

FINAL ASSESSMENT EXAMINATION LAB – NOVEMBER 2019  
SCHOOL OF COMPUTING SCIENCE AND ENGINEERING  
PROGRAMME: B.TECH CSE  
SUBJECT CODE: CSE1004  
SUBJECT TITLE: NETWORK AND COMMUNICATION

DATE: 06.11.2019

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Question no 5 :

Implement the IPv4 address validation for connection oriented protocol using socket programming and print the results.

Server :

```
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
port = 1121
s.bind(("", port))

s.listen(20)

cli, addr = s.accept()

data = cli.recv(1024)
data = data.decode()
print("Address Recieved")

a = data.split('.')
res = True
if len(a)!=4 :
    res = False

if res==True :
    for i in a :
        if len(i)==0 or (i[0] == '0' and len(i)>1) or (int(i)==0 and len(i)>0) :
            res = False
            break

if res==True :
    arr = list(map(int, data.split('.')))
    for num in range(len(arr)):
```

```

        if arr[num]<0 or arr[num]>255:
            res = False
            break

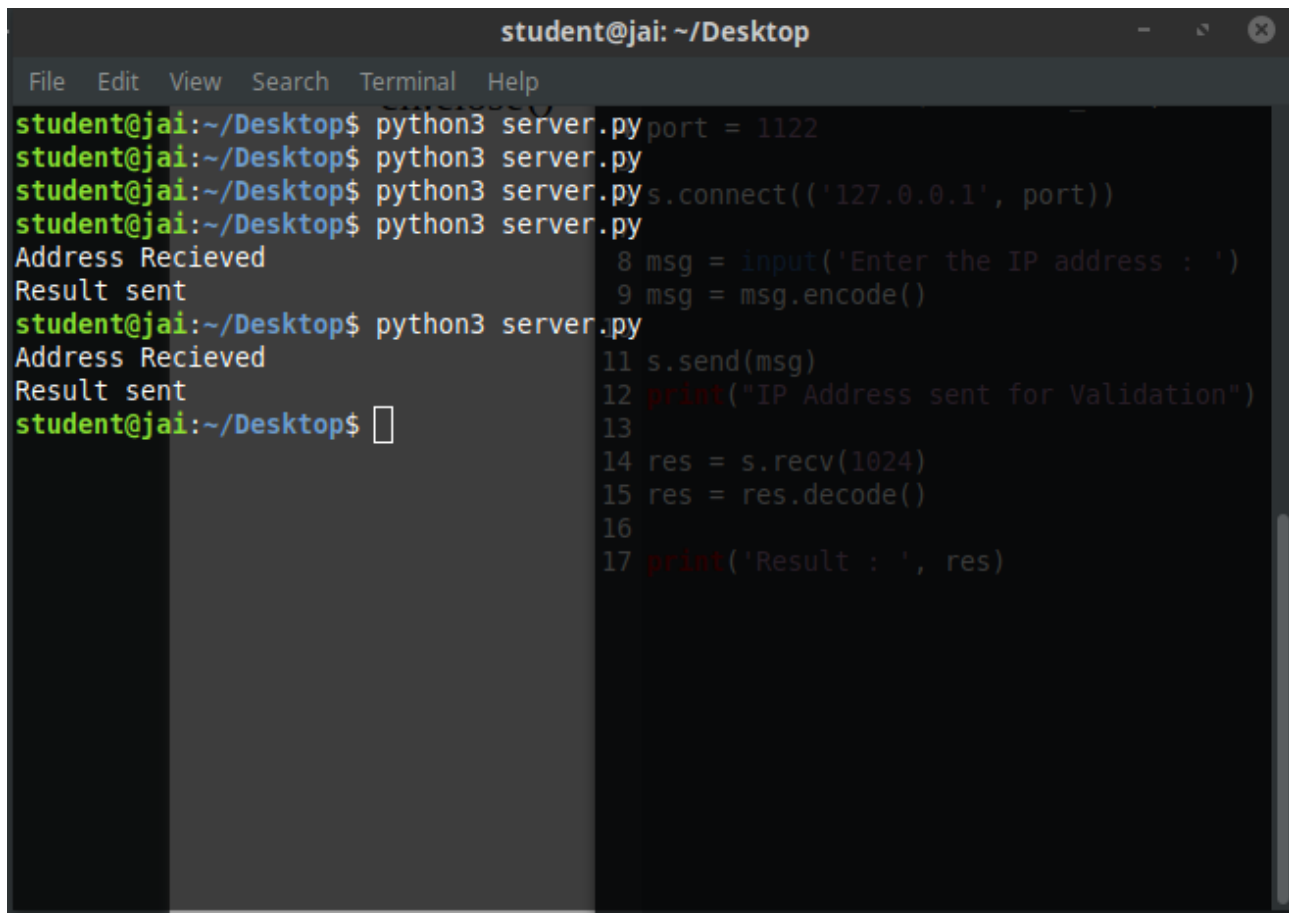
if res==True :
    result = "Valid"
else :
    result = "Invalid"

result = result.encode()
cli.send(result)

print("Result sent")

cli.close()

