h>
int main(){
int num;
printf("Enter a num:");
scanf("%d",&num);
if(num%2==0){
printf("%d is even.\n" ,num);
}
else{
printf("%d is odd.\n",num);
}
return 0;
}
```

```
Hamza@Ubuntu:~$ g++ hello.cpp -o hello
Hamza@Ubuntu:~$ ./hello
Enter an integer: 1
1 is odd.
```

Nano CodeCracker.java:

```
Hamza@Ubuntu:~$ nano CodeCracker.java
```

Code :

```java
import java.utl.Scanner;
public class CodeScanner
{
public static void  main(String[] args)
{
int numberone,numbertwo,largest;
Scanner scan=new Scanner(System.in);

System.out.print("Enter the First Number:");
numberone=scan.nextInt();
System.out.print("Enter the Second Number:");
numbertwo=scan.nextInt();

if(numberone>numbertwo)
largest=numberone;
else
largest=numbertwo;

System.out.printlb("\nLargest="+largest);
}
```

```
Hamza@Ubuntu:~$ java CodeCracker.java
Enter the First Number:1
Enter the Second Number:2

Largest=2
```

Check ps:

```
Hamza@Ubuntu:~$ ps
   PID TTY          TIME CMD
 15542 pts/0     00:00:00 bash
 17855 pts/0     00:00:00 ps
```

All programe process:

```
Hamza@Ubuntu:~$ ps -u $user
USER         PID %CPU %MEM    VSZ    RSS TTY      STAT START    TIME COMMAND
Hamza       1855  0.0  0.1 244336   6076 tty2     Ssl+ 03:40   0:00 /usr/libexec/
Hamza       1866  0.0  0.4 306904  16532 tty2     Sl+  03:40   0:00 /usr/libexec/
Hamza      15542  0.0  0.1  11264   5316 pts/0    Ss   04:15   0:00 bash
Hamza      17870  100  0.1  13752   4720 pts/0    R+   05:30   0:00 ps -u
```

Infinite code:

```
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
```

PS –U $USER:

```
Hamza@Ubuntu:~$ ps -u $USER
   PID TTY          TIME CMD
  1781 ?        00:00:01 systemd
  1785 ?        00:00:00 (sd-pam)
  1799 ?        00:00:00 pipewire
  1800 ?        00:00:00 pipewire
  1802 ?        00:00:00 snapd-desktop-i
  1804 ?        00:00:00 wireplumber
  1813 ?        00:00:00 pipewire-pulse
  1815 ?        00:00:00 gnome-keyring-d
  1816 ?        00:00:01 dbus-daemon
  1855 tty2     00:00:00 gdm-wayland-ses
  1866 tty2     00:00:00 gnome-session-b
  1877 ?        00:00:00 xdg-document-po
  1885 ?        00:00:00 xdg-permission-
  1967 ?        00:00:00 gcr-ssh-agent
  1968 ?        00:00:00 gnome-session-c
  1982 ?        00:00:00 gvfsd
  1990 ?        00:00:00 gvfsd-fuse
  1997 ?        00:00:00 gnome-session-b
  2024 ?        00:05:20 gnome-shell
  2026 ?        00:00:00 at-spi-bus-laun
  2037 ?        00:00:00 dbus-daemon
```

Kill code:

```
 16848 ?        00:00:03 Web Content
 17012 ?        00:00:03 Web Content
 17071 ?        00:00:03 Web Content
 17800 ?        00:00:00 gjs
 17963 pts/0    00:00:28 hello
 17973 pts/1    00:00:00 bash
 17982 pts/1    00:00:00 ps
Hamza@Ubuntu:~$ kill -9 17963
```

After Command Running:

```
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Running 120
Killed
Hamza@Ubuntu:~$ java CodeCracker.java
```