

EX.NO:2

TCP CLIENT-SERVER USING SOCKET PROGRAMMING IN PYTHON

AIM:

To implement TCP client-server communication using socket programming in python algorithm.

SERVER:

- 1.Create a socket using `socket.socket()`
- 2.Bind the socket to an IP and port using `bind()`.
- 3.Listen for client connections using `listen()`.
- 4.accept for client connection using `accept()`.
- 5.Receive data using `rev()`.
- 6.Send response using `send()`.
- 7.Close connection.

CLIENT:

- 1.Create a socket using `socket.socket()`.
- 2.Connect to server using `connect()`.
- 3.Send data using `send()`.
- 4.Receive response using `rev()`.
- 5.Close connection.

SERVERT PROGRAM:

```
import socket
```

```
sockfd=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
```

```
print('Socket Created')
```

```
sockfd.bind(('localhost',55555))
```

```
sockfd.listen(3)  
print('Waiting for connections')
```

```
while True:
```

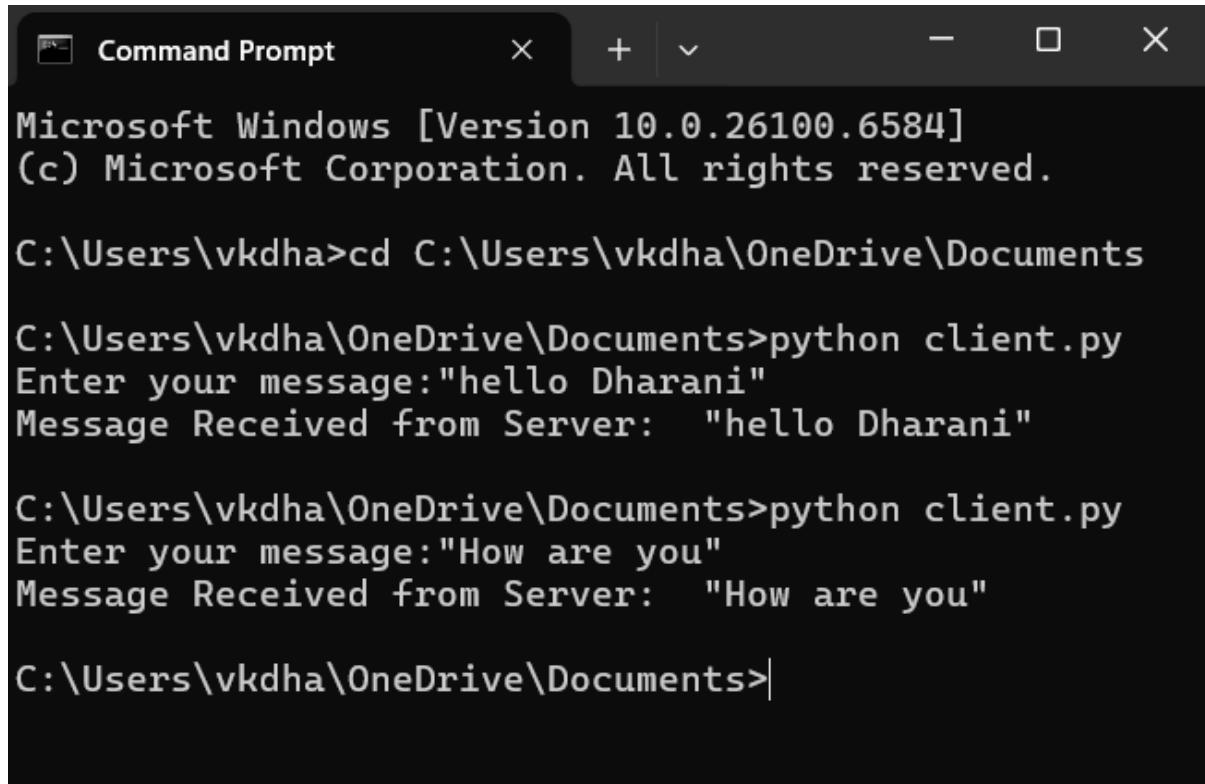
```
    clientfd,addr=sockfd.accept()  
    receivedMsg=clientfd.recv(1024).decode()  
    print("Connected with ",addr)  
    print("Message Received from Client: ",receivedMsg)  
    clientfd.send(bytes(receivedMsg,'utf-8'))  
    print("Message reply sent to Client!")  
    print("Do you want to continue(type y or n):")  
    choice=input()  
    if choice=='n':  
        break
```

CLIENT PROGRAM:

```
import socket  
clientfd=socket.socket(socket.AF_INET, socket.SOCK_STREAM)  
  
clientfd.connect(('localhost',55555))
```

```
name=input("Enter your message:")
clientfd.send(bytes(name,'utf-8'))
print("Message Received from Server: ",clientfd.recv(1024).decode())
```

INPUT:



The screenshot shows a Microsoft Windows Command Prompt window. The title bar reads "Command Prompt". The window displays the following text:

```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\vkdh>cd C:\Users\vkdh\OneDrive\Documents
C:\Users\vkdh\OneDrive\Documents>python client.py
Enter your message:"hello Dharani"
Message Received from Server: "hello Dharani"

C:\Users\vkdh\OneDrive\Documents>python client.py
Enter your message:"How are you"
Message Received from Server: "How are you"

C:\Users\vkdh\OneDrive\Documents>
```

OUTPUT:

```
Command Prompt - python  X  +  -  □  X
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\vkdh>cd C:\Users\vkdh\OneDrive\Documents

C:\Users\vkdh\OneDrive\Documents>python dharani.py
Socket Created
Waiting for connections
Connected with ('127.0.0.1', 63353)
Message Received from Client: "hello Dharani"
Message reply sent to Client!
Do you want to continue(type y or n):
y
Connected with ('127.0.0.1', 63378)
Message Received from Client: "How are you"
Message reply sent to Client!
Do you want to continue(type y or n):
y
```

RESULT:

Thus,TCP client-sever communication was successfully implemented using Python.

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