

Running machines

receiver.py: ubuntu1804-004.student.cs.uwaterloo.ca

```
ubuntu1804-004.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-004:~/cs436/A2/receiver$ ls
arrival.log  receiver.py  transmittedFile.txt
d376li@ubuntu1804-004:~/cs436/A2/receiver$
```

nEmulator.py: ubuntu1804-008.student.cs.uwaterloo.ca

```
ubuntu1804-008.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-008:~/cs436/A2/emulator$ ls
nEmulator.py
d376li@ubuntu1804-008:~/cs436/A2/emulator$
```

sender.py: ubuntu1804-002.student.cs.uwaterloo.ca

```
ubuntu1804-002.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-002:~/cs436/A2/sender$ ls
ack.log  sender.py  seqnum.log  textfile.txt
d376li@ubuntu1804-002:~/cs436/A2/sender$
```

Examples of how to run the programs

First, run `python3 receiver.py ubuntu1804-008.student.cs.uwaterloo.ca 5586 9368 transmittedFile.txt`

```
ubuntu1804-004.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-004:~/cs436/A2/receiver$ ls
arrival.log  receiver.py  transmittedFile.txt
d376li@ubuntu1804-004:~/cs436/A2/receiver$ python3 receiver.py ubuntu1804-008.st
udent.cs.uwaterloo.ca 5586 9368 transmittedFile.txt
```

Then, run `python3 nEmulator.py 5853 ubuntu1804-004.student.cs.uwaterloo.ca 9368 5586 ubuntu1804-002.student.cs.uwaterloo.ca 9326 0.25 1`

```
ubuntu1804-008.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-008:~/cs436/A2/emulator$ ls
nEmulator.py
d376li@ubuntu1804-008:~/cs436/A2/emulator$ python3 nEmulator.py 5853 ubuntu1804-
004.student.cs.uwaterloo.ca 9368 5586 ubuntu1804-002.student.cs.uwaterloo.ca 932
6 0.25 1
```


Finally, run `python3 sender.py ubuntu1804-008.student.cs.uwaterloo.ca 5853 9326 4000 textfile.txt`

```
ubuntu1804-002.student.cs.uwaterloo.ca - PuTTY
d376li@ubuntu1804-002:~/cs436/A2/sender$ ls
ack.log  sender.py  seqnum.log  textfile.txt
d376li@ubuntu1804-002:~/cs436/A2/sender$ python3 sender.py ubuntu1804-008.studen
t.cs.uwaterloo.ca 5853 9326 4000 textfile.txt
```

Note that the file that we send from sender is textfile.txt, which should be on ubuntu1804-002.student.cs.uwaterloo.ca together with sender.py.

Then, there are new log files and transmitted files in the correct places.

And if the verbose mode is open, the details behind nEmulator are demonstrated.

 ubuntu1804-008.student.cs.uwaterloo.ca - PuTTY

```
Forwarding ACK seqnum
Receiving Packet seqnum
Discarding Packet seqnum
Receiving Packet seqnum
Forwarding Packet seqnum
Receiving ACK seqnum
Forwarding ACK seqnum
Receiving Packet seqnum
Forwarding Packet seqnum
Receiving ACK seqnum
Forwarding ACK seqnum
Receiving Packet seqnum
Forwarding Packet seqnum
Receiving ACK seqnum
Forwarding ACK seqnum
Receiving Packet seqnum
Forwarding Packet seqnum
Receiving ACK seqnum
Forwarding ACK seqnum
Receiving Packet seqnum
Forwarding Packet seqnum
Receiving ACK seqnum
Forwarding ACK seqnum
Receiving Packet seqnum
```