CN LAB # 01

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20K-0477

Task#01:

Task#02:

```
Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) Centrino(R) Advanced-N 6205
   Physical Address. . . . . . . . . : 10-0B-A9-53-48-94
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::f31:1a2f:8567:3ded%11(Preferred)
   IPv4 Address. . . . . . . . . . . : 192.168.1.104(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : Friday, 27 January 2023 6:41:55 pm
   Lease Expires . . . . . . . . . . : Friday, 27 January 2023 9:41:54 pm
   Default Gateway . . . . . . . . . : 192.168.1.1
   DHCP Server . . . . . . . . . . . : 192.168.1.1
   DHCPv6 IAID . . . . . . . . . . . : 101714857
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-2A-4A-9A-81-D4-BE-D9-19-92-B6
   DNS Servers . . . . . . . . . . . : 192.168.1.1
   NetBIOS over Tcpip. . . . . . . . : Enabled

C:\Users\BASIL>
```

Task#03:

```
Command Prompt

C:\Users\BASIL>hostname
DESKTOP-A94KAE2

C:\Users\BASIL>
```

Task#04:

```
Command Prompt

C:\Users\BASIL>ping 192.168.1.104

Pinging 192.168.1.104 with 32 bytes of data:
Reply from 192.168.1.104: bytes=32 time<1ms TTL=128
Reply from 192.168.1.104: bytes=32 time<1ms TTL=128
Reply from 192.168.1.104: bytes=32 time<1ms TTL=128
Reply from 192.168.1.104: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.104:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\BASIL>
```

REASON: There is connection between two computers because organization already has enabled the connection. Otherwise, on personal computer there is no connectivity because Windows Firewall doesn't allow connection.

Task#05:

```
C:\Users\BASIL>ipconfig /all

Windows IP Configuration

    Host Name . . . . . . . . . . . . : DESKTOP-A94KAE2
    Primary Dns Suffix  . . . . . . . :
    Node Type . . . . . . . . . . . . : Hybrid
    IP Routing Enabled. . . . . . . . : No
    WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet:

    Media State . . . . . . . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
    Description . . . . . . . . . . . : Intel(R) 82579LM Gigabit Network Connection
    Physical Address. . . . . . . . . : D4-BE-D9-19-92-B6
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
```

Task#06:

```
Command Prompt

C:\Users\BASIL>net share

Share name   Resource                        Remark

-------------------------------------------------------------------------------
C$           C:\                             Default share
D$           D:\                             Default share
IPC$                                         Remote IPC
ADMIN$       C:\Windows                      Remote Admin
The command completed successfully.


C:\Users\BASIL>
```

Task#07:

```
Command Prompt

C:\Users\BASIL>netstat -a -n

Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    0.0.0.0:135            0.0.0.0:0              LISTENING
  TCP    0.0.0.0:445            0.0.0.0:0              LISTENING
  TCP    0.0.0.0:5040           0.0.0.0:0              LISTENING
  TCP    0.0.0.0:7680           0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49664          0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49665          0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49666          0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49667          0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49668          0.0.0.0:0              LISTENING
  TCP    0.0.0.0:49669          0.0.0.0:0              LISTENING
  TCP    127.0.0.1:1001         0.0.0.0:0              LISTENING
  TCP    127.0.0.1:8884         0.0.0.0:0              LISTENING
  TCP    127.0.0.1:27015        0.0.0.0:0              LISTENING
  TCP    127.0.0.1:59069        0.0.0.0:0              LISTENING
  TCP    192.168.1.104:139      0.0.0.0:0              LISTENING
  TCP    192.168.1.104:59037    20.198.119.84:443     ESTABLISHED
  TCP    192.168.1.104:59084    34.98.74.57:443       ESTABLISHED
  TCP    192.168.1.104:59100    40.97.190.18:443      ESTABLISHED
  TCP    192.168.1.104:59103    18.64.141.7:80        CLOSE_WAIT
  TCP    192.168.1.104:59104    18.64.141.7:80        CLOSE_WAIT
  TCP    192.168.1.104:59116    209.197.3.8:80        TIME_WAIT
  TCP    [::]:135               [::]:0                LISTENING
  TCP    [::]:445               [::]:0                LISTENING
  TCP    [::]:7680              [::]:0                LISTENING
  TCP    [::]:49664             [::]:0                LISTENING
  TCP    [::]:49665             [::]:0                LISTENING
  TCP    [::]:49666             [::]:0                LISTENING
  TCP    [::]:49667             [::]:0                LISTENING
  TCP    [::]:49668             [::]:0                LISTENING
  TCP    [::]:49669             [::]:0                LISTENING
  UDP    0.0.0.0:5050           *:*
  UDP    0.0.0.0:5353           *:*
  UDP    0.0.0.0:5355           *:*
  UDP    127.0.0.1:1900         *:*
  UDP    127.0.0.1:49664        *:*
  UDP    127.0.0.1:50825        *:*
  UDP    127.0.0.1:55167        *:*
  UDP    127.0.0.1:55168        *:*
```

