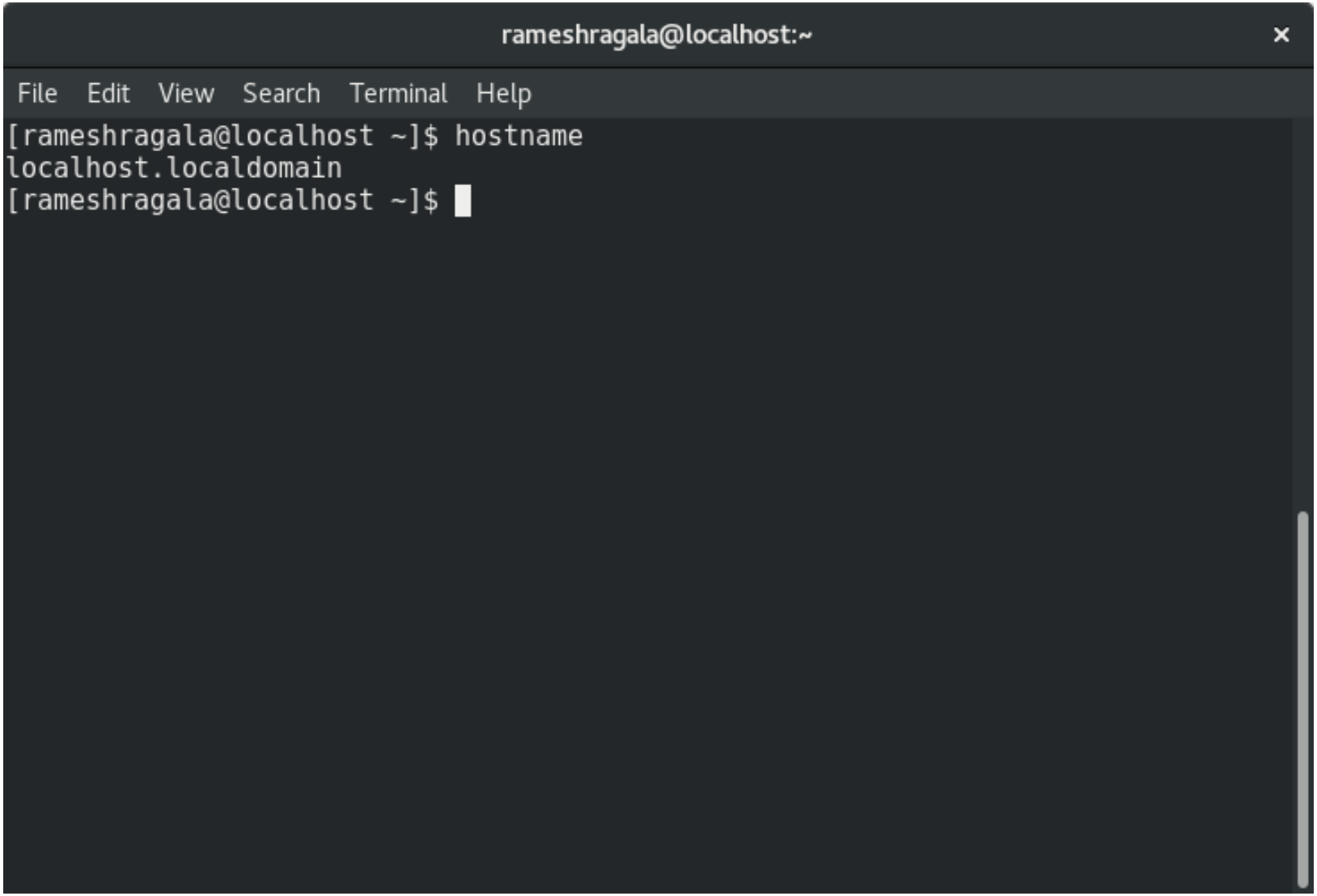
Computer Networks
SWE2002

Prof. Ramesh Ragala

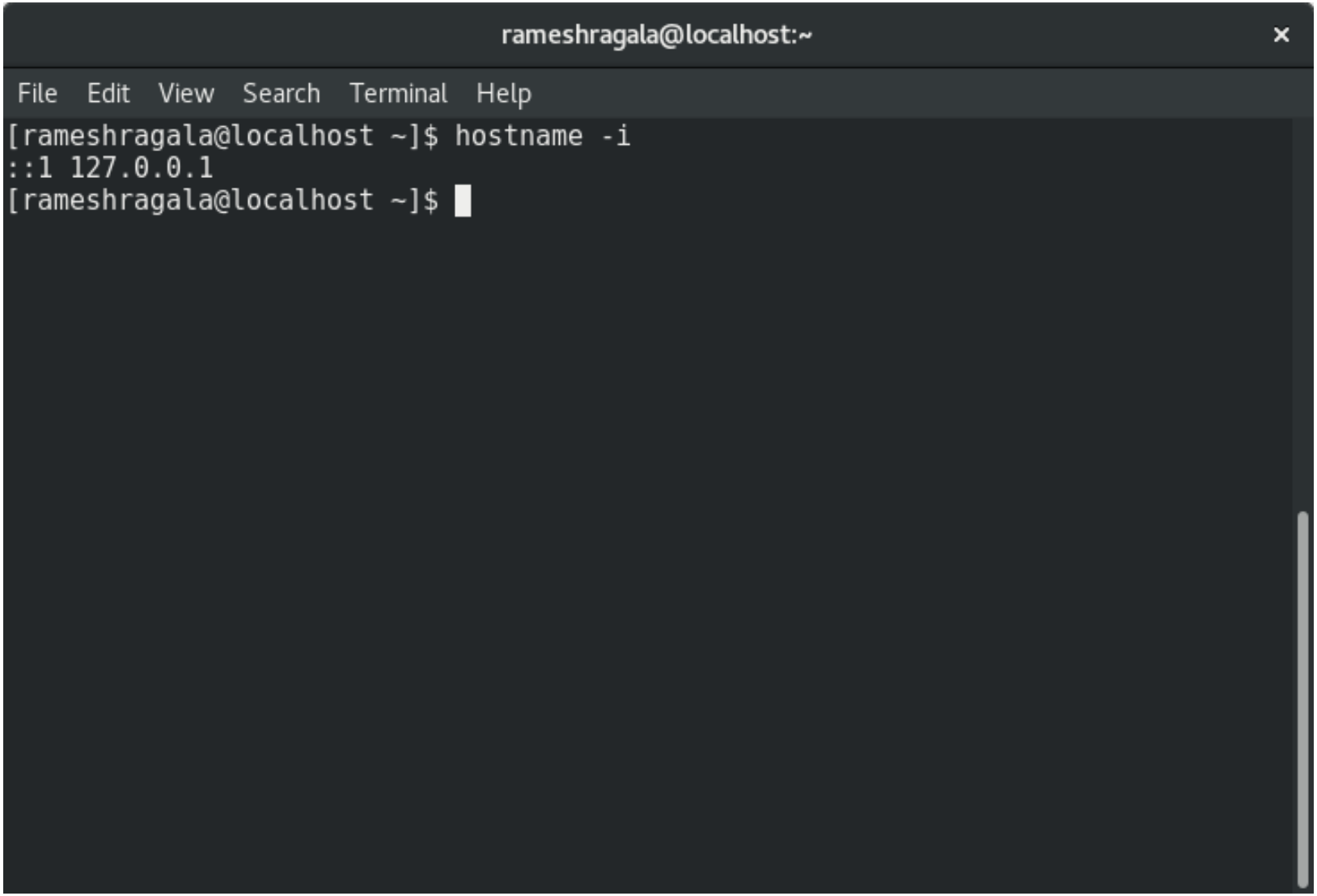
November 29, 2017

- **Hostname**
  - It is the program that is used to either set or display the current host, domain or node name of the system.
  - These names are used by many of the networking programs to identify the machine.
  - command is
    - **hostname [options] [file]**

- **Hostname**
  - Displays the name of the system on terminal.



