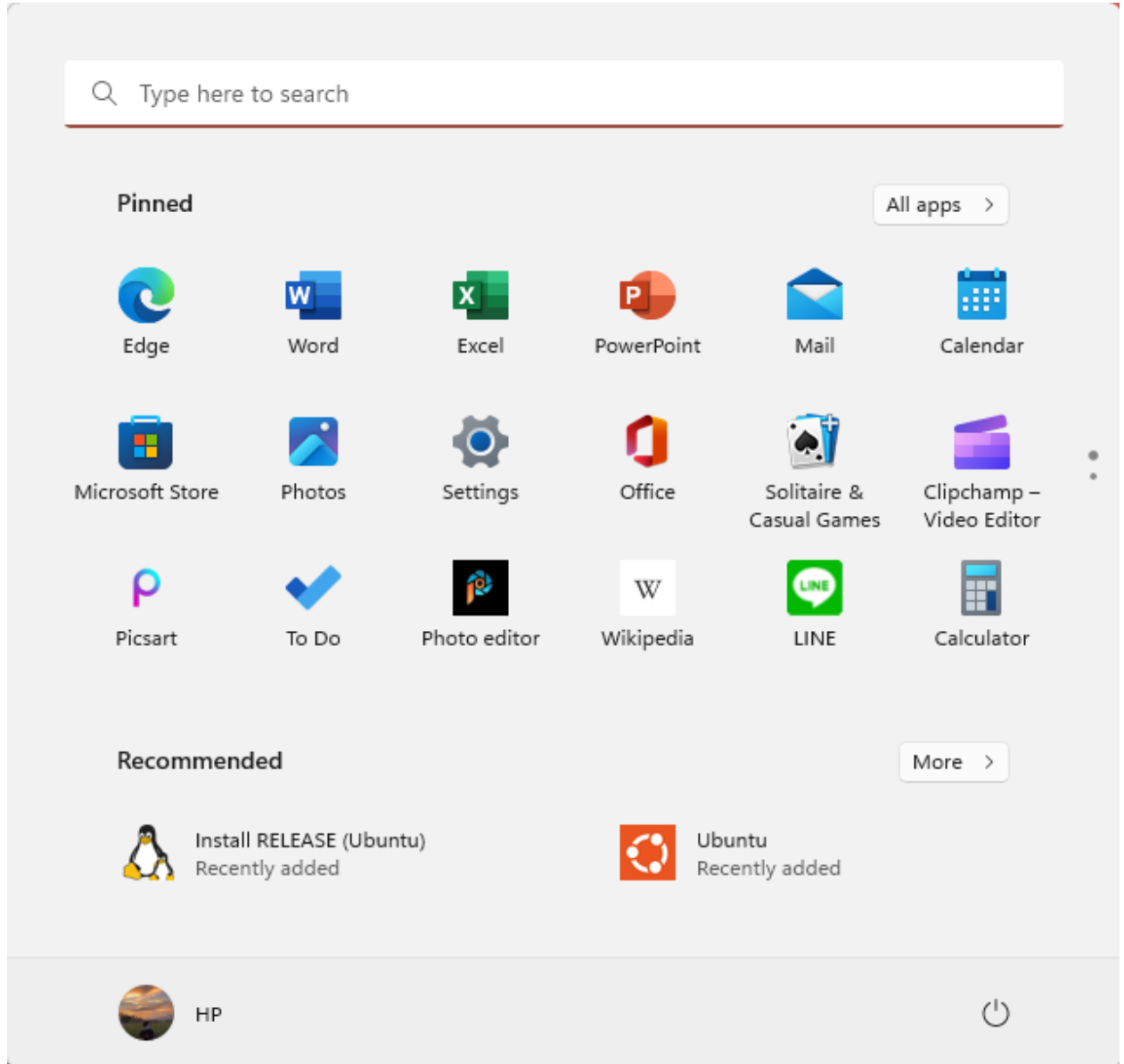
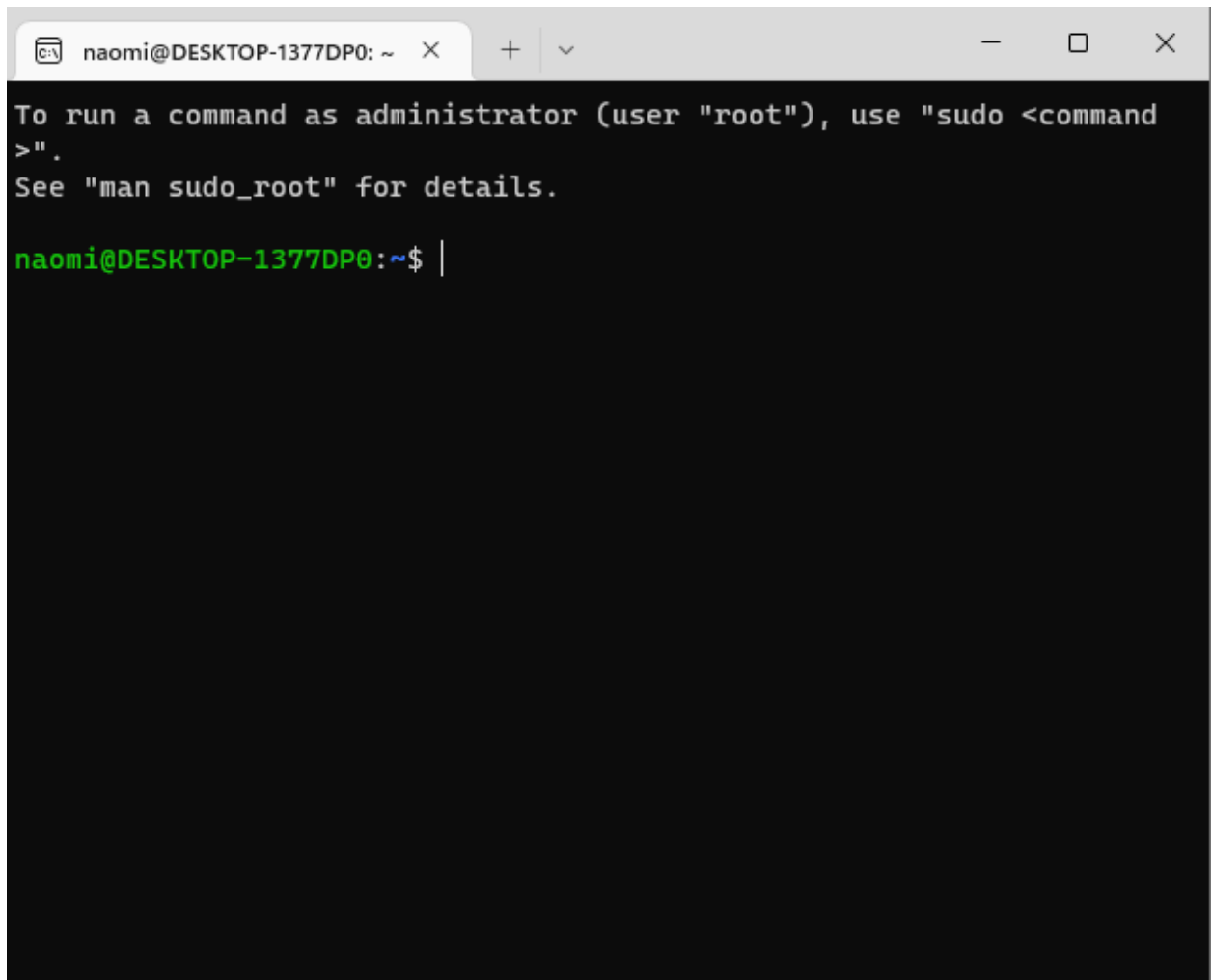


