

Alvin Liang  
Maria Leftheriotis  
Ethan Herndon  
Mustafa Memon

# Programming Assignment 1

## Screenshots

```
mininet@mininet-vm:~$ ifconfig
eth0:
    Link encap:Ethernet  HWaddr 08:00:27:e4:33:89
    inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
    RX packets:235 errors:0 dropped:0 overruns:0 frame:0
    TX packets:235 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:1000
    RX bytes:29020 (29.0 KB)  TX bytes:25098 (25.0 KB)

lo:
    Link encap:Local Loopback
    inet addr:127.0.0.1  Mask:255.0.0.0
    UP LOOPBACK RUNNING  MTU:65536  Metric:1
    RX packets:316 errors:0 dropped:0 overruns:0 frame:0
    TX packets:316 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:0
    RX bytes:15800 (15.8 KB)  TX bytes:15800 (15.8 KB)

s1:
    Link encap:Ethernet  HWaddr 22:17:02:96:5d:41
    UP BROADCAST RUNNING  MTU:1500  Metric:1
    RX packets:0 errors:0 dropped:0 overruns:0 frame:0
    TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:0
    RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

mininet@mininet-vm:~$ python UDPServer.py
The server is ready to receive
```

```
mininet@mininet-vm:~$ python UDPClient.py
Input lowercase sentence:abodef abo123def
ABODEF AB0123DEF
mininet@mininet-vm:~$ python UDPClient.py
Input lowercase sentence:ABodeF
ABODEF
mininet@mininet-vm:~$ python UDPClient.py
Input lowercase sentence:AB12odEF
AB12CDEF
mininet@mininet-vm:~$ python UDPClient.py
Input lowercase sentence:Two Words HERE!!
TWO WORDS HERE!!
mininet@mininet-vm:~$
```

*The UDP test cases running on virtual machines.*

```
mininet@mininet-vm:~$ ifconfig
eth0:
    Link encap:Ethernet  HWaddr 08:00:27:e4:33:89
    inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
    RX packets:224 errors:0 dropped:0 overruns:0 frame:0
    TX packets:224 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:1000
    RX bytes:22715 (22.7 KB)  TX bytes:23782 (23.7 KB)

lo:
    Link encap:Local Loopback
    inet addr:127.0.0.1  Mask:255.0.0.0
    UP LOOPBACK RUNNING  MTU:65536  Metric:1
    RX packets:144 errors:0 dropped:0 overruns:0 frame:0
    TX packets:144 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:0
    RX bytes:7200 (7.2 KB)  TX bytes:7200 (7.2 KB)

s1:
    Link encap:Ethernet  HWaddr 22:17:02:96:5d:41
    UP BROADCAST RUNNING  MTU:1500  Metric:1
    RX packets:0 errors:0 dropped:0 overruns:0 frame:0
    TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:0
    RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

mininet@mininet-vm:~$ python TCPServer.py
The server is ready to receive
```

```
mininet@mininet-vm:~$ python TCPClient.py
Input lowercase sentence:abodef abo123def
('From Server:', u'ABODEF AB0123DEF')
mininet@mininet-vm:~$ python TCPClient.py
Input lowercase sentence:ABodeF
('From Server:', u'ABODEF')
mininet@mininet-vm:~$ python TCPClient.py
Input lowercase sentence:AB12odEF
('From Server:', u'AB12CDEF')
mininet@mininet-vm:~$ python TCPClient.py
Input lowercase sentence:Two Words HERE !!
('From Server:', u'TWO WORDS HERE !!!')
```

*The TCP test cases running on virtual machines.*

# Minutes

Team Lead: Alvin Liang. Everyone was available during the group meetings.

How we divide the work is that Alvin implemented the code from the text and got the scripts to run on Repl.it. Maria is the researcher and she figured out how to run the python scripts on virtual machines. Mustafa and Ethan made sure the concepts in the assignment were correctly applied to the assignment's functionality.