

Echoserver

Echo server and client using python socket

AIM:

To develop a simple webserver to serve html programming pages.

DESIGN STEPS:

Step 1:

Design of echo server and client using python socket

Step 2:

Implementation using Python code

Step 3:

Testing the server and client

PROGRAM:

Server code

echo-server.py

```
import socket
```



```
HOST = "127.0.0.1" # Standard loopback interface address (localhost)
PORT = 65432 # Port to listen on (non-privileged ports are > 1023)
```

```
with socket.socket(socket.AF_INET, socket.SOCK_STREAM) as s:
    s.bind((HOST, PORT))
    s.listen()
    conn, addr = s.accept()
    with conn:
        print(f"Connected by {addr}")
        while True:
            data = conn.recv(1024)
            if not data:
                break
            conn.sendall(data)
```

Client Code:

echo-client.py

```
import socket
```



```
HOST = "127.0.0.1" # The server's hostname or IP address
PORT = 65432 # The port used by the server
```

```
with socket.socket(socket.AF_INET, socket.SOCK_STREAM) as s:
    s.connect((HOST, PORT))
```

```
s.sendall(b"Hello, world")
data = s.recv(1024)
```

```
print(f"Received {data!r}")
```

OUTPUT:

```
server.py - C:\Users\admin\Documents\server.py (3.11.9)
import socket

HOST = "127.0.0.1" # Standard loopback interface (i.e. localhost) on this machine
PORT = 65432 # Port to listen on (non-privileged ports are limited to 1024-65535)

with socket.socket(socket.AF_INET, socket.SOCK_STREAM) as s:
    s.bind((HOST, PORT))
    s.listen()
    conn, addr = s.accept()
    with conn:
        print(f"Connected by {addr}")
        while True:
            data = conn.recv(1024)
            if not data:
                break
            conn.sendall(data)
```

```
client.py - C:\Users\admin\Documents\client.py (3.11.9)
import socket

HOST = "127.0.0.1" # The server's hostname or IP address
PORT = 65432 # The port used by the server

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((HOST, PORT))
s.sendall(b"Hello, world")
data = s.recv(1024)

print(f"Received {data!r}")
```

```
IDLE Shell 3.11.9
Python 3.11.9 (tags/v3.11.9:de54cf5, Apr 2 2024, 10:12:12) [MSC v.1938 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\admin\Documents\server.py =====
Connected by ('127.0.0.1', 55702)
>>>
```

```
IDLE Shell 3.11.9
Python 3.11.9 (tags/v3.11.9:de54cf5, Apr 2 2024, 10:12:12) [MSC v.1938 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\admin\Documents\client.py =====
Received b'Hello, world'
>>>
```

RESULT:

The program is executed successfully