Instruction:

Complete all questions in 2 hrs.

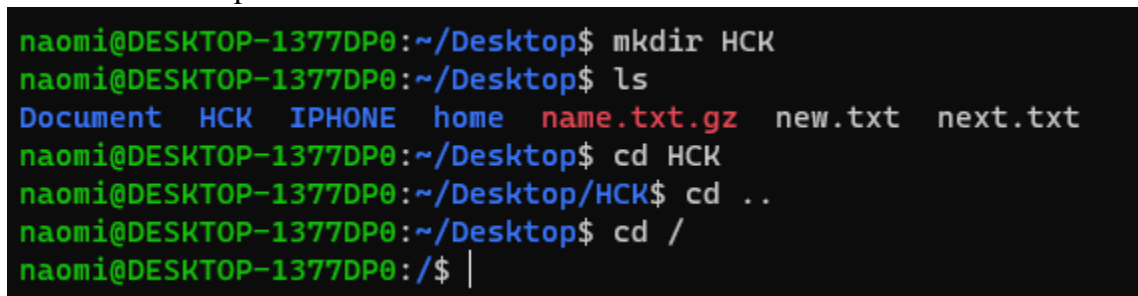
1. Start the Terminal program from the top menu bar (Applications -> Accessories -> Terminal).





```
naomi@DESKTOP-1377DP0: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
naomi@DESKTOP-1377DP0:~$ |
```

2. Use commands `cd`, `cd ..`, `cd /` to navigate through the directories. Create the directory HCK in the desktop.



```
naomi@DESKTOP-1377DP0:~/Desktop$ mkdir HCK  
naomi@DESKTOP-1377DP0:~/Desktop$ ls  
Document  HCK  IPHONE  home  name.txt.gz  new.txt  next.txt  
naomi@DESKTOP-1377DP0:~/Desktop$ cd HCK  
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ cd ..  
naomi@DESKTOP-1377DP0:~/Desktop$ cd /  
naomi@DESKTOP-1377DP0:/$ |
```

3. Write the command to print current working directory. List the files and directories in the current working directories. Insert the image of your terminal here.

```
naomi@DESKTOP-1377DP0:~$ pwd
/home/naomi
naomi@DESKTOP-1377DP0:~$ ls
Desktop
naomi@DESKTOP-1377DP0:~$ |
```