Task#08:

```
Command Prompt

C:\Users\BASIL>arp /a

Interface: 192.168.1.104 --- 0xb
  Internet Address      Physical Address      Type
  192.168.1.1           0c-80-63-95-db-96     dynamic
  192.168.1.255         ff-ff-ff-ff-ff-ff     static
  224.0.0.22            01-00-5e-00-00-16     static
  224.0.0.251           01-00-5e-00-00-fb     static
  224.0.0.252           01-00-5e-00-00-fc     static
  255.255.255.255       ff-ff-ff-ff-ff-ff     static

C:\Users\BASIL>
```

Task#09:

```
Command Prompt

C:\Users\BASIL>ipconfig

Windows IP Configuration


Ethernet adapter Ethernet:

   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  . :
   Link-local IPv6 Address . . . . . : fe80::f31:1a2f:8567:3ded%11
   IPv4 Address. . . . . . . . . . . : 192.168.1.104
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.1.1

C:\Users\BASIL>
```

Task#10:

Number of hops: 14

```
Command Prompt

C:\Users\BASIL>tracert www.google.com

Tracing route to www.google.com [142.250.185.36]
over a maximum of 30 hops:

  1     3 ms     1 ms     1 ms  192.168.1.1
  2     4 ms    10 ms     4 ms  192.168.0.1
  3     3 ms     2 ms     2 ms  172.18.0.52
  4     3 ms     3 ms     4 ms  192.168.40.205
  5     *        *        *     Request timed out.
  6     *        *        *     Request timed out.
  7     4 ms     6 ms     3 ms  221.120.249.233
  8    14 ms     8 ms     3 ms  119.159.240.165
  9     *        *        *     Request timed out.
 10     *        *        *     Request timed out.
 11    23 ms    23 ms    23 ms  72.14.211.72
 12    46 ms   299 ms   281 ms  216.239.41.109
 13    25 ms    24 ms    24 ms  172.253.79.255
 14    23 ms    24 ms    29 ms  mct01s19-in-f4.1e100.net [142.250.185.36]

Trace complete.

C:\Users\BASIL>
```

Task#11:

Reason: Incorrect server or machine name

Task#12:

Reason: Straight through cable. The Ethernet cable is attached to the router and PC and both end is different.

Task#13:

Yes, we can connect router to PC using straight cable because it is usually use to connect different type of devices or if switches support MDI/MDI-X feature so no need to use crossover cable which would be automatically enables when needed.

Task#14:

In my house all devices are connected to the router so in star topology as every device is connected wirelessly.

Task#15:

Number of hops: 17

```
Command Prompt                                                                      —

C:\Users\BASIL>tracert www.yahoo.com

Tracing route to new-fp-shed.wg1.b.yahoo.com [87.248.100.216]
over a maximum of 30 hops:

  1     1 ms     1 ms    <1 ms  192.168.1.1
  2     2 ms     2 ms     4 ms  192.168.0.1
  3     4 ms     3 ms     2 ms  172.18.0.52
  4     3 ms     2 ms     6 ms  192.168.40.205
  5      *        *        *     Request timed out.
  6      *        *        *     Request timed out.
  7     4 ms     6 ms     5 ms  221.120.249.233
  8     4 ms     3 ms     7 ms  119.159.240.165
  9      *        *        *     Request timed out.
 10      *        *        *     Request timed out.
 11   116 ms   118 ms   114 ms  ge-1-3-0.pat1.dee.yahoo.com [80.81.192.115]
 12      *        *        *     Request timed out.
 13   146 ms   150 ms   146 ms  ae-2.pat1.iry.yahoo.com [209.191.112.54]
 14   147 ms   147 ms   149 ms  et-1-1-2.msr1.ir2.yahoo.com [66.196.65.19]
 15   149 ms   151 ms   146 ms  lo0.fab1-1-gdc.ir2.yahoo.com [77.238.190.2]
 16   147 ms   149 ms   151 ms  usw2-1-lbc.ir2.yahoo.com [77.238.190.107]
 17   152 ms   150 ms   150 ms  media-router-fp74.prod.media.vip.ir2.yahoo.com [87.248.100.216]

Trace complete.

C:\Users\BASIL>
```