

EE533 Network Processor Design & Programming

Lab #1: Familiarity with VM & Sockets

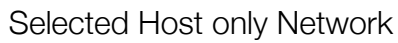
Instructor: Prof. Young Cho

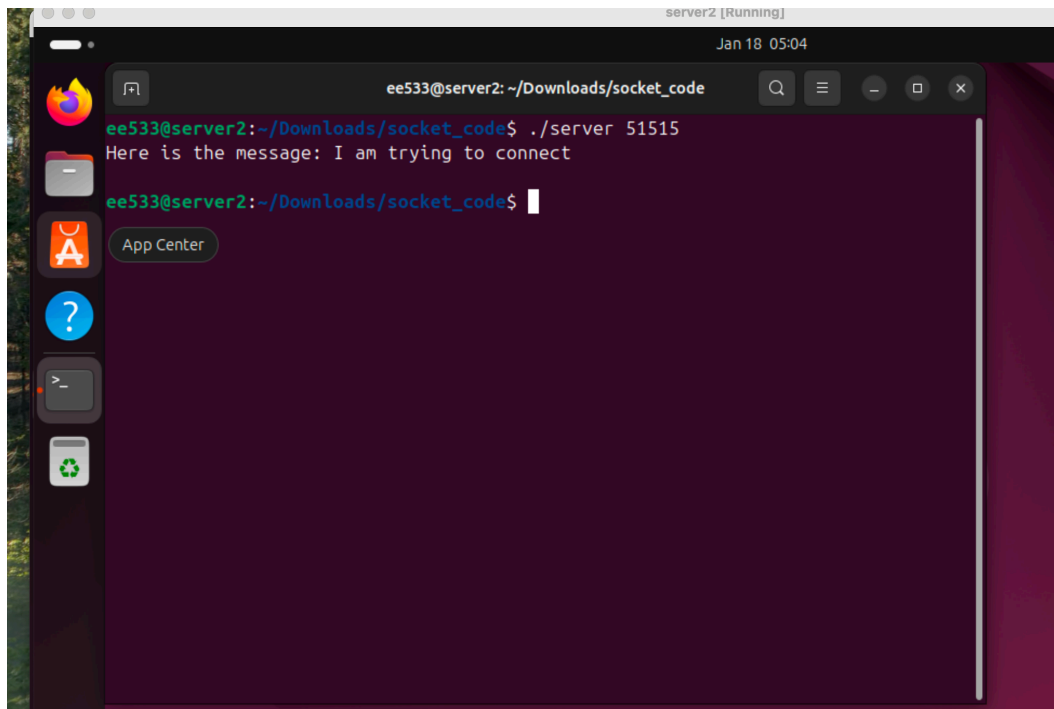
Name: Prathamesh Giriraj Hirekodi

GITHUB LINK to my REPOSITORY

GITHUB: <https://github.com/prathamesh-hirekodi/EE533/tree/main/LAB1>

- Networking: **1) Two VMs for Internet domain**

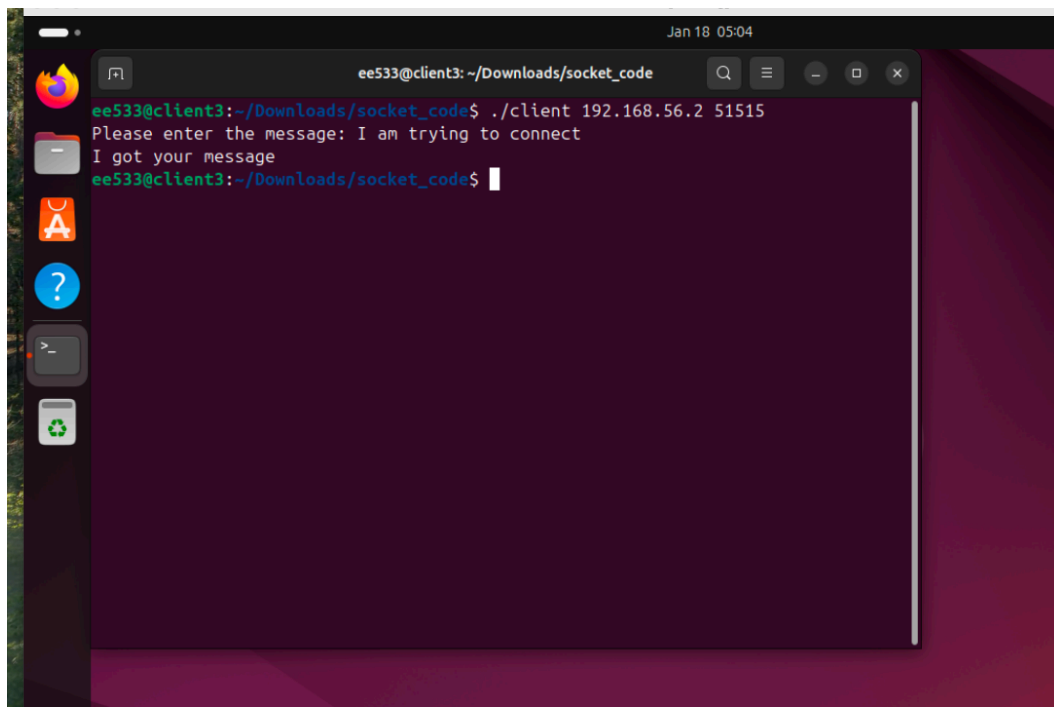




A terminal window titled "server2 [Running]" with a timestamp of "Jan 18 05:04". The window shows the user "ee533" at "server2" in the directory "~/Downloads/socket_code". The user has executed the command `./server 51515`, and the terminal output is "Here is the message: I am trying to connect". The prompt is `ee533@server2:~/Downloads/socket_code$`.

```
ee533@server2:~/Downloads/socket_code$ ./server 51515
Here is the message: I am trying to connect
ee533@server2:~/Downloads/socket_code$
```