4. Create New.txt file containing text “Herald College Kathmandu”, in the HCK directory.

```
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ echo 'Herald College Kathmandu'>New.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ |
```

5. Delete New.txt file from HCK directory.

```
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ rm New.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ ls
```

6. Remove directory HCK from the Desktop.

```
naomi@DESKTOP-1377DP0:~/Desktop$ rm -r HCK
naomi@DESKTOP-1377DP0:~/Desktop$ ls
Document IPHONE home name.txt.gz new.txt next.txt
naomi@DESKTOP-1377DP0:~/Desktop$ |
```

7. Create directory Kathmandu in the desktop containing file Swayambhu.txt, Rename Swayambhu.txt as Barahi.txt

```
naomi@DESKTOP-1377DP0:~/Desktop/Pokhara$ cd ..
naomi@DESKTOP-1377DP0:~/Desktop$ rm -r Pokhara
naomi@DESKTOP-1377DP0:~/Desktop$ rm -r Kathmandu
naomi@DESKTOP-1377DP0:~/Desktop$ ls
Document IPHONE home name.txt.gz new.txt next.txt
naomi@DESKTOP-1377DP0:~/Desktop$ mkdir Kathmandu
naomi@DESKTOP-1377DP0:~/Desktop$ cd Kathmandu
naomi@DESKTOP-1377DP0:~/Desktop/Kathmandu$ touch Swayambhunath.txt
naomi@DESKTOP-1377DP0:~/Desktop/Kathmandu$ ls
Swayambhunath.txt
naomi@DESKTOP-1377DP0:~/Desktop/Kathmandu$ mv Swayambhunath.txt Barahi.txt
naomi@DESKTOP-1377DP0:~/Desktop/Kathmandu$ ls
Barahi.txt
naomi@DESKTOP-1377DP0:~/Desktop/Kathmandu$ |
```

8. Create Directory Pokhara in the Desktop and move Bahari.txt of directory Kathmandu in directory Pokhara.

```
naomi@DESKTOP-1377DP0:~/Desktop$ mv Kathmandu/Barahi.txt Pokhara/  
naomi@DESKTOP-1377DP0:~/Desktop$ cd Pokhara/  
naomi@DESKTOP-1377DP0:~/Desktop/Pokhara$ ls  
Barahi.txt  
naomi@DESKTOP-1377DP0:~/Desktop/Pokhara$ |
```

9. What is the command to list all the invisible files and to display the directories in detail?

= The command “ls -a” is used to list all the invisible files and “ls -l” is the command used to display the directories in detail.

```
naomi@DESKTOP-1377DP0:~$ cd Desktop  
naomi@DESKTOP-1377DP0:~/Desktop$ ls -a  
.    Document  Kathmandu  home          new.txt  
..   IPHONE    Pokhara    name.txt.gz  next.txt  
naomi@DESKTOP-1377DP0:~/Desktop$ ls -l  
total 32  
drwxr-xr-x 2 naomi naomi 4096 Jan 18 14:17 Document  
drwxr-xr-x 2 naomi naomi 4096 Jan 16 14:28 IPHONE  
drwxr-xr-x 2 naomi naomi 4096 Jan 18 15:55 Kathmandu  
drwxr-xr-x 2 naomi naomi 4096 Jan 18 15:55 Pokhara  
drwxr-xr-x 3 naomi naomi 4096 Jan 18 14:23 home  
-rw-r--r-- 1 naomi naomi  52 Jan 16 15:00 name.txt.gz  
-rw-r--r-- 1 naomi naomi   8 Jan 18 14:16 new.txt  
-rw-r--r-- 1 naomi naomi   9 Jan 16 14:57 next.txt  
naomi@DESKTOP-1377DP0:~/Desktop$ |
```

10. What is the command to make a directory named IPHONE and IPAD and remove the directory named IPAD?

= “mkdir” is the command that is used to make a directory named IPHONE and IPAD, while “rmdir IPAD” is the command used to remove the directory named IPAD.

```

naomi@DESKTOP-1377DP0:~/Desktop$ mkdir IPHONE
naomi@DESKTOP-1377DP0:~/Desktop$ mkdir IPAD
naomi@DESKTOP-1377DP0:~/Desktop$ ls
IPAD  IPHONE
naomi@DESKTOP-1377DP0:~/Desktop$ rmdir IPAD
naomi@DESKTOP-1377DP0:~/Desktop$ ls
IPHONE
naomi@DESKTOP-1377DP0:~/Desktop$ |

```

11. Create file hck.txt containing text “Herald College Kathmandu” and another file hck1.txt containing text “Sanugaucharan, Naxal” concatenate these two files and give name HCK.txt.

```

naomi@DESKTOP-1377DP0:~/Desktop$ mkdir HCK
naomi@DESKTOP-1377DP0:~/Desktop$ cd HCK
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ touch hck.txt hck1.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ echo 'Herald College Kathmandu'> hck.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ echo 'Sanugaucharan, Naxal'> hck1.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ cat hck.txt hck1.txt> HCK.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ ls
HCK.txt  hck.txt  hck1.txt
naomi@DESKTOP-1377DP0:~/Desktop/HCK$ |

