Experiment 2

Student Name: **UID:**
Branch: BE-CSE **Section/Group:**
Semester: 5th **Date of Performance:**
Subject Name: Computer Networks **Subject Code:22CSH-312**

Aim: Study of basic network command and Network configuration commands.

Objective: -
Students will be able to troubleshoot networks.

Requirements (Hardware/Software):

- **Processor** – Any suitable Processor e.g. Celeron
- **Main Memory** - 128 MB RAM
- **Hard Disk** – minimum 20 GB IDE Hard Disk
- **Removable Drives**–1.44 MB Floppy Disk Drive –52X IDE CD-ROM Drive
- **PS/2 HCL Keyboard and Mouse**

Procedure:

In this EXPERIMENT- students have to understand basic networking commands e.g ping, tracert etc.
Go to command prompt and type the commands

i. Ping
ii. Ipconfig
iii. Tracert
iv. Nslookup
v. Netstat
vi. Arp
vii. Rarp
viii. Hostname
ix. pathping

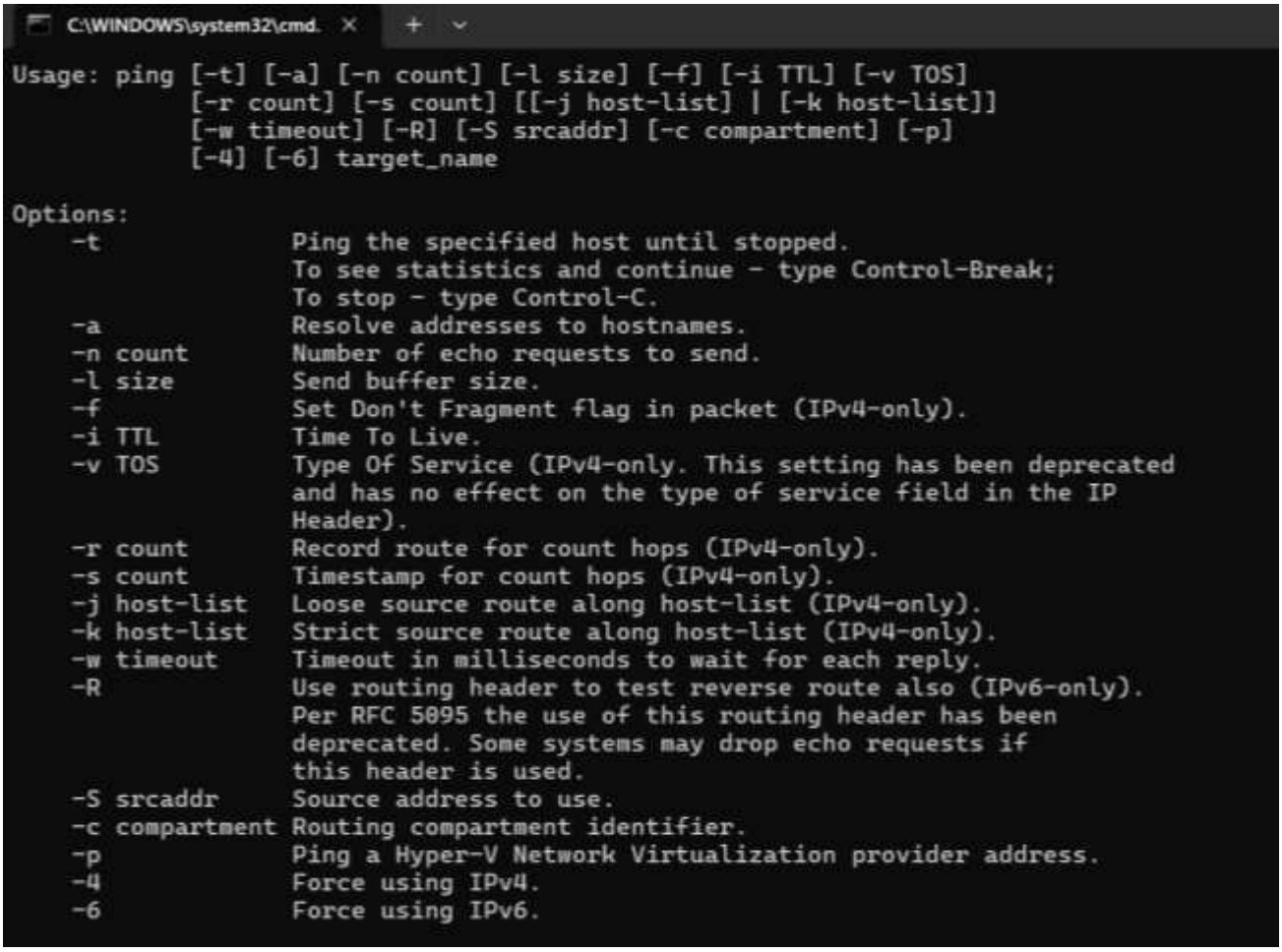
Step-1: Open command Prompt.

