

Computer Networks

CS21B1058

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1) Server:

```
import socket

PORT = 12356
ADDRESS = socket.gethostbyname(socket.gethostname())
FORMAT = 'utf-8'

print(ADDRESS)

socket = socket.socket(socket.AF_INET , socket.SOCK_STREAM)
socket.bind((ADDRESS, PORT))
socket.listen(2)

while True:
    new_conn, addr = socket.accept()
    print(f"[NEW CONNECTION] {addr}")
    new_conn.send('[SUCCESSFULLY CONNECTED]'.encode(FORMAT))
    new_conn.close()
    break
```

2) Client:

```
import socket

PORT = 12346
ADDRESS = '192.168.137.59'
FORMAT = 'utf-8'

socket = socket.socket()

socket.connect((ADDRESS, PORT))
print(socket.recv(2024).decode(FORMAT))
socket.close()
```

3) When I connected with other computer, I hosted the server.

Server side:

```
● PS C:\Users\B Uday Kiran\CN> python -u "c:\Users\B Uday Kiran\CN\server.py"
172.16.19.122
[NEW CONNECTION] ('172.16.18.70', 62876)
○ PS C:\Users\B Uday Kiran\CN> █
```

```
server.py > ...
2
3  PORT = 12356
4  ADDRESS = socket.gethostname(socket.gethostname())
5  FORMAT = 'utf-8'
6
7  print(ADDRESS)
8
9  socket = socket.socket(socket.AF_INET , socket.SOCK_STREAM)
10 socket.bind((ADDRESS, PORT))
11 socket.listen(2)
12
13 while True:
14     new_conn, addr = socket.accept()
15     print(f"[NEW CONNECTION] {addr}")
16     new_conn.send('[SUCCESSFULLY CONNECTED]'.encode(FORMAT))
17     new_conn.close()
```

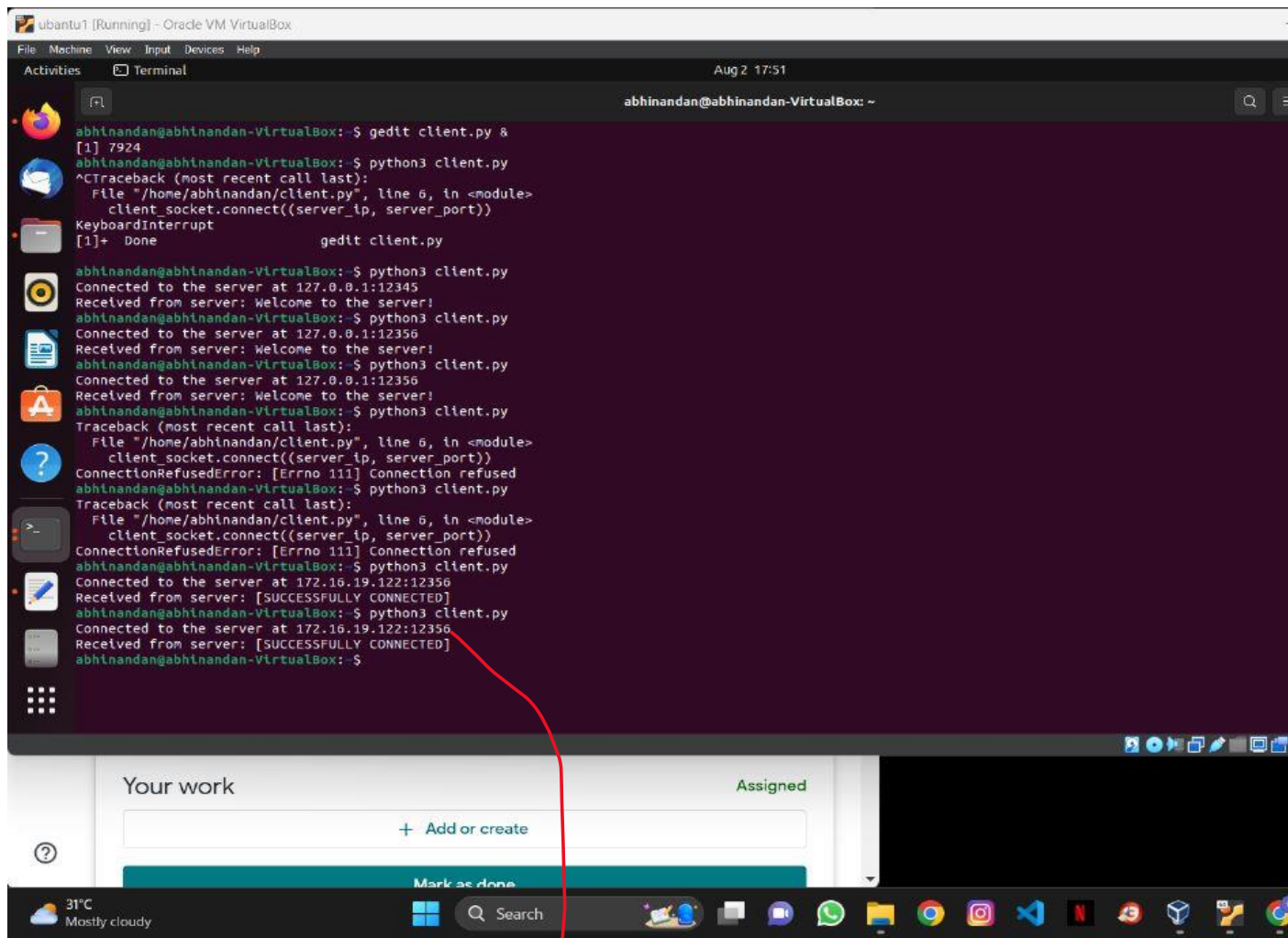
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
● PS C:\Users\B Uday Kiran\CN> python -u "c:\Users\B Uday Kiran\CN\server.py"
172.16.19.122
[NEW CONNECTION] ('172.16.18.70', 62494)
● PS C:\Users\B Uday Kiran\CN> python -u "c:\Users\B Uday Kiran\CN\server.py"
172.16.19.122
[NEW CONNECTION] ('172.16.18.70', 62876)
○ PS C:\Users\B Uday Kiran\CN> █
```

My IP address

Client IP Address

Client side:



```
abhinandan@abhinandan-VirtualBox:~$ gedit client.py &
[1] 7924
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
^CTraceback (most recent call last):
  File "/home/abhinandan/client.py", line 6, in <module>
    client_socket.connect((server_ip, server_port))
KeyboardInterrupt
[1]+  Done                  gedit client.py

abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Connected to the server at 127.0.0.1:12345
Received from server: Welcome to the server!
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Connected to the server at 127.0.0.1:12356
Received from server: Welcome to the server!
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Connected to the server at 127.0.0.1:12356
Received from server: Welcome to the server!
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Traceback (most recent call last):
  File "/home/abhinandan/client.py", line 6, in <module>
    client_socket.connect((server_ip, server_port))
ConnectionRefusedError: [Errno 111] Connection refused
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Traceback (most recent call last):
  File "/home/abhinandan/client.py", line 6, in <module>
    client_socket.connect((server_ip, server_port))
ConnectionRefusedError: [Errno 111] Connection refused
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Connected to the server at 172.16.19.122:12356
Received from server: [SUCCESSFULLY CONNECTED]
abhinandan@abhinandan-VirtualBox:~$ python3 client.py
Connected to the server at 172.16.19.122:12356
Received from server: [SUCCESSFULLY CONNECTED]
abhinandan@abhinandan-VirtualBox:~$
```

Connected to server IP address