```

12. Create filename1.txt and filename2.txt in the Desktop and create compressed file new.zip which contains filename1.txt and filename2.txt.

```

naomi@DESKTOP-1377DP0:~/Desktop$ zip new.zip filename1.txt filename2.txt
Command 'zip' not found, but can be installed with:
sudo apt install zip
naomi@DESKTOP-1377DP0:~/Desktop$ sudo apt-get install zip
[sudo] password for naomi:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  unzip
The following NEW packages will be installed:
  unzip zip
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 350 kB of archives.
After this operation, 929 kB of additional disk space will be used.Do you want to continue? [Y/n]
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 unzip amd64 6.0-26ubuntu3.1 [174 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy/main amd64 zip amd64 3.0-12build2 [176 kB]
Fetched 350 kB in 3s (127 kB/s)
Selecting previously unselected package unzip.
(Reading database ... 24112 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-26ubuntu3.1_amd64.deb ...
Unpacking unzip (6.0-26ubuntu3.1) ...
Selecting previously unselected package zip.
Preparing to unpack .../zip_3.0-12build2_amd64.deb ...
Unpacking zip (3.0-12build2) ...
Setting up unzip (6.0-26ubuntu3.1) ...
Setting up zip (3.0-12build2) ...
Processing triggers for man-db (2.10.2-1) ...
naomi@DESKTOP-1377DP0:~/Desktop$ ls
Document  IPHONE      Pokhara  name.txt.gz  next.txt
HCK       Kathmandu  home     new.txt

```

13. Check the permissions for User, group and world for new.zip and set read permission for user, read and write permission for group and read write and execute permission for world.

```
naomi@DESKTOP-1377DP0:~/Desktop$ chmod 467 new.zip
naomi@DESKTOP-1377DP0:~/Desktop$ ls
Document  IPHONE      Pokhara  name.txt.gz  new.zip
HCK       Kathmandu  home     new.txt      next.txt
```

14. Write the command to check your last 10 commands.

```
naomi@DESKTOP-1377DP0:~$ cd Desktop
naomi@DESKTOP-1377DP0:~/Desktop$ history 10
401  rm -r Province3
402  rm -r Province4
403  rm -r Province5
404  rm -r Province6
405  rm -r Province7
406  ls
407  clear
408  cd ..
409  cd Desktop
410  history 10
naomi@DESKTOP-1377DP0:~/Desktop$ |
```

15. Write the command to check current user.

```
naomi@DESKTOP-1377DP0:~/Desktop$ cd
naomi@DESKTOP-1377DP0:~$ whoami
naomi
naomi@DESKTOP-1377DP0:~$ |
```

16. Write the command to add user having user name newuser and switch to newuser.

```
naomi@DESKTOP-1377DP0:~/Desktop$ sudo useradd newuser
[sudo] password for naomi:
naomi@DESKTOP-1377DP0:~/Desktop$ sudo passwd newuser
New password:
Retype new password:
passwd: password updated successfully
naomi@DESKTOP-1377DP0:~/Desktop$ sudo su newuser
```