Step-2: Run ping command in command prompt.

Step-3: Take the screenshot and paste it in the output.

Step-4: Run others command one by one and take the screenshot.

Output:



```
C:\Users\HP>Ipconfig

Windows IP Configuration


Ethernet adapter Ethernet:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . : cuchdit.in

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

Wireless LAN adapter Local Area Connection* 10:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

Wireless LAN adapter WiFi:

   Connection-specific DNS Suffix  . : cuchdit.in
   Link-local IPv6 Address . . . . . : fe80::64f0:d930:630e:ac5c%15
   IPv4 Address. . . . . . . . . . . : 172.25.42.114
   Subnet Mask . . . . . . . . . . . : 255.255.240.0
   Default Gateway . . . . . . . . . : 172.25.32.1

Ethernet adapter Bluetooth Network Connection:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
```

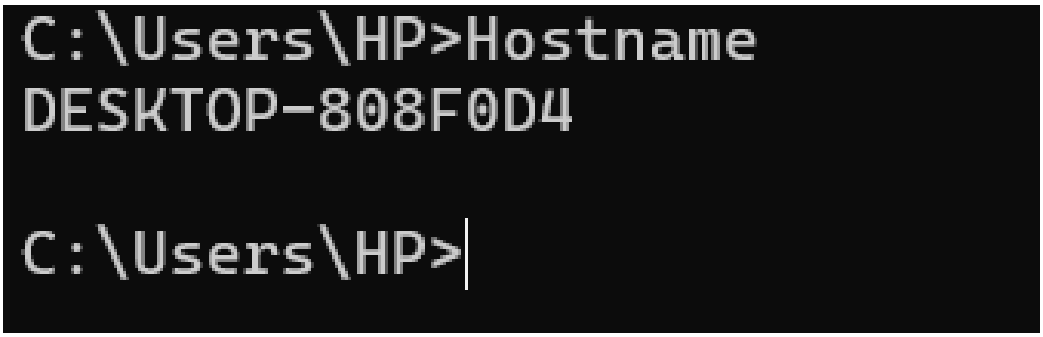
```
C:\Users\HP>Tracert

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
               [-R] [-S srcaddr] [-4] [-6] target_name

Options:
    -d                  Do not resolve addresses to hostnames.
    -h maximum_hops     Maximum number of hops to search for target.
    -j host-list        Loose source route along host-list (IPv4-only).
    -w timeout          Wait timeout milliseconds for each reply.
    -R                  Trace round-trip path (IPv6-only).
    -S srcaddr          Source address to use (IPv6-only).
    -4                  Force using IPv4.
    -6                  Force using IPv6.

C:\Users\HP>
```