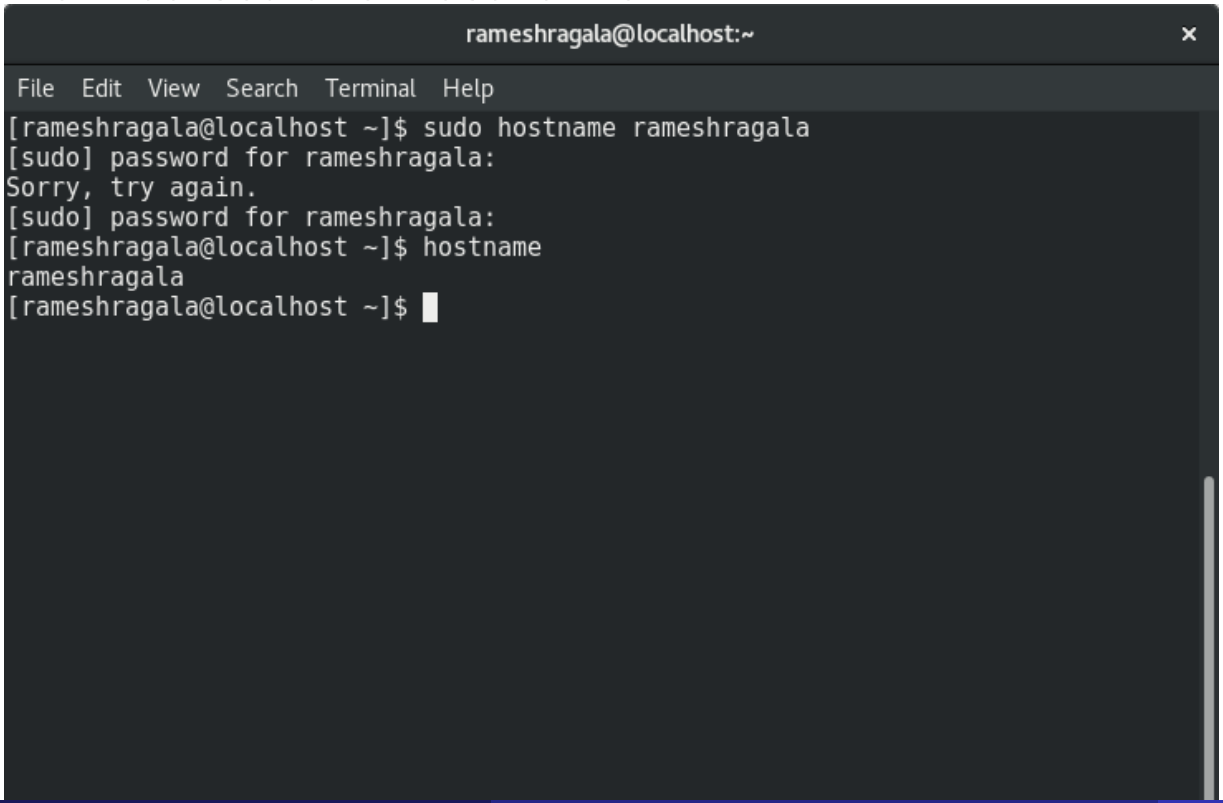
- **Hostname**
  - Displays the IP address of the computer