17. Create the following directories in and paste your result here.

```
uttam@uttam-VirtualBox:~/Desktop/NEPAL$ tree
.
├── Province1
│   └── Capital
│       └── Biratnagar.txt
├── Province2
│   └── Capital
│       └── Janakpur.txt
├── Province3
│   └── Capital
│       └── Hetauda.txt
├── Province4
│   └── Capital
│       └── Pokhara.txt
├── Province5
│   └── Capital
│       └── Deukhuri.txt
├── Province6
│   └── Capital
│       └── Birendranagar.txt
└── Province7
    └── Capital
        └── Mahendranagar.txt

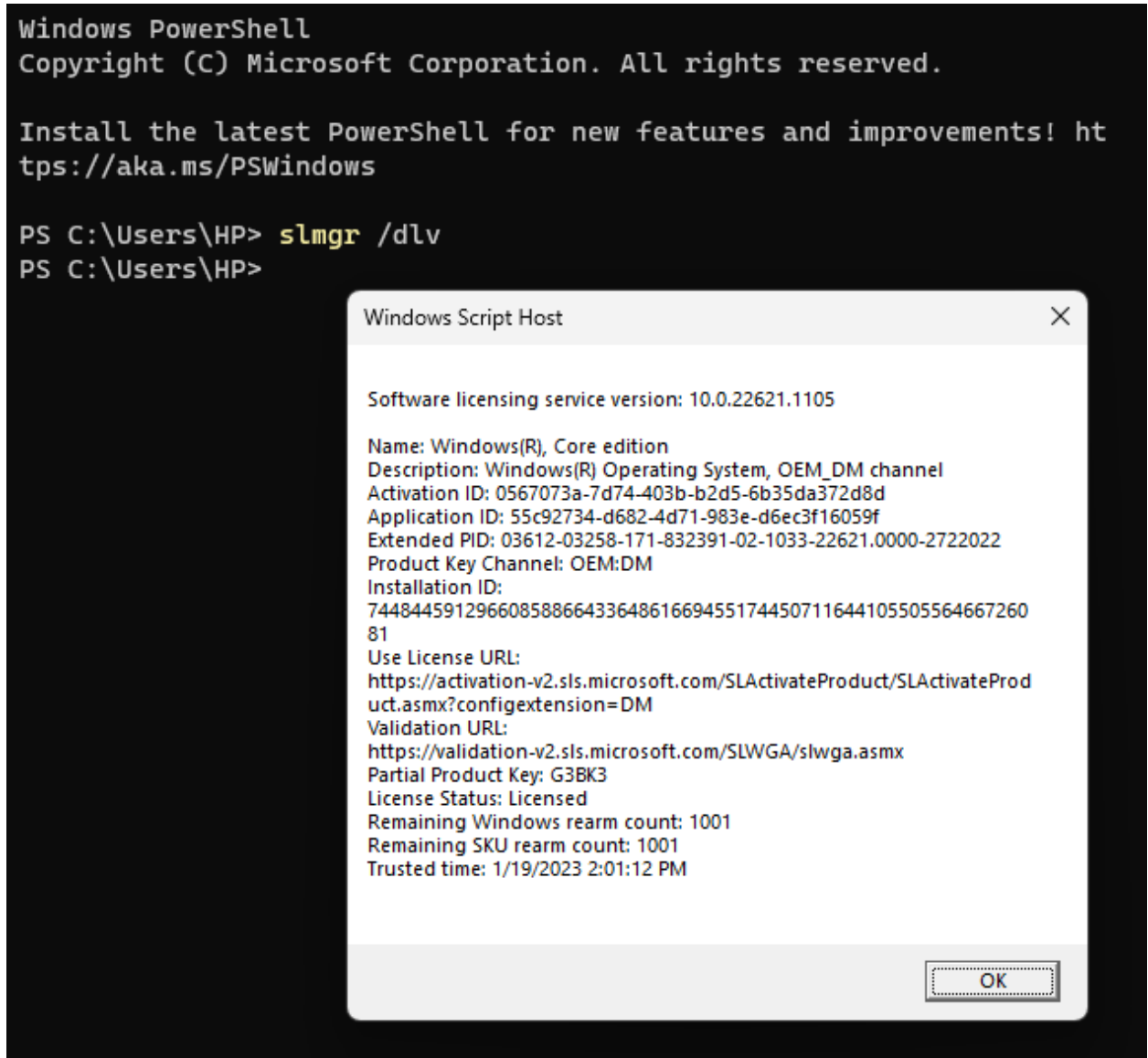
14 directories, 7 files
uttam@uttam-VirtualBox:~/Desktop/NEPAL$
```

Result:

```
naomi@DESKTOP-1377DP0:~/Desktop/NEPAL$ tree
.
├── Province-1
│   └── Capital
│       └── Biratnagar.txt
├── Province-2
│   └── Capital
│       └── Janakur.txt
├── Province-3
│   └── Capital
│       └── Hetauda.txt
├── Province-4
│   └── Capital
│       └── Pokhara.txt
├── Province-5
│   └── Capital
│       └── Deukhuri.txt
├── Province-6
│   └── Capital
│       └── Birendranagar.txt
└── Province-7
    └── Capital
        └── Mahendranagar.txt

14 directories, 7 files
naomi@DESKTOP-1377DP0:~/Desktop/NEPAL$
```

18. Write a command to check our windows version.



The screenshot shows a Windows PowerShell terminal window with the following text:

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! ht
tps://aka.ms/PSWindows

PS C:\Users\HP> slmgr /dlv
PS C:\Users\HP>
```

Overlaid on the terminal is a "Windows Script Host" dialog box displaying the following information:

Software licensing service version: 10.0.22621.1105

Name: Windows(R), Core edition
Description: Windows(R) Operating System, OEM_DM channel
Activation ID: 0567073a-7d74-403b-b2d5-6b35da372d8d
Application ID: 55c92734-d682-4d71-983e-d6ec3f16059f
Extended PID: 03612-03258-171-832391-02-1033-22621.0000-2722022
Product Key Channel: OEM:DM
Installation ID:
7448445912966085886643364861669455174450711644105505564667260
81
Use License URL:
<https://activation-v2.sls.microsoft.com/SLActivateProduct/SLActivateProduct.aspx?configextension=DM>
Validation URL:
<https://validation-v2.sls.microsoft.com/SLWGA/slwgga.aspx>
Partial Product Key: G3BK3
License Status: Licensed
Remaining Windows rearm count: 1001
Remaining SKU rearm count: 1001
Trusted time: 1/19/2023 2:01:12 PM

An "OK" button is located at the bottom right of the dialog box.

19. Create the directory date. Within that directory create a text file to show the current system date.


```
C:\Users\HP\Downloads>mkdir Date

C:\Users\HP\Downloads>cd Date

C:\Users\HP\Downloads\Date>echo "date"> %date:~6,4%%date:~3,2%%date:~0,2%.txt
The filename, directory name, or volume label syntax is incorrect.

