

Bansilal Ramnath Agarwal Charitable Trust's
Vishwakarma Institute of Technology,Pune-37

(An Autonomous Institute of Savitribai Phule Pune University)

Assignment 7:



Department of Artificial Intelligence and Data Science

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Batch	1
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Assignment:

TCP_SERVER:

```
import socket

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

server_address = ('localhost', 12345)
server_socket.bind(server_address)

server_socket.listen(1)
print("TCP Server is listening on port 12345...")

while True:
    client_socket, client_address = server_socket.accept()
    print(f"Connected to {client_address}")

    data = client_socket.recv(1024).decode()
    print(f"Received: {data}")

    client_socket.sendall("Hello from Shivam Server!".encode())

    client_socket.close()
```

TCP_CLIENT:

```
import socket

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

server_address = ('localhost', 12345)
client_socket.connect(server_address)

client_socket.sendall("Hello from TCP Client!".encode())

data = client_socket.recv(1024).decode()
print(f"Server Response: {data}")

client_socket.close()
```

OUTPUT:

```
PS F:\C> python -u "f:\C\CN_CODING\TCP_client.py"
Server Response: Hello from TCP Server!
PS F:\C> █
```

UDP SERVER:

```
import socket

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

server_address = ('localhost', 12345)
server_socket.bind(server_address)

print("UDP Server is waiting for a message...")

while True:
    data, client_address = server_socket.recvfrom(1024)
    print(f"Received: {data.decode()} from {client_address}")

    server_socket.sendto("Hello from UDP Server!".encode(), client_address)
```

UDP Client:

```
import socket

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

server_address = ('localhost', 12345)

client_socket.sendto("Hello from UDP Client!".encode(), server_address)

data, _ = client_socket.recvfrom(1024)
print(f"Server Response: {data.decode()}")

client_socket.close()
```

OUTPUT:

```
PS F:\C> python -u "f:\C\CN_CODING\UDP_client.py"
Server Response: Hello from UDP Server!
```