

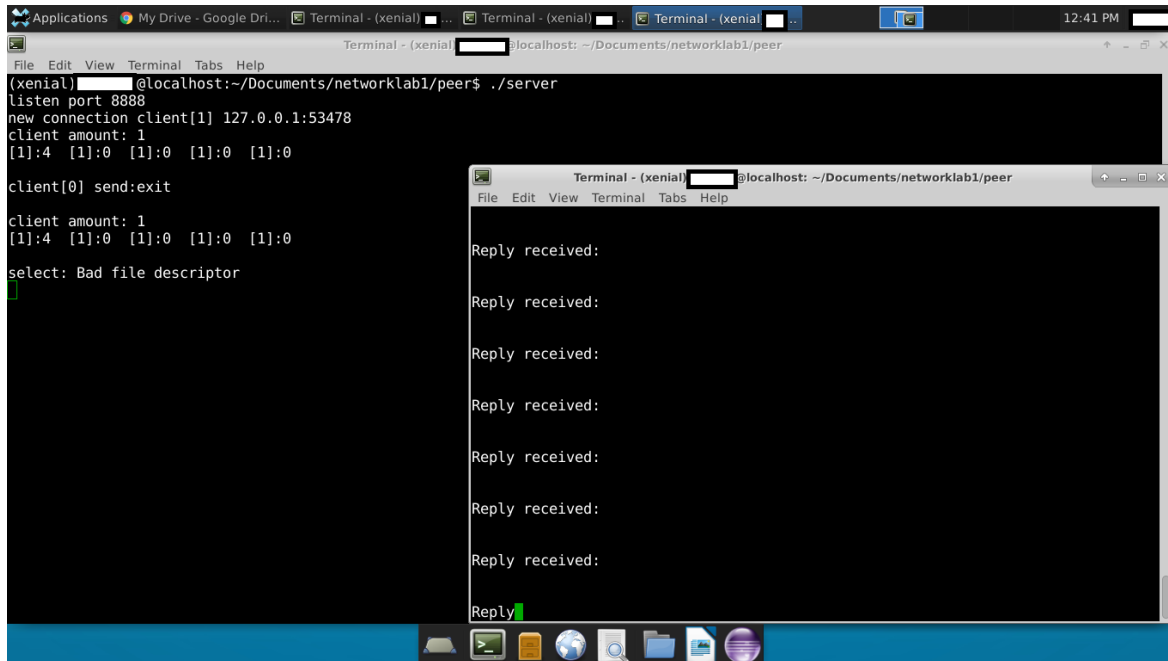
Peer Evaluation Lab 1

Note that I had to change the port number of the program to run on my machine. The server can accept multiple connections successfully. When a client sends the list command, the server receives the message but does not successfully respond with a list of clients. After some testing, I noticed that server simply does not enter the if statement corresponding to the list command. If it did enter that section successfully, the code would execute correctly, so I decided that partial credit would be fair. It should be noted that after every command, the server outputs a list of active clients, so the function clearly works, but not when the client sends a message. The server successfully uses the message command to send information to another client. The exit command works (though it outputs that there is a bad file descriptor), so I think that deserves full credit. The history command also works successfully, so that section seems fine.