C:\Users\HP\Downloads\Date>echo "date"> ~-4,4%%date:~-10,2%%date:~7,2%.txt

C:\Users\HP\Downloads\Date>ls
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\HP\Downloads\Date>dir
Volume in drive C is Windows
Volume Serial Number is 1E62-6CFB

Directory of C:\Users\HP\Downloads\Date

01/19/2023  02:21 PM    <DIR>          .
01/19/2023  02:19 PM    <DIR>          ..
01/19/2023  02:21 PM                19 ~-4
                1 File(s)                19 bytes
                2 Dir(s)  148,929,925,120 bytes free

C:\Users\HP\Downloads\Date>
```

20. Show the system information using the command.

```
C:\Users\HP\Downloads\Date>systeminfo

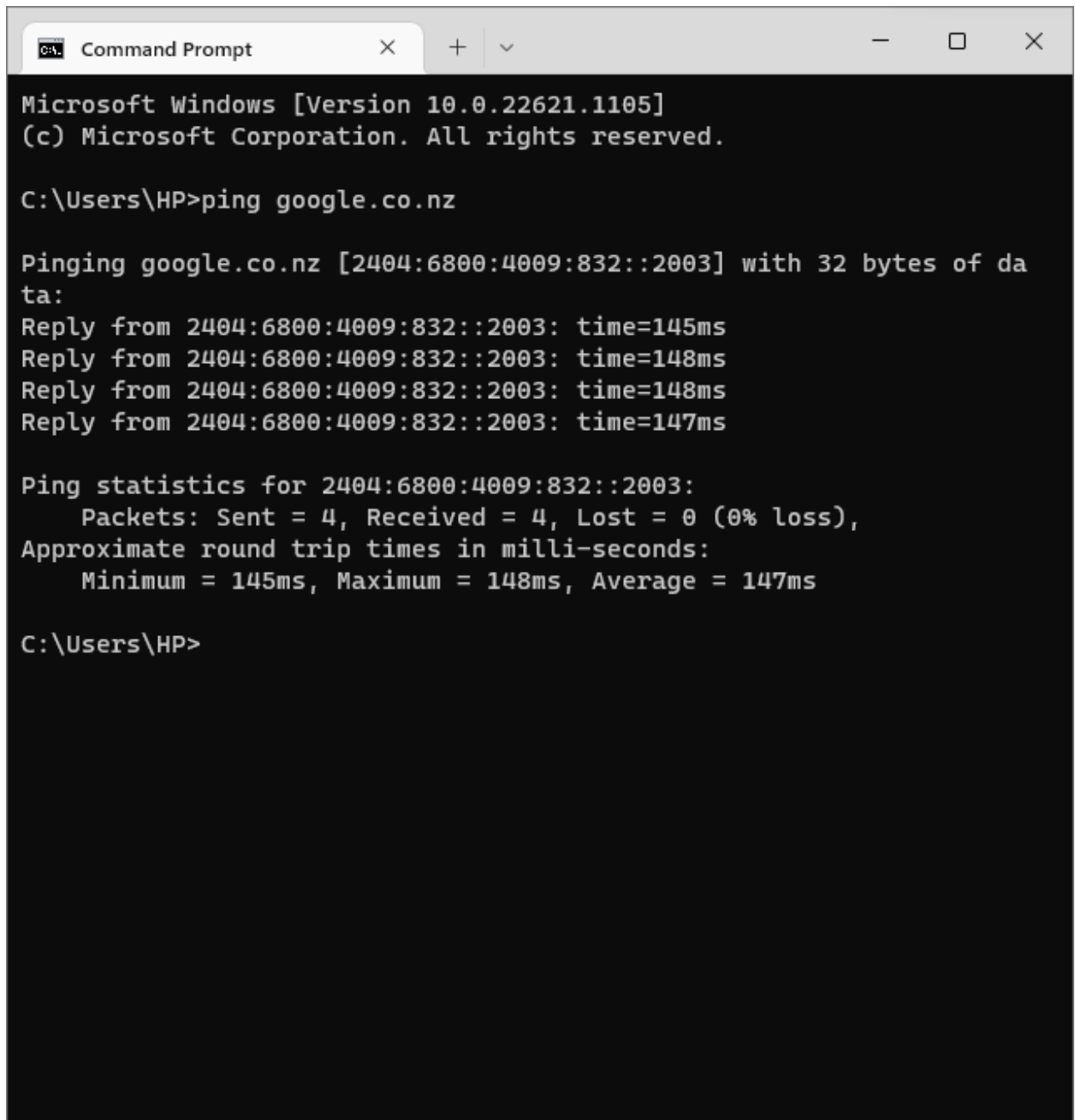
Host Name:                DESKTOP-1377DP0
OS Name:                  Microsoft Windows 11 Home
OS Version:               10.0.22621 N/A Build 22621
OS Manufacturer:         Microsoft Corporation
OS Configuration:        Standalone Workstation
OS Build Type:             Multiprocessor Free
Registered Owner:         HP
Registered Organization:  HP
Product ID:               00325-81718-32391-AAOEM
Original Install Date:     9/29/2022, 9:31:49 AM
System Boot Time:         1/17/2023, 7:29:52 PM
System Manufacturer:      HP
System Model:              HP Pavilion x360 Convertible 14-dh2xxx
System Type:               x64-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: Intel64 Family 6 Model 126 Stepping 5 GenuineIntel ~991 Mhz
BIOS Version:              Insyde F.05, 11/10/2020
Windows Directory:         C:\WINDOWS
System Directory:          C:\WINDOWS\system32
Boot Device:               \Device\HarddiskVolume1
System Locale:              en-us;English (United States)
Input Locale:              en-us;English (United States)
Time Zone:                 (UTC+05:45) Kathmandu
Total Physical Memory:     7,951 MB
Available Physical Memory: 2,099 MB
Virtual Memory: Max Size:  9,807 MB
Virtual Memory: Available: 2,259 MB
Virtual Memory: In Use:    7,548 MB
Page File Location(s):     C:\pagefile.sys
Domain:                    WORKGROUP
```

21. Create the directory called **systemInfo** and create the file name **systemInfo.txt**. In that file all your system information should be auto generated using the command.

22. Launch the **systeminfo.txt** using notepad using the command.

23. Briefly explain about the Ping,getmac,ipconfig command.

24. Ping the google domain and paste the screenshot.

A screenshot of a Windows Command Prompt window. The title bar says "Command Prompt". The text inside shows the Windows version (10.0.22621.1105) and copyright information. The user has entered the command "ping google.co.nz". The output shows four successful replies from the IPv6 address 2404:6800:4009:832::2003 with response times between 145ms and 148ms. Ping statistics show 4 packets sent, 4 received, and 0% loss, with an average round trip time of 147ms. The prompt is currently at "C:\Users\HP>".

```
Microsoft Windows [Version 10.0.22621.1105]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>ping google.co.nz

Pinging google.co.nz [2404:6800:4009:832::2003] with 32 bytes of data:
Reply from 2404:6800:4009:832::2003: time=145ms
Reply from 2404:6800:4009:832::2003: time=148ms
Reply from 2404:6800:4009:832::2003: time=148ms
Reply from 2404:6800:4009:832::2003: time=147ms

Ping statistics for 2404:6800:4009:832::2003:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 145ms, Maximum = 148ms, Average = 147ms

C:\Users\HP>
```

25. Show the ip address of your device.

```
Command Prompt
C:\Users\HP> ipconfig /all

Windows IP Configuration

Host Name . . . . . : DESKTOP-1377DP0
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet 2:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : ExpressVPN TAP Adapter
Physical Address. . . . . : 00-FF-D3-16-D7-C2
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 1:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtu
al Adapter
Physical Address. . . . . : 3C-58-C2-24-69-B9
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

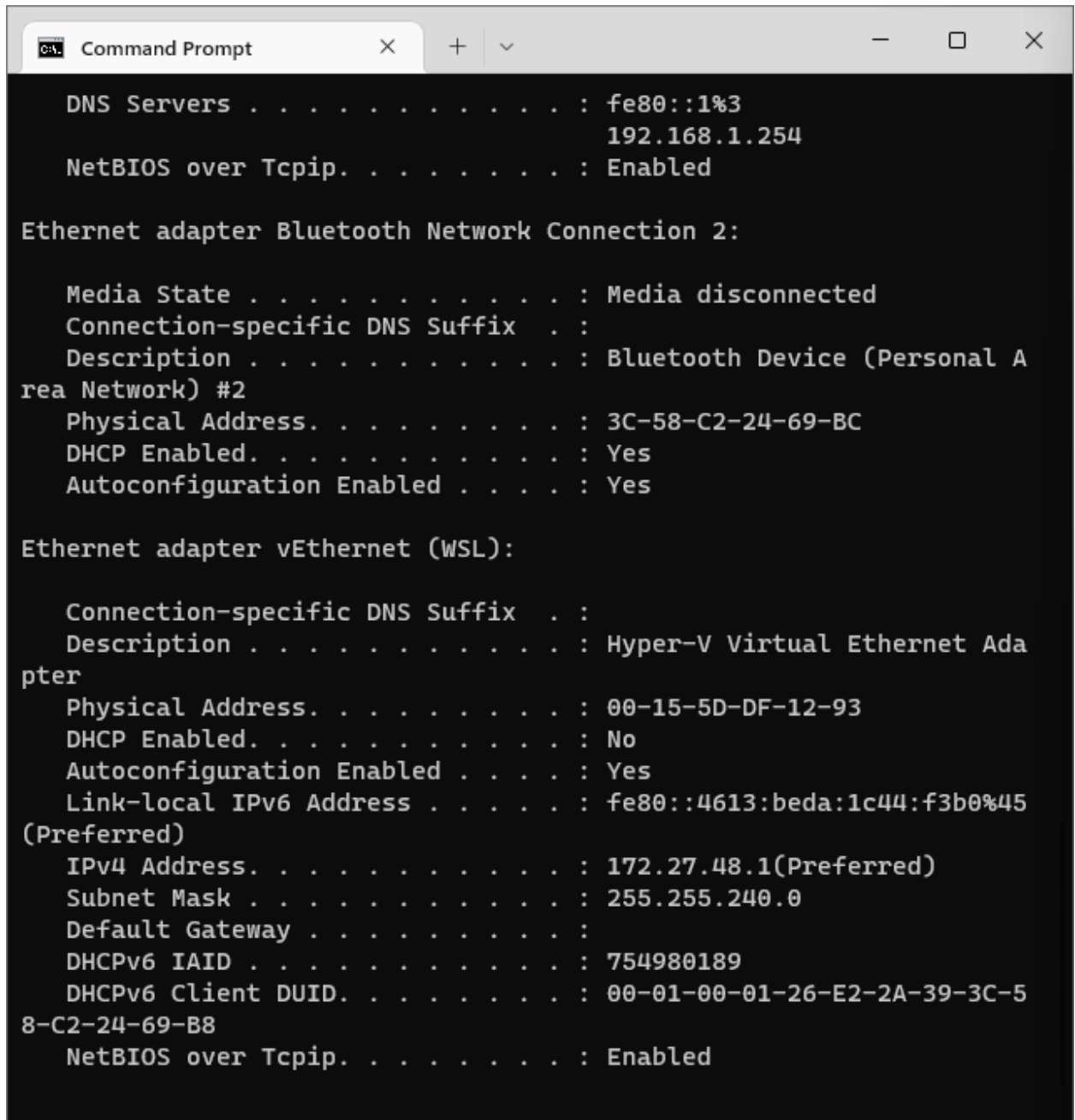
Media State . . . . . : Media disconnected
```