Server Side

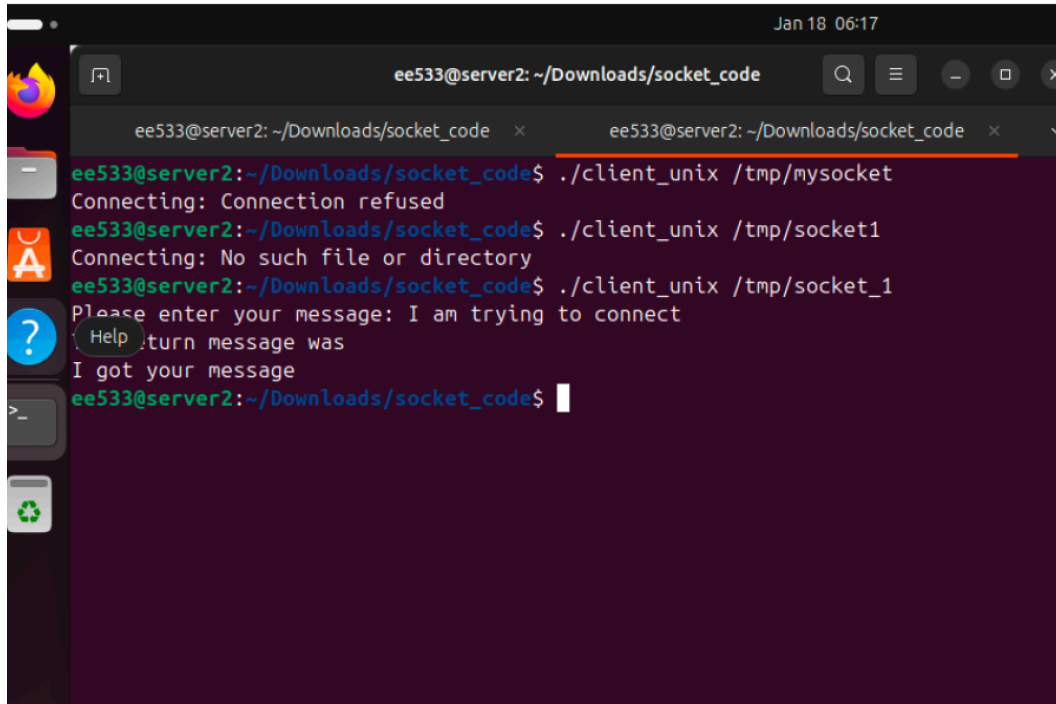


A terminal window titled "ee533@client3: ~/Downloads/socket_code" with a timestamp of "Jan 18 05:04". The window shows the user "ee533" at "client3" in the directory "~/Downloads/socket_code". The user has executed the command `./client 192.168.56.2 51515`. The terminal output shows "Please enter the message: I am trying to connect" followed by "I got your message". The prompt is `ee533@client3:~/Downloads/socket_code$`.

```
ee533@client3:~/Downloads/socket_code$ ./client 192.168.56.2 51515
Please enter the message: I am trying to connect
I got your message
ee533@client3:~/Downloads/socket_code$
```

Client Side

2) Single VM for Unix domain



The screenshot shows a terminal window titled "ee533@server2: ~/Downloads/socket_code" with a search bar and window controls. The terminal output is as follows:

