

Output:

```
student@ubuntu:~$ sudo nmap 127.0.0.1

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:20 PDT
Nmap scan report for localhost (127.0.0.1)
Host is up (0.0000060s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE
631/tcp   open  ipp
```

```
student@ubuntu:~$ nmap --version

Nmap version 7.60 ( https://nmap.org )
Platform: x86_64-pc-linux-gnu
Compiled with: liblua-5.3.3 openssl-1.1.0g nmap-libssh2-1.8.0
Compiled without:
Available nsock engines: epoll poll select
```

```
student@ubuntu:~$ sudo apt-get install nmap
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-4.18.0-15 linux-headers-4.18.0-15-generic
  linux-image-4.18.0-15-generic linux-modules-4.18.0-15-generic
  linux-modules-extra-4.18.0-15-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libblas3 liblinear3
Suggested packages:
  liblinear-tools liblinear-dev ndiff
```

```
student@ubuntu:~$ sudo nmap -O 127.0.0.1
[sudo] password for student:
Sorry, try again.
[sudo] password for student:

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:43 PDT
Nmap scan report for localhost (127.0.0.1)
Host is up (0.0000050s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE
631/tcp   open  ipp
Device type: general purpose
Running: Linux 2.6.X
OS CPE: cpe:/o:linux:linux_kernel:2.6.32
OS details: Linux 2.6.32
Network Distance: 0 hops

OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 3.90 seconds
```

```
student@ubuntu:~$ nmap -A 127.0.0.1

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:31 PDT
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000035s latency).
Not shown: 999 closed ports
PORT      STATE SERVICE VERSION
631/tcp   open  ipp      CUPS 2.2
|_ http-methods:
|_   Potentially risky methods: PUT
|_ http-robots.txt: 1 disallowed entry
|_/
|_ http-server-header: CUPS/2.2 IPP/2.1
|_ http-title: Home - CUPS 2.2.7

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 6.45 seconds
```

```
student@ubuntu:~$ sudo nmap -p 80 127.0.0.1

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:53 PDT
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000090s latency).

PORT      STATE SERVICE
80/tcp    closed http

Nmap done: 1 IP address (1 host up) scanned in 0.28 seconds
```

```
student@ubuntu:~$ sudo nmap -p 631 127.0.0.1

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:53 PDT
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000085s latency).

PORT      STATE SERVICE
631/tcp   open  ipp

Nmap done: 1 IP address (1 host up) scanned in 0.27 seconds
```

```
student@ubuntu:~$ nmap -sn 8.8.8.8

Starting Nmap 7.60 ( https://nmap.org ) at 2023-03-19 23:47 PDT
Nmap scan report for dns.google (8.8.8.8)
Host is up (0.0031s latency).
Nmap done: 1 IP address (1 host up) scanned in 0.01 seconds
```