```



```

student@jai: ~/Desktop
File Edit View Search Terminal Help
student@jai:~/Desktop$ python3 server.py port = 1122
student@jai:~/Desktop$ python3 server.py
student@jai:~/Desktop$ python3 server.py s.connect(('127.0.0.1', port))
student@jai:~/Desktop$ python3 server.py
Address Recieved      8 msg = input('Enter the IP address : ')
Result sent           9 msg = msg.encode()
student@jai:~/Desktop$ python3 server.py
Address Recieved     11 s.send(msg)
Result sent          12 print("IP Address sent for Validation")
student@jai:~/Desktop$ 13
                        14 res = s.recv(1024)
                        15 res = res.decode()
                        16
                        17 print('Result : ', res)

```

Client :

```

import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
port = 1121

```

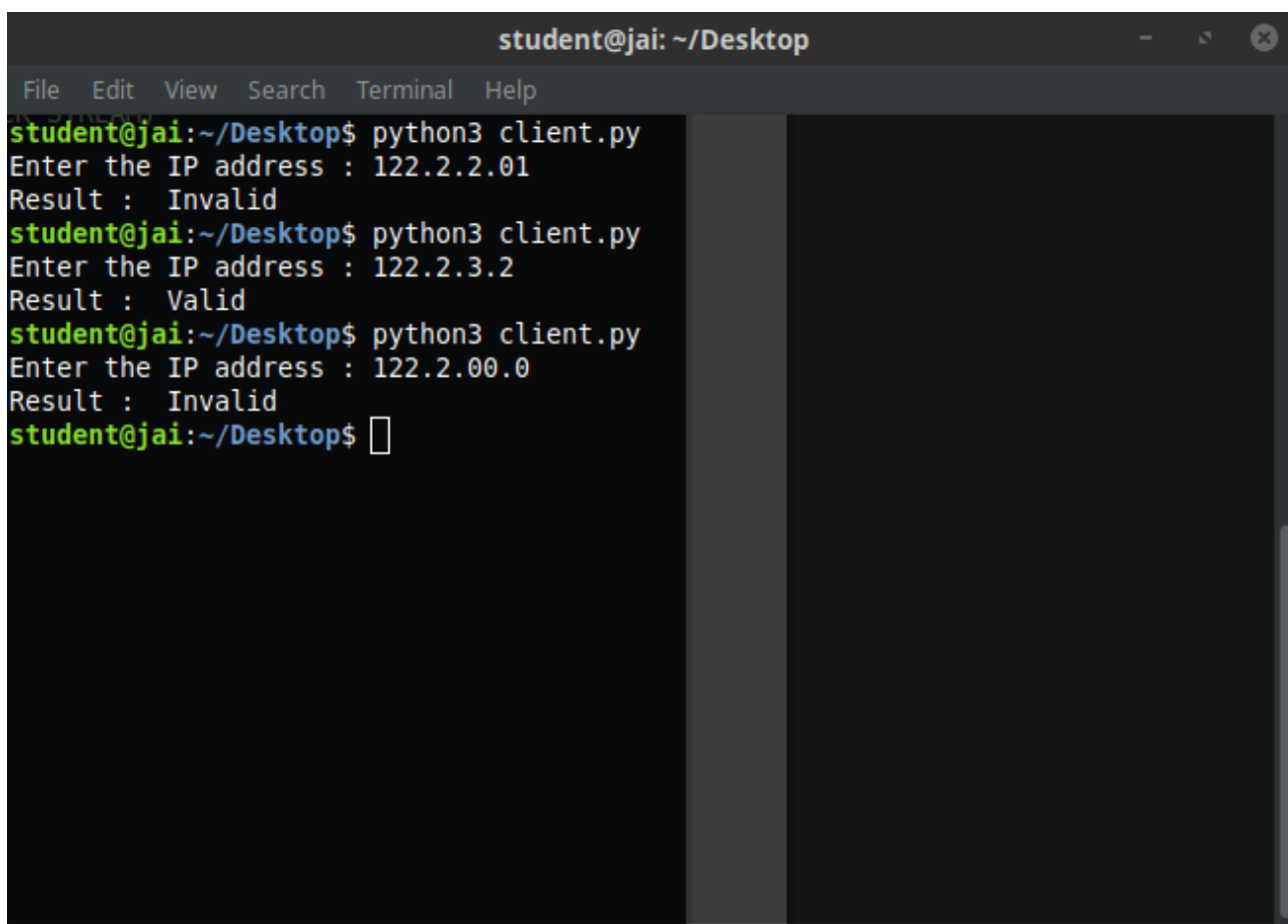
```
s.connect(('127.0.0.1', port))

msg = input('Enter the IP address : ')
msg = msg.encode()

s.send(msg)
print("IP Address sent for Validation")

res = s.recv(1024)
res = res.decode()

print('Result : ', res)
```



```
student@jai: ~/Desktop
File Edit View Search Terminal Help
student@jai:~/Desktop$ python3 client.py
Enter the IP address : 122.2.2.01
Result : Invalid
student@jai:~/Desktop$ python3 client.py
Enter the IP address : 122.2.3.2
Result : Valid
student@jai:~/Desktop$ python3 client.py
Enter the IP address : 122.2.00.0
Result : Invalid
student@jai:~/Desktop$
```