```
ee533@server2:~/Downloads/socket_code$ ./client_unix /tmp/mysocket
Connecting: Connection refused
ee533@server2:~/Downloads/socket_code$ ./client_unix /tmp/socket1
Connecting: No such file or directory
ee533@server2:~/Downloads/socket_code$ ./client_unix /tmp/socket_1
Please enter your message: I am trying to connect
Help return message was
I got your message
ee533@server2:~/Downloads/socket_code$
```

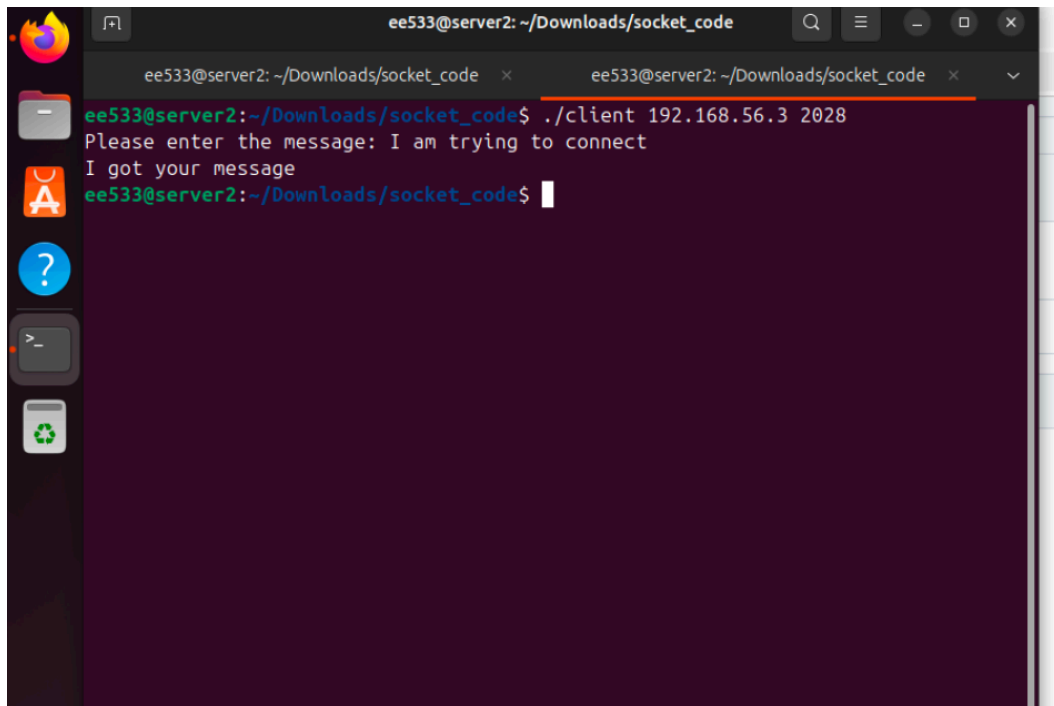
Server Side

```
Connecting: No such file or directory
ee533@server2:~/Downloads/socket_code$ ./client_unix /tmp/my_socket3
Please enter your message: I am trying to connect
The return message was
I got your message
ee533@server2:~/Downloads/socket_code$
```

