Assignment

Network Systems Assignment

Objective:

Implement a basic client-server application in Python using sockets where the client sends a message to the server and the server responds back with an acknowledgment.

Client Side Code -

```python
import socket

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

#define host and port
host = 'localhost'
port = 12345

#connect to the server
client_socket.connect((host, port))

#send data to the server
message = "Hello"
client_socket.sendall(message.encode())

#receive acknowledgement from the server
ack_message = client_socket.recv(1024).decode()
print(f"Received from server: {ack_message}")

#close the connection
client_socket.close()
```

Server Side Code -

```python
import socket

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

#define host and port
host = 'localhost'
port = 12345

server_socket.bind((host, port))
server_socket.listen(1)

print(f"Server is listening on {host}:{port}...")

#accept a client connection
conn, addr = server_socket.accept()
print(f"Connected to {addr}")

#receive data from the client
data = conn.recv(1024).decode('utf-8')
print(f"Received from client: {data}")

#send acknowledgement to the client
ack_message = "Message received"
conn.sendall(ack_message.encode())

#close the connection
conn.close()
```
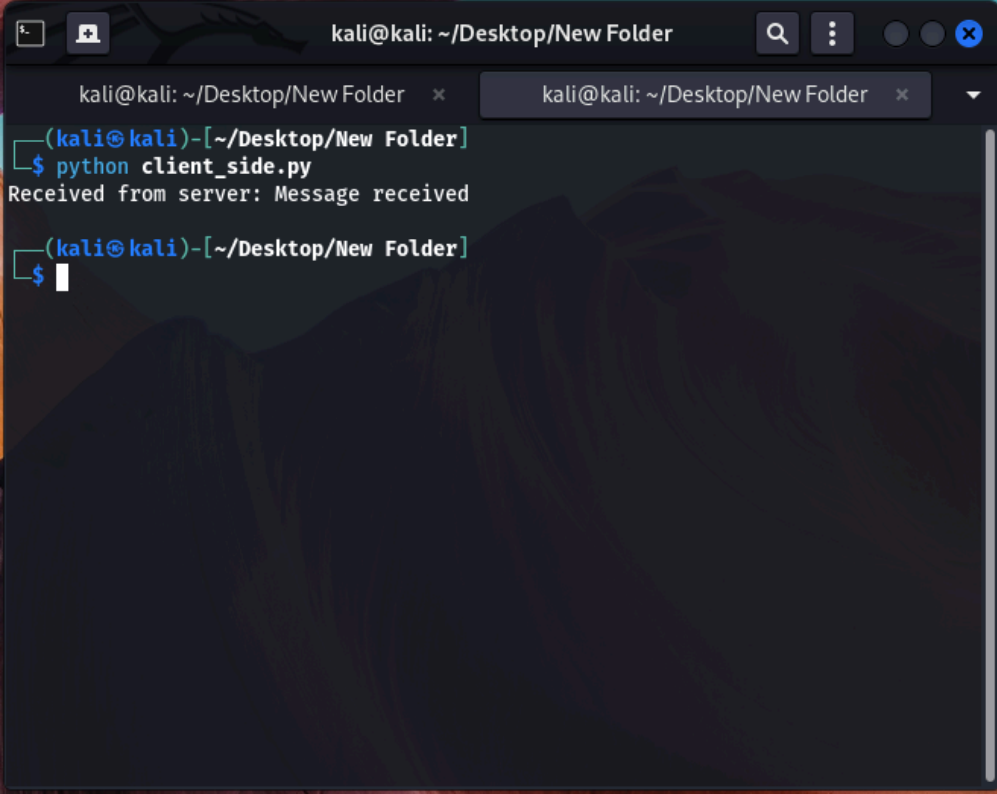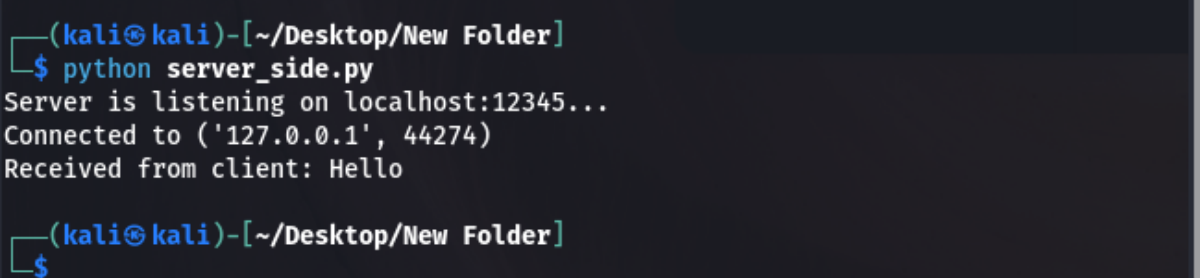
Executing client_side.py and sending the message

Listening and receiving the sent message with server_side.py

Output

The server is running successfully, and the connection is being established. Once the client sends a packet, the server will respond with an acknowledgment

Submitted by
Neeraj Jayesh
SOCSE 241037