```
Command Prompt

Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtu
al Adapter #2
Physical Address. . . . . : 3E-58-C2-24-69-B8
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) Wi-Fi 6 AX201 160MH
z
Physical Address. . . . . : 3C-58-C2-24-69-B8
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2400:1a00:b020:682e:9220:a6a
2:54a8:3ab6(Preferred)
Temporary IPv6 Address. . . . . : 2400:1a00:b020:682e:9dac:f0b
:bc9e:4587(Preferred)
Link-local IPv6 Address . . . . . : fe80::23ac:736d:d25b:d4d4%3(
Preferred)
IPv4 Address. . . . . : 192.168.1.81(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Thursday, January 19, 2023 7
:50:23 PM
Lease Expires . . . . . : Friday, January 20, 2023 8:4
9:52 PM
Default Gateway . . . . . : fe80::1%3
                            192.168.1.254
DHCP Server . . . . . : 192.168.1.254
DHCPv6 IAID . . . . . : 54286530
DHCPv6 Client DUID. . . . . : 00-01-00-01-26-E2-2A-39-3C-5
```



```
Command Prompt

DNS Servers . . . . . : fe80::1%3
                        192.168.1.254
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth Network Connection 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 
    Description . . . . . : Bluetooth Device (Personal Area Network) #2
    Physical Address. . . . . : 3C-58-C2-24-69-BC
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes

Ethernet adapter vEthernet (WSL):

    Connection-specific DNS Suffix  . : 
    Description . . . . . : Hyper-V Virtual Ethernet Adapter
    Physical Address. . . . . : 00-15-5D-DF-12-93
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::4613:beda:1c44:f3b0%45
    (Preferred)
    IPv4 Address. . . . . : 172.27.48.1(Preferred)
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 
    DHCPv6 IAID . . . . . : 754980189
    DHCPv6 Client DUID. . . . . : 00-01-00-01-26-E2-2A-39-3C-58-C2-24-69-B8
    NetBIOS over Tcpip. . . . . : Enabled
```

25. What is the use of the FC command?

= FC (File Compare) command is used to compare two files. FC returns lines that differ between the two files after the FC is run and completed.

26. Create the directory called difference. In that directory create two files File1.txt and File2.txt. Add contents in 2 files and perform the ASCII comparison of these 2 files.

```
C:\Users\HP>cd Downloads
C:\Users\HP\Downloads>mkdir Difference
C:\Users\HP\Downloads>cd Difference
C:\Users\HP\Downloads\Difference>echo "Hello"> File1.txt
C:\Users\HP\Downloads\Difference>echo "Bye"> File2.txt
C:\Users\HP\Downloads\Difference>fc /L File1.txt File2.txt
Comparing files File1.txt and FILE2.TXT
***** File1.txt
"Hello"
***** FILE2.TXT
"Bye"
*****
```

27. Generate the power efficiency diagnostics report using the command.

28. What does the CHKDSK do?

= CHKDSK is the command that examines disk space and disk use and provides a status report specific to each file system.

29. Explain doskey /history command.

= Doskey allows the user to keep a record of all commands executed on a computer. Doskey also allows you to execute frequently used commands without having to type them each time.