Client Side

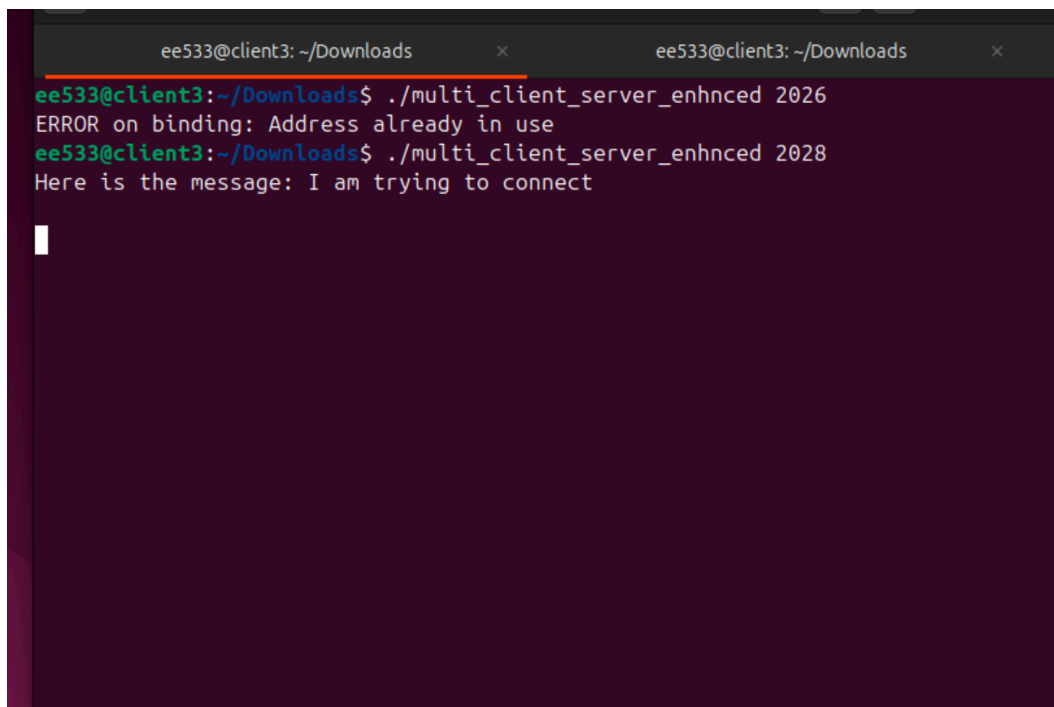
3) Multi Client Server Enhanced - Internet Domain communication [Between two VMs]

There are multiple requests from client side like the one below, couldnt capture screenshot.



```
ee533@server2: ~/Downloads/socket_code
ee533@server2:~/Downloads/socket_code$ ./client 192.168.56.3 2028
Please enter the message: I am trying to connect
I got your message
ee533@server2:~/Downloads/socket_code$
```

Client Side



```
ee533@client3: ~/Downloads
ee533@client3:~/Downloads$ ./multi_client_server_enhnced 2026
ERROR on binding: Address already in use
ee533@client3:~/Downloads$ ./multi_client_server_enhnced 2028
Here is the message: I am trying to connect

```

Server Side