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Ex.No:1bDate:18/8/25

Basic Networking Commands in Windows operating system

Aim:

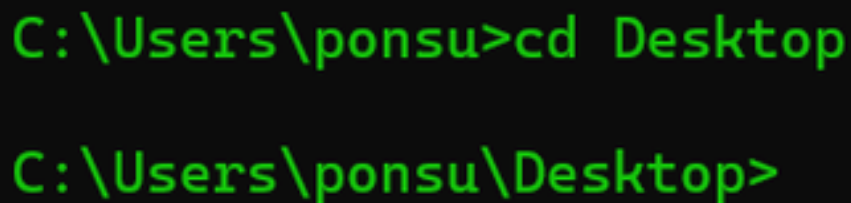To study and execute basic networking commands in Windows operating system.

1. **cd**

SYNOPSIS: CD [/D] [drive:][path]

CD [..]

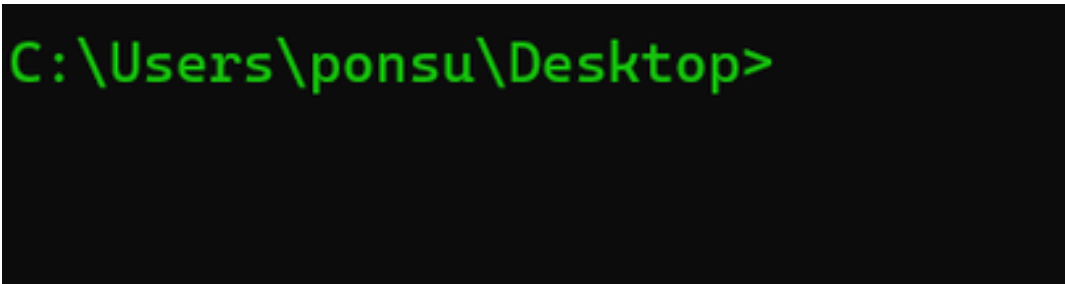**DESCRIPTION:** Displays the name of or changes the current directory.

OUTPUT:

```
C:\Users\ponsu>cd Desktop

C:\Users\ponsu\Desktop>
```

1. **cls**

SYNOPSIS: cls

DESCRIPTION: Clears the screen. **OUTPUT:**

```
C:\Users\ponsu\Desktop>
```

1. **ipconfig**

SYNOPSIS: ipconfig [/allcompartments]

DESCRIPTION: The default is to display only the IP address, subnet mask and default gateway for each adapter bound to TCP/IP.

OUTPUT:

```
C:\Users\ponsu\Desktop>ipconfig

Windows IP Configuration


Unknown adapter Local Area Connection:

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

Unknown adapter Norton VPN:

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

Ethernet adapter Ethernet 3:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::be2b:3d6f:e027:c8%18
   IPv4 Address. . . . . . . . . . . : 192.168.56.1
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :

Unknown adapter OpenVPN Connect DCO Adapter:

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

Wireless LAN adapter Local Area Connection* 1:

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

Wireless LAN adapter Local Area Connection* 2:

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

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   IPv6 Address. . . . . . . . . . . : 2401:4900:1cd4:41d7:96d6:f7e0:7ac0:1d2f
   Temporary IPv6 Address. . . . . . : 2401:4900:1cd4:41d7:2de0:6489:130b:3d12
   Link-local IPv6 Address . . . . . : fe80::25b1:174a:723b:da2e%21
   IPv4 Address. . . . . . . . . . . : 192.168.1.3
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : fe80::1%21
                                       192.168.1.1

Ethernet adapter vEthernet (WSL (Hyper-V firewall)):

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::3dc3:21be:bfef:1b36%56
   IPv4 Address. . . . . . . . . . . : 172.24.224.1
   Subnet Mask . . . . . . . . . . . : 255.255.240.0
   Default Gateway . . . . . . . . . :
```

1. **echo**

SYNOPSIS: ECHO [ON | OFF]

ECHO [message]

DESCRIPTION: Displays messages, or turns command-echoing on or off.

OUTPUT:

```
C:\Users\ponsu\Desktop>echo "hi"
"hi"
```

1. **del**

SYNOPSIS: DEL [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

ERASE [/P] [/F] [/S] [/Q] [/A[[:]attributes]] names

DESCRIPTION: Deletes one or more files.