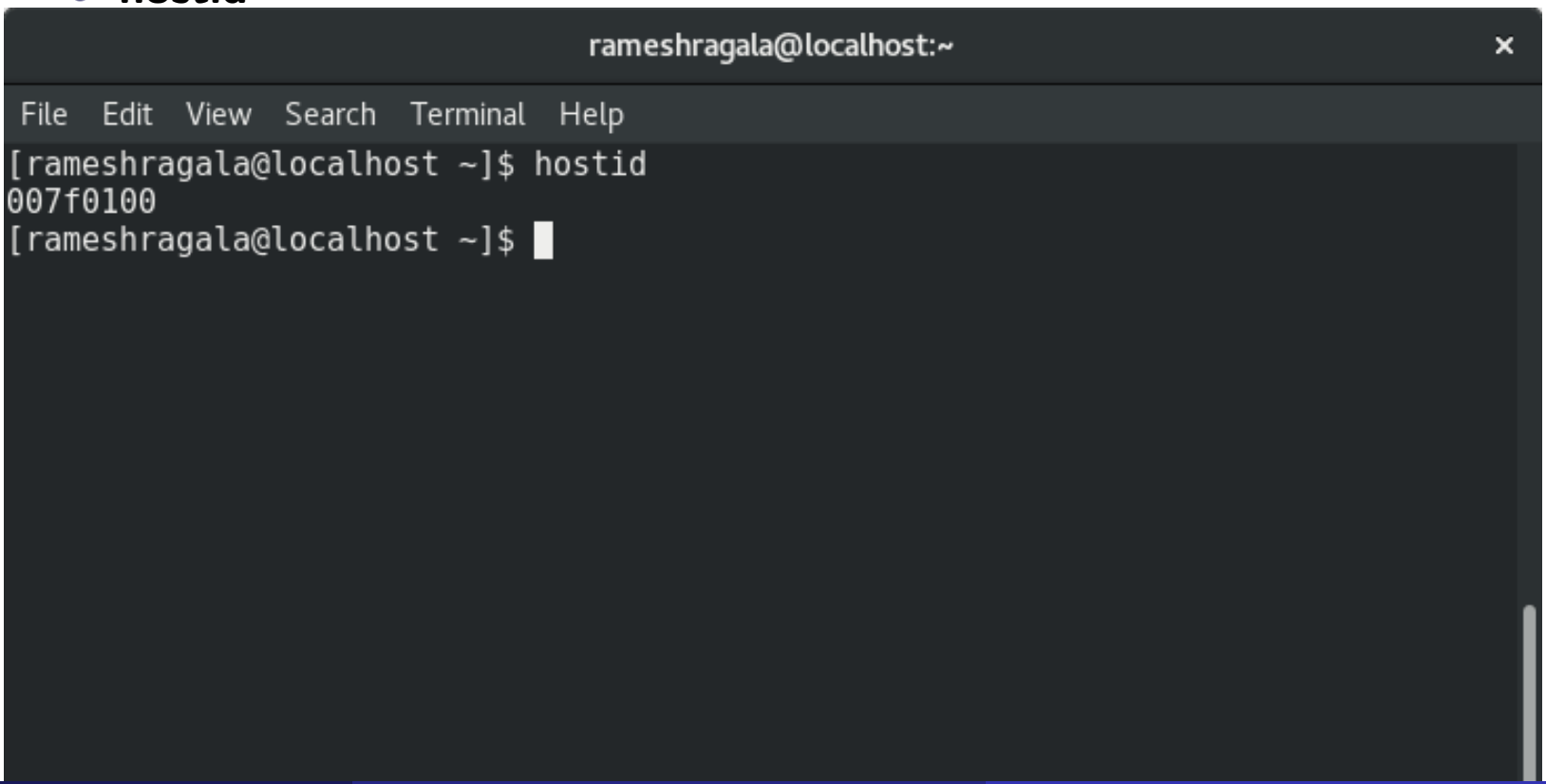
- **Hostname**
  - Command to get the help
  - **man hostname**
  - few options are:

```
-a : Prints the alisa name of the host if created any.
-d : prints the domain name
-i : prints the ip address of the host
-s : prints the shortname of the host.
-v : verbose data
-V : version information
-h : help about hostname command
```

