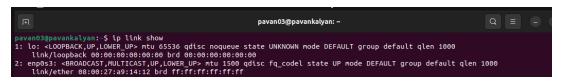9. Describe how you would configure a basic LAN interface using the ip command in Linux (kernel.org)

1)Checking the existing network interfaces:


```
pavan03@pavankalyan:~$ ip link show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFAULT group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 08:00:27:a9:14:12 brd ff:ff:ff:ff:ff:ff
```

2) Assigning the ip address to the interface :


```
pavan03@pavankalyan:~$ sudo ip addr add 192.168.1.100/24 dev enp0s3
```

3)Setting a Default gateway :


```
pavan03@pavankalyan:~$ sudo ip route add default via 192.168.1.1
pavan03@pavankalyan:~$ ip addr show enp0s3
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:a9:14:12 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
       valid_lft 85757sec preferred_lft 85757sec
    inet 192.168.1.100/24 scope global enp0s3
       valid_lft forever preferred_lft forever
    inet6 fd00::9d99:ff87:e2ec:3b25/64 scope global temporary dynamic
       valid_lft 86358sec preferred_lft 14358sec
    inet6 fd00::4054:9bb:6eea:4200/64 scope global dynamic mngtmpaddr noprefixroute
       valid_lft 86358sec preferred_lft 14358sec
    inet6 fe80::57e3:3482:5138:e96a/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
pavan03@pavankalyan:~$ ip route show
default via 192.168.1.1 dev enp0s3
default via 10.0.2.2 dev enp0s3 proto dhcp metric 100
10.0.2.0/24 dev enp0s3 proto kernel scope link src 10.0.2.15 metric 100
169.254.0.0/16 dev enp0s3 scope link metric 1000
192.168.1.0/24 dev enp0s3 proto kernel scope link src 192.168.1.100
```