

## Lab 2

*\$hostname*

- Displays the computer's whole name

```
C:\Users\nehak>hostname
DESKTOP-4TNRFB2
```

*\$env*

- Displays environment variables

[illegible]

$\$ps$

- Prints active processes on my system.

```
C:\Users\nehak>ps
  PID   PPID   PGID   WINPID   TTY      UID     STIME  COMMAND
  1068     1   1068   14756  cons0    197609  21:19:36 /usr/bin/ps
```

*\$ pwd*

- Prints full root directory

```
C:\Users\nehak>pwd
/c/Users/nehak
```

```
$ git clone https://github.com/kevinwlu/iot.git
```

- Clones the GitHub needed for this class.

```
C:\Users\nehak> git clone https://github.com/kevinwlu/iot.git
fatal: destination path 'iot' already exists and is not an empty directory.
```

```
$ cd iot
```

- Entering the iot directory

**\$ /s**

- Displays all the different directories within `iot`.

$\$ cd$

- Displaying what directory path I am in.

*\$df*

- Displays free disk space

```
C:\Users\nehak>cd iot

C:\Users\nehak\iot>ls
README.md  demo      hype      lesson2   lesson5   lesson8   special_problems
apps       economics lesson1    lesson3   lesson6   lesson9   standards
cases      file1     lesson10  lesson4   lesson7   projects  tools

C:\Users\nehak\iot>cd
C:\Users\nehak\iot

C:\Users\nehak\iot>df
Filesystem      1K-blocks      Used    Available Use% Mounted on
C:/msys64        228548604 197961412    30587192  87% /
D:                1953382396   372084 1953010312    1% /d
```

*\$ mkdir demo*

- Creates a subdirectory called demo.

*\$ cd demo*

- Enter the demo sub directory.

```
C:\Users\nehak\iot>mkdir demo
A subdirectory or file demo already exists.

C:\Users\nehak\iot>cd demo
```

*\$ nano file*

- Create a file.

*\$ cat file*

- Print the contents of the file created.

```
C:\Users\nehak\iot\demo>nano file

C:\Users\nehak\iot\demo>cat file
hi.
```

*\$ cp file file1*

- Copies file and call the copy file 1.

*\$ mv file file2*

- Overwrites file 2 with file 1.

*\$ rm file2*

- Deletes file 2.

```
C:\Users\nehak\iot\demo>cp file file1

C:\Users\nehak\iot\demo>mv file file 2
mv: target '2' is not a directory

C:\Users\nehak\iot\demo>mv file file2

C:\Users\nehak\iot\demo>rm file2
```

*\$ clear*

- Clears the terminal

```
C:\Users\nehak\iot\demo>
```

*\$ man uname (uname --help)*

- Prints information about the OS.

```
C:\Users\nehak\iot\demo>uname --help
Usage: uname [OPTION]...
Print certain system information.  With no OPTION, same as -s.

  -a, --all                print all information, in the following order,
                           except omit -p and -i if unknown:
  -s, --kernel-name        print the kernel name
  -n, --nodename            print the network node hostname
  -r, --kernel-release     print the kernel release
  -v, --kernel-version     print the kernel version
  -m, --machine            print the machine hardware name
  -p, --processor          print the processor type (non-portable)
  -i, --hardware-platform  print the hardware platform (non-portable)
  -o, --operating-system   print the operating system
      --help              display this help and exit
      --version           output version information and exit

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report any translation bugs to <https://translationproject.org/team/>
Full documentation <https://www.gnu.org/software/coreutils/uname>
or available locally via: info '(coreutils) uname invocation'
```

*\$ uname -a*

- Prints the Kernel name, release, version, network node hostname, machine hardware name, processor type, hardware platform and operating system

```
C:\Users\nehak\iot\demo>uname -a
MSYS_NT-10.0-22621 DESKTOP-4TNRFB2 3.3.3-341.x86_64 2022-01-18 13:00 UTC x86_64 Msys
```

*\$ ifconfig (ipconfig)*

- Prints ip configurations.

```

C:\Users\nehak\iot\demo>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

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

Unknown adapter Local Area Connection:

    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  . : campus.stevens-tech.edu
    Link-local IPv6 Address . . . . . : fe80::f7f5:a6bc:58de:a29b%6
    IPv4 Address. . . . . : 10.156.19.203
    Subnet Mask . . . . . : 255.255.224.0
    Default Gateway . . . . . : 10.156.0.1

Ethernet adapter Bluetooth Network Connection:

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

Ethernet adapter vEthernet (WSL):

    Connection-specific DNS Suffix  . :
    Link-local IPv6 Address . . . . . : fe80::b6dc:f2e6:38ab:def5%48
    IPv4 Address. . . . . : 172.24.96.1
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . :

```

*\$ ping localhost*

- Pings the local ip address.

```
C:\Users\nehak\iot\demo>ping localhost

Pinging DESKTOP-4TNRFB2 [::1] with 32 bytes of data:
Reply from ::1: time<1ms
Reply from ::1: time<1ms
Reply from ::1: time<1ms
Reply from ::1: time<1ms

Ping statistics for ::1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

### \$ netstat

- Provide information on all active connections to the computer.

```
C:\Users\nehak\iot\demo>netstat

Active Connections

Proto Local Address          Foreign Address         State
TCP    10.156.19.203:51399     20.25.241.18:https      ESTABLISHED
TCP    10.156.19.203:53300     20.25.241.18:https      ESTABLISHED
TCP    10.156.19.203:53936     20.25.241.18:https      ESTABLISHED
TCP    10.156.19.203:56211     ec2-44-199-178-28:https ESTABLISHED
TCP    10.156.19.203:62535     ec2-34-203-7-57:https   TIME_WAIT
TCP    10.156.19.203:62542     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62543     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62544     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62545     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62546     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62547     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62548     server-108-138-106-48:https ESTABLISHED
TCP    10.156.19.203:62549     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62550     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62551     lga25s74-in-f3:https    ESTABLISHED
TCP    10.156.19.203:62552     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62553     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62554     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62555     155.246.1.20:domain     TIME_WAIT
TCP    10.156.19.203:62612     bh-in-f188:5228         ESTABLISHED
TCP    10.156.19.203:62613     bh-in-f188:5228         ESTABLISHED
TCP    10.156.19.203:62719     13.73.252.141:https     ESTABLISHED
TCP    10.156.19.203:62802     lb-140-82-114-25-iad:https ESTABLISHED
TCP    127.0.0.1:4767         DESKTOP-4TNRFB2:59915    ESTABLISHED
TCP    127.0.0.1:5354         DESKTOP-4TNRFB2:49674    ESTABLISHED
TCP    127.0.0.1:5354         DESKTOP-4TNRFB2:49675    ESTABLISHED
TCP    127.0.0.1:49674         DESKTOP-4TNRFB2:5354     ESTABLISHED
TCP    127.0.0.1:49675         DESKTOP-4TNRFB2:5354     ESTABLISHED
TCP    127.0.0.1:59915         DESKTOP-4TNRFB2:4767     ESTABLISHED
```