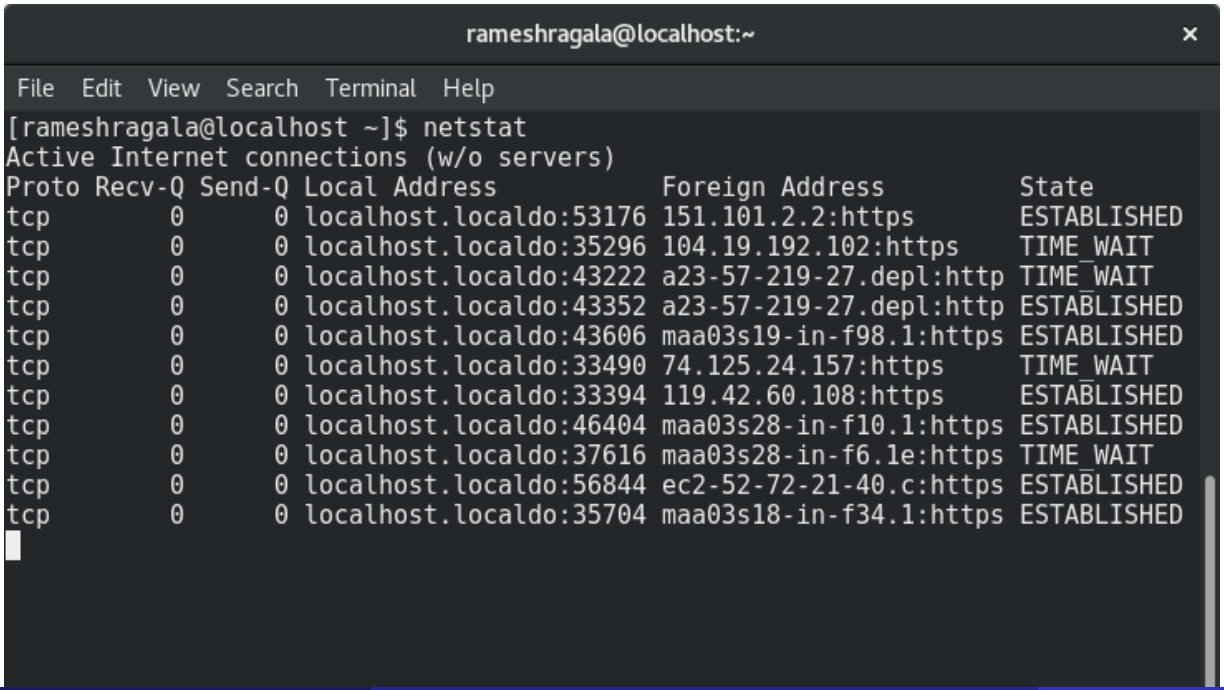
- **Hostname**
  - hostname -i → check the output
  - hostname -a → check the output
  - hostname -d → check the output
  - hostname -s → check the output
  - hostname -h → check the output
- How to set the hostname



- **hostid**
  - It outputs a number i.e host identification number, which identifies the current system.
  - This unique number based on the machine's IPv4 network address
  - It is represented in Hexadecimal
  - command is
    - **hostid**

