James Cross, Michael Patel 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) 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 -----

----- Environment -----

VCL: Ubuntu 16.04 LTS Base

----- Example 1 -----

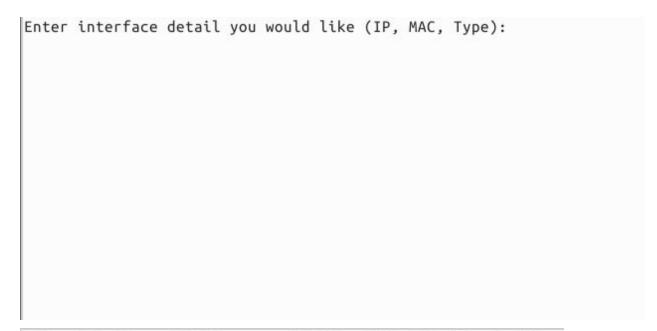
Linux command line: (in directory that contains Python source files)

readme q5.py q6.py

Linux

Python: 3.5.2

python3 q5.py



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$
```