

# Solution: Write a UDP Chat App!

## WE'LL COVER THE FOLLOWING ^

- Client
- Server

## Client #

The client program uses a `while` loop to keep the conversation with the server alive. Furthermore, it uses `connect()` to ensure that only one server is connected to, and only replies from that server are received.

```
import argparse, socket

MAX_SIZE_BYTES = 65535 # Mazimum size of a UDP datagram

def client(port):
    s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
    host = '127.0.0.1'
    while True:
        s.connect((host, port))
        message = input('Input message to send to server: ')
        data = message.encode('ascii')
        s.send(data)
        data = s.recv(MAX_SIZE_BYTES)
        text = data.decode('ascii')
        print('The server replied with {}'.format(text))
```

## Server #

```
import argparse, socket

MAX_SIZE_BYTES = 65535 # Mazimum size of a UDP datagram

def server(port):
    s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
    hostname = '127.0.0.1'
    s.bind((hostname, port))
    print('Listening at {}'.format(s.getsockname()))
```

```
while True:
    data, clientAddress = s.recvfrom(MAX_SIZE_BYTES)
    message = data.decode('ascii')

    print('The client at {} says {!r}'.format(clientAddress, message))
    msg_to_send = input('Input message to send to client: ' )
    data = msg_to_send.encode('ascii')
    s.sendto(data, clientAddress)
```

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Great! Let's look at how server and client programs can be written to run on TCP in Python3 in the next lesson!