

Echo client-server using TCP/UDP sockets

Ex no: 12a

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AIM: Implement echo client server using TCP/UDP sockets.

client:

```
import socket
import time

def ping_server(host = '127.0.0.1', port = 12345):
    with socket.socket(socket.AF_INET,
                       socket.SOCK_DGRAM) as s:
        try:
            s.sendto(b'Hello', (host, port))
        except socket.timeout:
            print("Request timed out")

if __name__ == "__main__":
    ping_server()
```

Server:

```
import socket

def start_server(host = '127.0.0.1', port = 12345):
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
        s.bind((host, port))
        print(f"UDP server running on {host}, {port}")
        while True:
            data, addr = s.recvfrom(1024)
            print(f"Received message from {addr} {data.decode()}")

if __name__ == "__main__":
    start_server()
```

O/p: python server.py
UDP server running on 127.0.0.1 12345
Received message from (127.0.0.1, 12345)
Hello

python client.py

Received reply from server: Hello, client.

b) Implement chat client server using UDP/TCP:

chat server.py

```
import socket
```

```
def recur1():
```

```
    port = 12345
```

```
    host = '127.0.0.1'
```

```
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
```

```
        s.bind((host, port))
```

```
        while True:
```

```
            d, add = s.recvfrom(1024)
```

```
            print("Client", {d.decode()})
```

```
            a = input("Enter Reply")
```

```
            s.sendto(a.encode(), add)
```

```
            if a == 'end':
```

```
                break
```

```
            exit
```

```
recur1()
```

recur2.py

```
import socket
```

```
import time
```

```
def recur2(a):
```

```
    host = '127.0.0.1'
```

```
    port = 12345
```

```
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
```

```
        s.sendto(a.encode(), (host, port)):
```

```
        d, add = s.recvfrom(1024)
```

```
        print({d.decode()})
```

```
    while True:
```

```
        a = input("Enter Message")
```

```
        if a == 'end':
```

```
            recur2(a)
```

```
            break
```

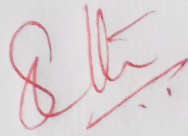
```
        else:
```

```
            recur2(a)
```


o/p: python chat-serv.py
client { 'hi' }
Enter Reply hello
Client { "How are you" }
Enter reply I'm fine

python servr.py
Enter message hi
{ 'hello' }
Enter message How are you
{ 'I m fine' }
Enter message

RESULT:


Thus the program is executed and the output
is verified