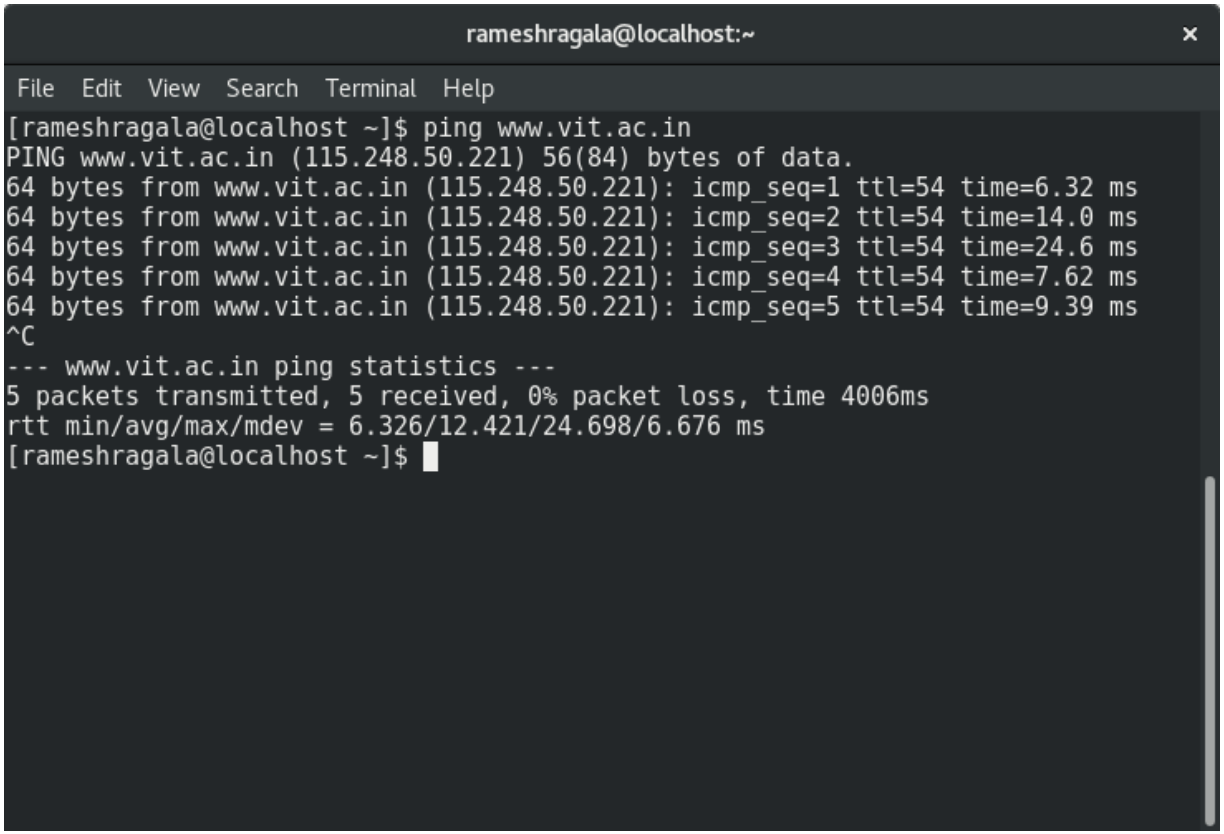


- **netstat**
  - It is a command line utility that can be used to list out all the network (socket) connections on a system.
  - It lists out all the TCP, UDP socket connections and the UNIX socket connections.
  - It also list out the listing sockets, which are waiting for incoming connections
  - command is
    - **netstat**



- **netstat**
  - man netstat → check the output
  - netstat -a → list out all current connections
  - netstat -at → list out only tcp connections
  - netstat -au → list out only udp connections
  - netstat -tnl → list out only tcp listing connections
  - netstat -unl → list out only udp listing connections
  - netstat -nl → list out all listing connections
  - netstat -s → prints the statistics like total number of packets received and transmitted by protocol
  - netstat -ts → check the output
  - netstat -us → check the output
  - netstat -rn → gives the kernel routing information
  - netstat -i → gives the network interface information
  - netstat -it → check the output
  - netstat -g → displays the multicast group information

- **ping**
  - it sends echo requests to the host which specified on the command line.
  - It sends the ICMP echo message
  - This may go continually until you hit Control+C
  - Ping tells you if the other Host is Up.
  - It is used to ensure that a network connection can be established



- **ping**
  - ping -i 5 www.vit.ac.in → it waits for 5 seconds before sending the next packet → increases the ping time interval
  - ping -i 0.1 www.vit.ac.in → decreases the ping time interval
  - ping -c 10 www.vit.ac.in → it sends 10 packets and stop pinging
  - ping -q www.vit.ac.in → check the output
  - ping -c 10 -q 127.0.0.1 → Print Only Ping Command Summary Statistics
  - ping -s 100 localhost → changes the default packet size from 64 to 100
  - ping -w 6 localhost → it will ping for 6 seconds i.e ping command will exit after 6 seconds
  - ping -R www.vit.ac.in → Record and print route of how ECHO_REQUEST sent and ECHO_REPLY received