

4. Send and receive the message using the send function in socket.

PROGRAM

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import socket
# Create a socket object
server_socket = socket.socket(socket.AF_INET,
socket.SOCK_STREAM)
# Get local machine name (can also use 'localhost' or
an IP address)
host = socket.gethostname() # or '127.0.0.1' for
port = 12345 # Choose any unused port
# Bind the socket to the address and port
server_socket.bind((host, port))
# Start listening for incoming connections (can queue
up to 5)
server_socket.listen(5)
print(f"Server listening on {host}:{port}")
# Accept the connection from the client
client_socket, client_address = server_socket.accept()
print(f"Connection from {client_address} has been
established!")
# Chat loop to send and receive messages
while True:
    # Receive message from client
    message from client =
client_socket.recv(1024).decode('ascii')
    print(f"Client: {message_from_client}")
    # End chat if the client sends 'bye'
    if message_from_client.lower() == 'bye':
        print("Client has left the chat.")
        break
    # Send a message to the client
    message_to_client = input("Server: ")
client_socket.send(message_to_client.encode('ascii'))
    # End chat if the server sends 'bye'
    if message_to_client.lower() == 'bye':
        print("Closing connection...")
        break
# Close the connection
```

```
client_socket.close()
server_socket.close()
import socket
# Create a socket object
client socket = socket.socket(socket.AF INET,
socket.SOCK_STREAM)
# Get the local machine name
host = socket.gethostname() # or '127.0.0.1' for
port = 12345 # Port should be the same as the
server's
# Connect to the server
client_socket.connect((host, port))
print(f"Connected to server at {host}:{port}")
# Chat loop to send and receive messages
while True:
   # Send a message to the server
   message_to_server = input("Client: ")
client_socket.send(message_to_server.encode('ascii'))
    # End chat if the client sends 'bye'
    if message to server.lower() == 'bye':
        print("Exiting chat...")
        break
    # Receive a message from the server
    message_from_server =
client socket.recv(1024).decode('ascii')
    print(f"Server: {message_from_server}")
    # End chat if the server sends 'bye'
    if message from server.lower() == 'bye':
        print("Server has closed the chat.")
        break
# Close the connection
client_socket.close()
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OUPUT

Connection from ('192.168.1.2', 52405) has been established! Client: hi , server!

Server: hello client. Client: how are you doing?

Server: i am well pretty good , how abt you?

Client: fine here , thanks

Server: welcome

Server: i am well pretty good , how abt you?

Client: fine here , thanks

O Server: welcome Client: bye

> Client: hi , server! Server: hello client.

Client: how are you doing?

Server: i am well pretty good , how abt you?

Client: fine here , thanks

Server: welcome