

28/05/2021  
Exp: 11

# Implementation of echo client server using sockets

Aim: - To implement an echo client server using TCP/UDP sockets.

Server-side Algorithm: -

```
import socket
```

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

```
server_socket.bind(('localhost', 12345))
```

```
server_socket.listen(1)
```

```
print("Server is waiting for connection")
```

```
conn, addr = server_socket.accept()
```

```
print(f"Connected to {addr}")
```

```
while True:
```

```
    data = conn.recv(1024)
```

```
    if not data: break
```

```
    print("connection closed")
```

```
break
```

```
print(f"Received from client: {data}")
```

```
conn.send(data.encode())
```

```
conn.close()
```

Client - Side

```
import socket
```

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

```
client_socket.connect(('localhost', 12345))
```

```
while True:
```

```
    message = input("Enter message: ")
```

```
    client_socket.send(message.encode())
```

```
    if not message: break
```

```
    data = client_socket.recv(1024)
```

```
    print(f"Received from server: {data}")
```

```
client_socket.close()
```



### Client - Side Algorithm:-

```
import socket
client = socket.socket(socket.AF_INET,
                        socket.SOCK_STREAM)
client.connect(('localhost', 12345))
while True:
    message = input("Enter message: ")
    client.send(message.encode())
    if message.lower() == 'bye':
        break
    data = client.recv(1024).decode()
    print(f"Echo from server: {data}")
client.close()
```

Sample Inputs and outputs:-

Client side:-

Enter message: Hello server

Echo from server: Hello server

Enter message: How are you?

Echo from server: How are you?

Enter ~~message~~: Bye



Server Side:-  
Server is waiting for connection  
Connected to (127.0.0.1, 58944)  
Received from client: Hello Server  
Received from client: How are you?  
Connection closed.

Result:-

Implementation of Echo client Server  
Using TCP/IP Sockets have been  
Successfully Completed

Exp 126

Im

Aim:-

To  
the  
Server  
in  
Server