EX:10B

DATE: 24/09/2024

## PING TO TEST SERVER CONNECTIVITY USING SOCKETS

**AIM:** To develop ping program to test server connectivity using sockets.

## **ALGORITHM:**

# Server.py

- 1. Import the socket package
- 2. Initialize local IP address and local port.
- 3. Create a socket using socket() function
- 4. Bind the IP address and port number.
- 5. Accept client request for connection.
- 6. Print the received connection details
- 7. Send reply message to the client.
- 8. Close the connection.

# Client.py

- 1. Import the socket package
- 2. Initialize server IP address and local port.
- 3. Create a socket using socket() function.
- 4. Start the timer.
- 5. Send message to the server.
- 6. The reply message of the server is received.
- 7. The timer is stopped.
- 8. Print the round trip time statistics.

## Ping to test server connectivity using sockets

## **Client code:**

from socket import \*

from os import system

s = socket(AF\_INET, SOCK\_STREAM)

s.connect(("127.0.0.1",8000)) # Connect

op='connect'

s.send(op.encode('utf-8')) # Send request

```
data = s.recv(100).decode()# Get response print(data)
system("ping "+ gethostname())
s.close()
Server Code:
from socket import *
from os import system
s = socket(AF_INET,SOCK_STREAM)
s.bind(("",8000))
s.listen(5)
while
True:
       c,a = s.accept()
       print("Received connection from",
       a) data=c.recv(100).decode()
       print(data)
       c.send(data.encode('utf-8'))
       system("ping "+ a)
```

# c.close()

```
C:\Users\LENOVO>python server.py
python: can't open file 'C:\\Users\\LENOVO\server.py': [Errno 2] No such file or directory

C:\Users\LENOVO>cd desktop

C:\Users\LENOVO>cd desktop

C:\Users\LENOVO\cd desktop

C:\Users\LENOVO\cd desktop

C:\Users\LENOVO\Desktop>python server.py
Server listening on port 8000...

Received connection from ('127.0.0.1', 54032)
connect

Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<lns TTL=128
Reply
```

**RESULT:** server connectivity using sockets has been tested using ping command