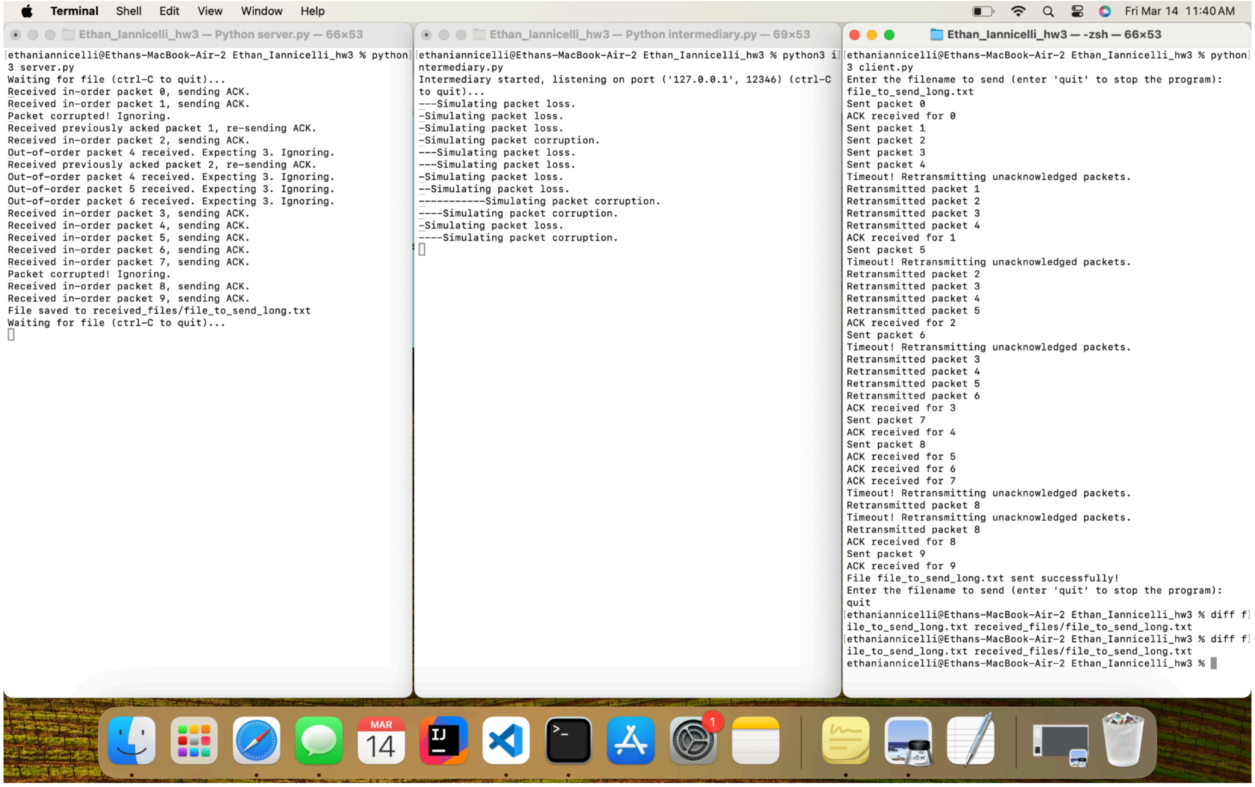
Terminal
Shell
Edit
View
Window
Help
Fri Mar 14 11:40 AM
Ethan_Iannicelli_hw3 — Python server.py — 66×53
Ethan_Iannicelli_hw3 — Python intermediary.py — 69×53
Ethan_Iannicelli_hw3 — -zsh — 66×53
MAR
14

```
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 % python
3 server.py
Waiting for file (ctrl-C to quit)...
Received in-order packet 0, sending ACK.
Received in-order packet 1, sending ACK.
Packet corrupted! Ignoring.
Received previously acked packet 1, re-sending ACK.
Received in-order packet 2, sending ACK.
Out-of-order packet 4 received. Expecting 3. Ignoring.
Received previously acked packet 2, re-sending ACK.
Out-of-order packet 4 received. Expecting 3. Ignoring.
Out-of-order packet 5 received. Expecting 3. Ignoring.
Out-of-order packet 6 received. Expecting 3. Ignoring.
Received in-order packet 3, sending ACK.
Received in-order packet 4, sending ACK.
Received in-order packet 5, sending ACK.
Received in-order packet 6, sending ACK.
Received in-order packet 7, sending ACK.
Packet corrupted! Ignoring.
Received in-order packet 8, sending ACK.
Received in-order packet 9, sending ACK.
File saved to received_files/file_to_send_long.txt
Waiting for file (ctrl-C to quit)...
```

```
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 % python3 i
ntermediary.py
Intermediary started, listening on port ('127.0.0.1', 12346) (ctrl-C
to quit)...
---Simulating packet loss.
-Simulating packet loss.
-Simulating packet loss.
-Simulating packet corruption.
---Simulating packet loss.
---Simulating packet loss.
-Simulating packet loss.
--Simulating packet loss.
-----------Simulating packet corruption.
----Simulating packet corruption.
-Simulating packet loss.
----Simulating packet corruption.
```

```
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 % python
3 client.py
Enter the filename to send (enter 'quit' to stop the program):
file_to_send_long.txt
Sent packet 0
ACK received for 0
Sent packet 1
Sent packet 2
Sent packet 3
Sent packet 4
Timeout! Retransmitting unacknowledged packets.
Retransmitted packet 1
Retransmitted packet 2
Retransmitted packet 3
Retransmitted packet 4
ACK received for 1
Sent packet 5
Timeout! Retransmitting unacknowledged packets.
Retransmitted packet 2
Retransmitted packet 3
Retransmitted packet 4
Retransmitted packet 5
ACK received for 2
Sent packet 6
Timeout! Retransmitting unacknowledged packets.
Retransmitted packet 3
Retransmitted packet 4
Retransmitted packet 5
Retransmitted packet 6
ACK received for 3
Sent packet 7
ACK received for 4
Sent packet 8
ACK received for 5
ACK received for 6
ACK received for 7
Timeout! Retransmitting unacknowledged packets.
Retransmitted packet 8
Timeout! Retransmitting unacknowledged packets.
Retransmitted packet 8
ACK received for 8
Sent packet 9
ACK received for 9
File file_to_send_long.txt sent successfully!
Enter the filename to send (enter 'quit' to stop the program):
quit
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 % diff f
ile_to_send_long.txt received_files/file_to_send_long.txt
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 % diff f
ile_to_send_long.txt received_files/file_to_send_long.txt
ethaniannicelli@Ethans-MacBook-Air-2 Ethan_Iannicelli_hw3 %
```

The above shows the output for all three programs running at the same time. The left panel is the server, the middle panel is the intermediary, and the right panel is the client. In the middle, each '-' represents a packet that was sent without disruption. The left shows how packets are handled when obstruction occurs, and the right shows the client side of this interaction. At the bottom of the right panel, I ran the diff command to show the output of comparing the 'send' file and the 'received' file - There is no difference between them