

UDP String Reverser (Server)

Description

In this problem, you are asked to test the interaction between a server and a client through socket programming. The client will send a text message to the server, the server will reverse the message, and send the reversed version back to the client. Note that you need to use UDP for this problem.

Input

There is no input for this problem as the interaction happens over a network connection established between the server and the client. The server will listen on localhost (127.0.0.1) at port 12346, receive a specific message from the client, reverse the message, and send it back.

Output

The server should reverse the received message and send it back to the client. The complete output of the program is as follows (note that the reversed message is hardcoded and must match exactly):

```
Test handle_client_message ...
Received from ('127.0.0.1', 12345): Hello, Server! Please reverse this message.
sendto called with: call(b'.egassem siht esrever esaelP !revreS ,olleH', ('127.0.0.1', 12345))
Test start_server ...
UDP server listening on 127.0.0.1:12345 ...
Received from ('127.0.0.1', 12345): test
bind called with: call(('127.0.0.1', 12345))
recvfrom called with: call(1024)
sendto called with: call(b'tset', ('127.0.0.1', 12345))
close called with: call()
```

Method

Your task is to implement and run both the server and client programs as provided. Ensure the server successfully binds to the specified port, listens for incoming connections, accepts a client connection, receives the message, reverses it, sends it back to the client, and then closes the connection.