OUTPUT:

```
C:\Users\ponsu\Desktop>del test.txt
```

1. **find**

SYNOPSIS: FIND [/V] [/C] [/N] [/I] [/OFF[LINE]] "string"

[[drive:][path]filename[...]]

DESCRIPTION: Searches for a text string in a file or files.

OUTPUT:

```
C:\Users\ponsu\Desktop>find "Hello" tt.txt

--------- TT.TXT
Hello There!
```

1. **tasklist**

SYNOPSIS: TASKLIST [/S system [/U username [/P [password]]]]

[/M [module] | /SVC | /V] [/FI filter] [/FO format] [/NH]

DESCRIPTION: This tool displays a list of currently running processes on either a local or remote machine.

OUTPUT:

```
C:\Users\ponsu\Desktop>tasklist

Image Name                     PID Session Name        Session#    Mem Usage
========================= ======== ================ =========== ============
System Idle Process              0 Services                   0          8 K
System                           4 Services                   0      7,844 K
Secure System                  188 Services                   0     62,040 K
Registry                       232 Services                   0     29,436 K
smss.exe                       792 Services                   0        792 K
csrss.exe                     1084 Services                   0      4,452 K
wininit.exe                   1172 Services                   0      4,316 K
services.exe                  1320 Services                   0     11,152 K
LsaIso.exe                    1340 Services                   0      2,072 K
lsass.exe                     1348 Services                   0     26,476 K
svchost.exe                   1476 Services                   0     34,048 K
fontdrvhost.exe               1496 Services                   0      1,800 K
WUDFHost.exe                  1608 Services                   0     10,112 K
```

1. **systeminfo**

SYNOPSIS: SYSTEMINFO [/S system [/U username [/P [password]]]] [/FO format] [/NH]

DESCRIPTION: This tool displays operating system configuration information for a local or remote machine, including service pack levels.

OUTPUT:

```
C:\Users\ponsu\Desktop>systeminfo | findstr "Time Zone"
System Boot Time:              01-10-2025, 13:13:07
Time Zone:                     (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
```

1. **tracert**

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

DESCRIPTION: Traces the route packets take to a destination, showing each hop and its response time to diagnose network issues.

OUTPUT:

```
C:\Users\ponsu\Desktop>tracert 8.8.8.8

Tracing route to dns.google [8.8.8.8]
over a maximum of 30 hops:

  1      6 ms      3 ms      3 ms  RTK_GW [192.168.1.1]
  2     25 ms      6 ms      6 ms  abts-tn-dynamic-1.132.78.171.airtelbroadband.in [171.78.132.1]
  3     14 ms     16 ms      8 ms  125.17.36.41
  4     19 ms      9 ms      8 ms  182.79.141.35
  5      6 ms      6 ms      8 ms  182.79.191.222
  6    393 ms     10 ms     11 ms  116.119.161.147
  7     14 ms     10 ms      8 ms  72.14.197.10
  8     15 ms      8 ms      7 ms  216.239.51.91
  9     14 ms     11 ms      8 ms  142.251.55.41
 10     16 ms     10 ms     10 ms  dns.google [8.8.8.8]

Trace complete.
```

1.

2. **ping**

SYNOPSIS: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]

[-r count] [-s count] [[-j host-list] | [-k host-list]]

[-w timeout] [-R] [-S srcaddr] [-c compartment] [-p] [-4] [-6] target_name

DESCRIPTION: Ping tests network connectivity and measures response time between two devices.

OUTPUT:

```
C:\Users\ponsu\Desktop>ping www.google.com

Pinging www.google.com [2404:6800:4002:815::2004] with 32 bytes of data:
Reply from 2404:6800:4002:815::2004: time=159ms
Reply from 2404:6800:4002:815::2004: time=164ms
Reply from 2404:6800:4002:815::2004: time=162ms
Reply from 2404:6800:4002:815::2004: time=75ms

Ping statistics for 2404:6800:4002:815::2004:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 75ms, Maximum = 164ms, Average = 140ms
```

Result:

Thus the above windows commands were executed.