COMPUTER NETWORKS

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TY Comp Div-2, T4 Batch

Assignment-3: Client-Server Communication

Server.py

```python
import socket

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

serverAddress = ('localhost', 9876)
serverSocket.bind(serverAddress)

serverSocket.listen(1)
print(f"Server is listening on {serverAddress[0]}:{serverAddress[1]}")

clientSocket, clientAddress = serverSocket.accept()
print(f"Accepted connection from {clientAddress[0]}:{clientAddress[1]}")

username = clientSocket.recv(1024).decode('utf-8')
print(f"Client's username is {username}.")

while True:
    clientData = clientSocket.recv(1024).decode('utf-8')
    if not clientData:
        break

    print(f"{username}: {clientData}")

    serverResponse = input("Server: ")
    clientSocket.send(serverResponse.encode('utf-8'))

clientSocket.close()
serverSocket.close()
```

Client.py

```python
import socket
import sys

if len(sys.argv) != 3:
    sys.exit(1)

serverIP = sys.argv[1]
serverPort = int(sys.argv[2])

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

serverSocket = (serverIP, serverPort)
clientSocket.connect(serverSocket)

username = input("Username: ")
clientSocket.send(username.encode('utf-8'))

while True:
    userInput = input(f"{username}: ")

    clientSocket.send(userInput.encode('utf-8'))

    serverResponse = clientSocket.recv(1024).decode('utf-8')
    print(f"Server: {serverResponse}")

clientSocket.close()
```

Output: