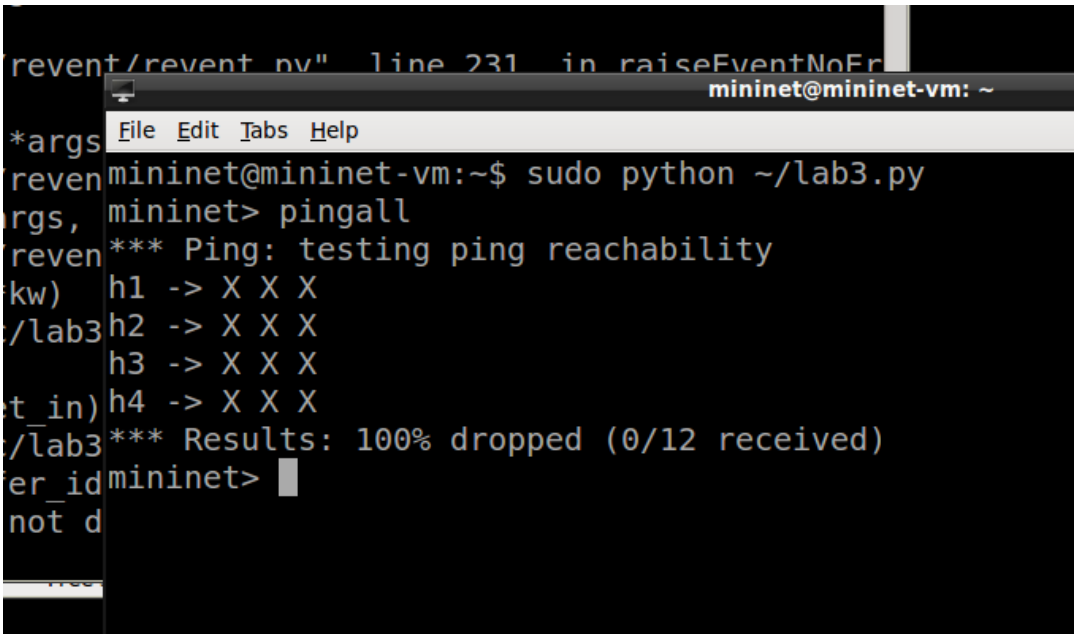
Testing/Submission/Grading:
To test your controller, first start the controller, then start the mininet script. When you are prompted with the mininet CLI, run the following commands and take a screenshot of each:

[30 points] pingall : This should fail, since ICMP traffic should be blocked.
-20 points: ping succeeds
The remaining 10 points will be awarded depending on the quality of the explanation given.



Pingall is failing because the packet coming in is ICMP, and ICMP doesn't belong to arp or tcp. That is why ICMP packets get dropped.

[70 points] dpctl dump-flows : This should show a few entries. These are the entries that you installed into the switch with of_flow_mod. You'll need to do this within the timeout you specified in your of_flow_mod for the entries to show up!
-40 points: no flows shown
The remaining 30 points will be awarded depending on the quality of the explanation Given.

```
mininet> dpctl dump-flows
*** s1 ------------------------------------------------------------------------
NXST_FLOW reply (xid=0x4):
 cookie=0x0, duration=11.805s, table=0, n_packets=1, n_bytes=98, idle_timeout=10
0, hard_timeout=300, idle_age=11, priority=3,icmp,vlan_tci=0x0000,dl_src=00:00:0
0:00:00:01,dl_dst=00:00:00:00:00:02,nw_src=10.0.1.10,nw_dst=10.0.1.20,nw_tos=0,i
cmp_type=8,icmp_code=0 actions=drop
 cookie=0x0, duration=1.82s, table=0, n_packets=1, n_bytes=98, idle_timeout=100,
 hard_timeout=300, idle_age=1, priority=3,icmp,vlan_tci=0x0000,dl_src=00:00:00:0
0:00:01,dl_dst=00:00:00:00:00:03,nw_src=10.0.1.10,nw_dst=10.0.1.30,nw_tos=0,icmp
_type=8,icmp_code=0 actions=drop
 cookie=0x0, duration=1.822s, table=0, n_packets=1, n_bytes=42, idle_timeout=100
, hard_timeout=300, idle_age=1, priority=2,arp,vlan_tci=0x0000,dl_src=00:00:00:0
0:00:03,dl_dst=00:00:00:00:00:01,arp_spa=10.0.1.30,arp_tpa=10.0.1.10,arp_op=2 ac
tions=FLOOD
 cookie=0x0, duration=1.824s, table=0, n_packets=1, n_bytes=42, idle_timeout=100
, hard_timeout=300, idle_age=1, priority=2,arp,vlan_tci=0x0000,dl_src=00:00:00:0
0:00:01,dl_dst=ff:ff:ff:ff:ff:ff,arp_spa=10.0.1.10,arp_tpa=10.0.1.30,arp_op=1 ac
tions=FLOOD
 cookie=0x0, duration=11.809s, table=0, n_packets=1, n_bytes=42, idle_timeout=10
0, hard_timeout=300, idle_age=11, priority=2,arp,vlan_tci=0x0000,dl_src=00:00:00
:00:00:01,dl_dst=ff:ff:ff:ff:ff:ff,arp_spa=10.0.1.10,arp_tpa=10.0.1.20,arp_op=1
actions=FLOOD
 cookie=0x0, duration=11.807s, table=0, n_packets=1, n_bytes=42, idle_timeout=10
0, hard_timeout=300, idle_age=11, priority=2,arp,vlan_tci=0x0000,dl_src=00:00:00
:00:00:02,dl_dst=00:00:00:00:00:01,arp_spa=10.0.1.20,arp_tpa=10.0.1.10,arp_op=2
actions=FLOOD
```

The flow entries are showing the type of packet coming in as well as the actions did to the packet. Such as for the first entry is icmp packet which it got dropped. And the third one is arp which got flooded and accepted.

[70 points] iperf : This should succeed.
-40 points: iperf fails
The remaining 30 points will be awarded depending on the quality of the explanation Given.

```
ept and floo
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 cookie=0x0, duration=50.585s, table=0, n_packets=1, n_bytes
0, hard_timeout=300, idle_age=50, priority=2,arp,vlan_tci=0x
:00:00:04,dl_dst=00:00:00:00:00:02,arp_spa=10.0.1.40,arp_tpa
actions=FLOOD
mininet> iperf
*** Iperf: testing TCP bandwidth between h1 and h4
*** Results: ['8.89 Gbits/sec', '8.90 Gbits/sec']
mininet>
```

The iperf is using TCP connection which is why it got accepted by the firewall. And the connection speed is 8.89Gb/s