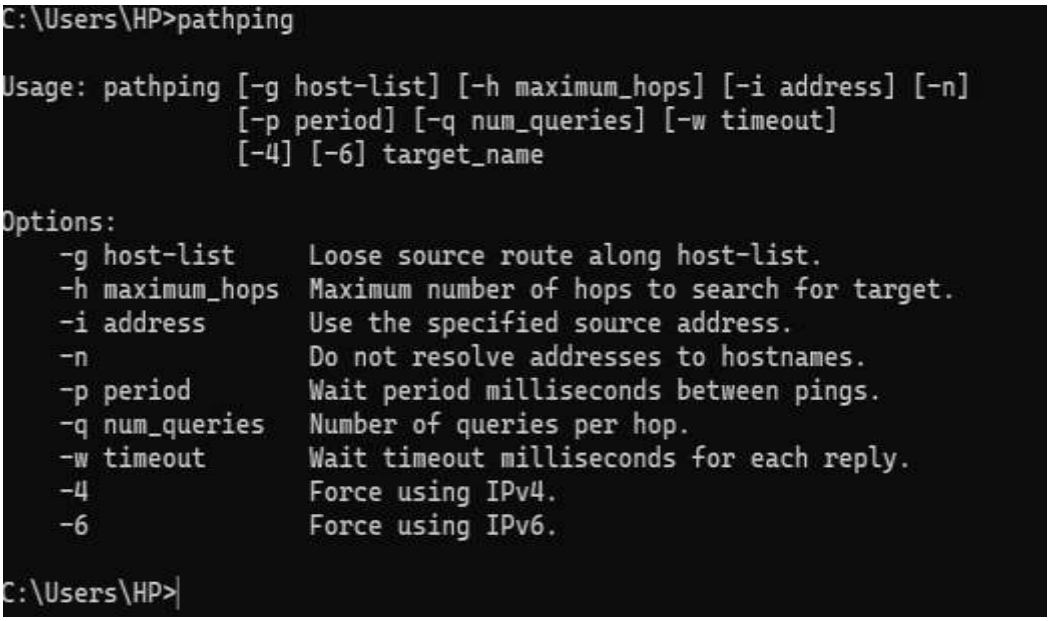
```
C:\Users\HP>Nslookup
Default Server:  DC2K16.cuchdit.in
Address:  172.19.2.101

> |
```

```
C:\Users\HP>Netstat

Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    127.0.0.1:1521         DESKTOP-808F0D4:49699  ESTABLISHED
  TCP    127.0.0.1:49676        DESKTOP-808F0D4:49677  ESTABLISHED
  TCP    127.0.0.1:49677        DESKTOP-808F0D4:49676  ESTABLISHED
  TCP    127.0.0.1:49678        DESKTOP-808F0D4:49679  ESTABLISHED
  TCP    127.0.0.1:49679        DESKTOP-808F0D4:49678  ESTABLISHED
  TCP    127.0.0.1:49699        DESKTOP-808F0D4:1521   ESTABLISHED
  TCP    172.25.42.114:49443    20.198.162.78:https    ESTABLISHED
  TCP    172.25.42.114:49844    48.218.104.163:https   ESTABLISHED
  TCP    172.25.42.114:50055    13.107.213.254:https   CLOSE_WAIT
  TCP    172.25.42.114:50456    whatsapp-chatd-edge-shv-01-del1:5222  ESTABLISHED
  TCP    172.25.42.114:50458    20.192.44.78:https     ESTABLISHED
  TCP    172.25.42.114:50463    sf-in-f188:5228        FIN_WAIT_2
  TCP    172.25.42.114:50474    184:https              TIME_WAIT
  TCP    172.25.42.114:50487    sf-in-f84:https        TIME_WAIT
  TCP    172.25.42.114:50490    55:https               TIME_WAIT
  TCP    172.25.42.114:50496    a23-50-232-199:http    TIME_WAIT
  TCP    172.25.42.114:50498    a23-50-232-199:http    TIME_WAIT
  TCP    172.25.42.114:50500    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50501    sd-in-f188:5228        ESTABLISHED
  TCP    172.25.42.114:50502    20.212.88.117:https    ESTABLISHED
  TCP    172.25.42.114:50503    204.79.197.239:https   ESTABLISHED
  TCP    172.25.42.114:50505    40.99.33.178:https     ESTABLISHED
  TCP    172.25.42.114:50507    a23-32-29-99:https     ESTABLISHED
  TCP    172.25.42.114:50511    13.89.179.8:https      ESTABLISHED
  TCP    172.25.42.114:50513    150.171.28.254:https   ESTABLISHED
  TCP    172.25.42.114:50514    a23-40-32-112:https    ESTABLISHED
  TCP    172.25.42.114:50515    150.171.22.254:https   ESTABLISHED
  TCP    172.25.42.114:50516    a23-40-32-112:https    ESTABLISHED
  TCP    172.25.42.114:50517    20.70.174.252:https    ESTABLISHED
  TCP    172.25.42.114:50518    204.79.197.222:https   ESTABLISHED
  TCP    172.25.42.114:50519    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50520    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50521    del12s09-in-f14:https  ESTABLISHED
  TCP    172.25.42.114:50522    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50523    DC2K16:domain          TIME_WAIT
```

```
  TCP    172.25.42.114:50515    150.171.22.254:https   ESTABLISHED
  TCP    172.25.42.114:50516    a23-40-32-112:https    ESTABLISHED
  TCP    172.25.42.114:50517    20.70.174.252:https    ESTABLISHED
