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ECE 577
Lab Hw1

Readme for Questions 5 and 6 Python parts. Contains information on how to run Python scripts and some example screenshots.

---------- Instructions ----------
Setup
Linux command line: (in directory that contains Python source files)
1. sudo python3 -m pip uninstall pip && sudo apt install python3-pip --reinstall
2. pip3 install netifaces
3. pip3 install numpy
4. pip3 install sys

Question 5
Linux command line: (in directory that contains Python source files)
1. python3 q5.py
2. (will be prompted to enter more input - (IP, MAC, Type))
   a. To get multiple details on interface at same time, enter multiple inputs with space in between (e.g. "IP MAC" or see Example 1)

Question 6
Linux command line: (in directory that contains Python source files)
1. python3 q6.py <network address> <number of hosts>
   a. Network address will have form a.b.c.d/m (see Example 2)

---------- Source Code Files ----------
readme
q5.py
q6.py

---------- Environment ----------
Linux
VCL: Ubuntu 16.04 LTS Base
Python: 3.5.2

---------- Example 1 ----------
Linux command line: (in directory that contains Python source files)
python3 q5.py

```
Enter interface detail you would like (IP, MAC, Type):
```

```
Enter interface detail you would like (IP, MAC, Type): IP

Interface : IP Address
lo : 127.0.0.1
eth0 : 10.25.8.16
eth1 : 152.46.18.75
mrpatel5@vm18-75:~/Desktop$
```

```
Enter interface detail you would like (IP, MAC, Type): IP MAC

Interface : IP Address
lo : 127.0.0.1
eth0 : 10.25.8.16
eth1 : 152.46.18.75

Interface : MAC Address
lo : 00:00:00:00:00:00
eth0 : 00:50:56:08:ab:1e
eth1 : 00:50:56:08:ab:1f
mrpatel5@vm18-75:~/Desktop$
```

```
Enter interface detail you would like (IP, MAC, Type): IP MAC Type

Interface : IP Address
lo : 127.0.0.1
eth0 : 10.25.8.16
eth1 : 152.46.18.75

Interface : MAC Address
lo : 00:00:00:00:00:00
eth0 : 00:50:56:08:ab:1e
eth1 : 00:50:56:08:ab:1f

Interface : Type
lo : Loopback
eth0 : Ethernet
eth1 : Ethernet
mrpatel5@vm18-75:~/Desktop$ ▮
```

---------- Example 2 ----------

```
mrpatel5@vm18-75:~/Desktop$ python3 q6.py 172.168.0.0/16 26
172.168.0.0/27
mrpatel5@vm18-75:~/Desktop$
```