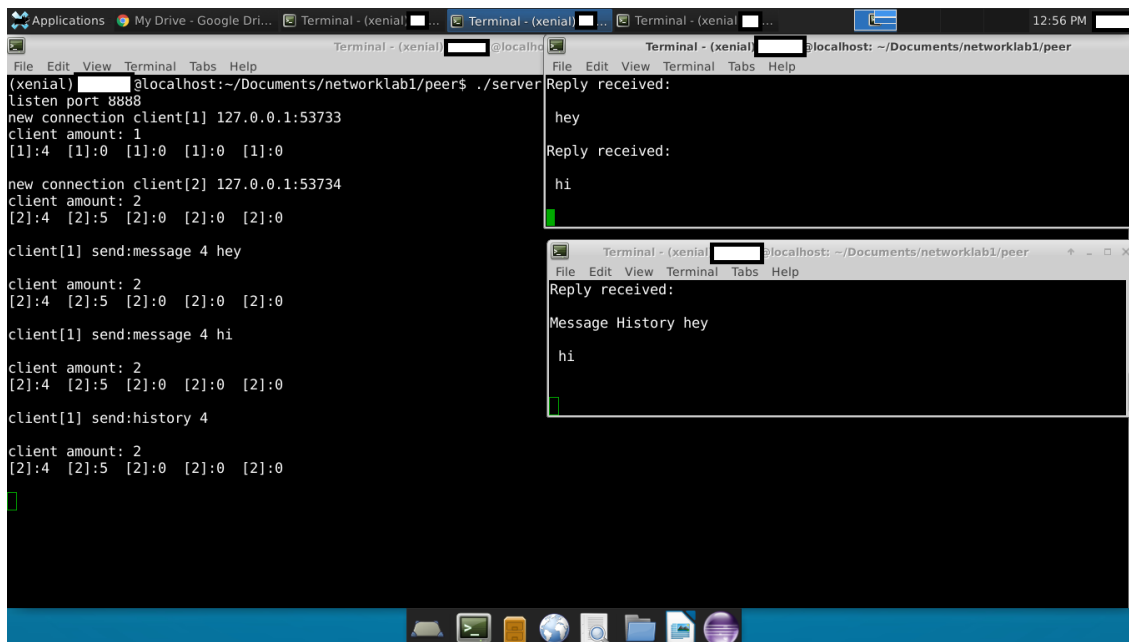
The logic is also reasonably easy to follow for each of the commands. The history command stores the messages in lists which are concatenated to complete the history which is then sent to the client that requested it. The message command splits the "message" portion from the actual data and stores the data in the appropriate list to be returned later by the history command. The other functions seem unmodified from the given code, so they are also easy to follow.

In total I grade this at 97.5%, or an A, with the 2.5 percent deduction because of the list command not functioning correctly. Attached are screenshots of the tests.

Exit:



History:



List:

```
Applications  My Drive - Google Dri...  Terminal - (xenial)  Terminal - (xenial)  Terminal - (xenial)  11:56 AM
Terminal - (xenial) @localhost: ~/Documents/networklab1/peer
File Edit View Terminal Tabs Help
(xenial) @localhost:~/Documents/networklab1/peer$ ./server
listen port 8888
new connection client[1] 127.0.0.1:52727
client amount: 1
[1]:4 [1]:0 [1]:0 [1]:0 [1]:0

client[0] send:list

client amount: 1
[1]:4 [1]:0 [1]:0 [1]:0 [1]:0
█

Terminal - (xenial) @localhost: ~/Documents/networklab1/peer
File Edit View Terminal Tabs Help
(xenial) @localhost:~/Documents/networklab1/peer$ ./client 8888
Reply received:

Unique ID: 4
list
█
```

Message:

```
Applications  My Drive - Google Dri...  Terminal - (xenial)  Terminal - (xenial)  Terminal - (xenial)  12:47 PM
Terminal - (xenial) @localhost: ~/Documents/networklab1/peer
File Edit View Terminal Tabs Help
(xenial) @localhost:~/Documents/networklab1/peer$ ./server
listen port 8888
new connection client[1] 127.0.0.1:53595
client amount: 1
[1]:4 [1]:0 [1]:0 [1]:0 [1]:0

new connection client[2] 127.0.0.1:53596
client amount: 2
[2]:4 [2]:5 [2]:0 [2]:0 [2]:0

client[1] send:message 4 hey

client amount: 2
[2]:4 [2]:5 [2]:0 [2]:0 [2]:0
█

Terminal - (xenial) @localhost: ~/Documents/networklab1/peer
File Edit View Terminal Tabs Help
(xenial) @localhost:~/Documents/networklab1/peer$ ./client 8888
Reply received:

Unique ID: 4
Reply received:

Unique ID: 5
Reply received:

hey
█

Terminal - (xenial) @localhost: ~/Documents/networklab1/peer
File Edit View Terminal Tabs Help
(xenial) @localhost:~/Documents/networklab1/peer$ ./client 8888
Reply received:

Unique ID: 5
message 4 hey
█
```

Multiple Connections:

```
(xerial) [REDACTED]@localhost:~/Documents/networklab1/peer$ ./server  
listen port 8888  
new connection client[1] 127.0.0.1:52398  
client amount: 1  
[1]:4 [1]:0 [1]:0 [1]:0 [1]:0  
  
new connection client[2] 127.0.0.1:52401  
client amount: 2  
[2]:4 [2]:5 [2]:0 [2]:0 [2]:0  
  
timeout
```