  TCP    172.25.42.114:50518    204.79.197.222:https   ESTABLISHED
  TCP    172.25.42.114:50519    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50520    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50521    del12s09-in-f14:https  ESTABLISHED
  TCP    172.25.42.114:50522    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50523    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50524    111:https              ESTABLISHED
  TCP    172.25.42.114:50525    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50526    DC2K16:domain          TIME_WAIT
  TCP    172.25.42.114:50527    bom12s06-in-f4:https   ESTABLISHED
  TCP    [::1]:1521             DESKTOP-808F0D4:49680  ESTABLISHED
  TCP    [::1]:49680            DESKTOP-808F0D4:1521   ESTABLISHED

C:\Users\HP>
```

```
C:\Users\HP>Arp

Displays and modifies the IP-to-Physical address translation tables used by
address resolution protocol (ARP).

ARP -s inet_addr eth_addr [if_addr]
ARP -d inet_addr [if_addr]
ARP -a [inet_addr] [-N if_addr] [-v]

  -a            Displays current ARP entries by interrogating the current
                protocol data.  If inet_addr is specified, the IP and Physical
                addresses for only the specified computer are displayed.  If
                more than one network interface uses ARP, entries for each ARP
                table are displayed.
  -g            Same as -a.
  -v            Displays current ARP entries in verbose mode.  All invalid
                entries and entries on the loop-back interface will be shown.
  inet_addr     Specifies an internet address.
  -N if_addr    Displays the ARP entries for the network interface specified
                by if_addr.
  -d            Deletes the host specified by inet_addr. inet_addr may be
                wildcarded with * to delete all hosts.
  -s            Adds the host and associates the Internet address inet_addr
                with the Physical address eth_addr.  The Physical address is
                given as 6 hexadecimal bytes separated by hyphens. The entry
                is permanent.
  eth_addr      Specifies a physical address.
  if_addr       If present, this specifies the Internet address of the
                interface whose address translation table should be modified.
                If not present, the first applicable interface will be used.
Example:
  > arp -s 157.55.85.212   00-aa-00-62-c6-09  .... Adds a static entry.
  > arp -a                                    .... Displays the arp table.

C:\Users\HP>
```





Learning Outcome:

1.Understanding the concept behind the command prompt.

2.Understanding the different network command.

3.Running the different network command.

4.Understanding the concept to troubleshoot networks.