

## 1)SOCKET-LOCAL-PYTHON

### Server.py

```
import socket

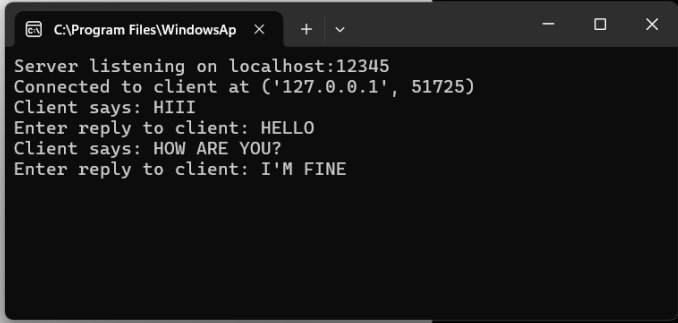
# Create a socket object
server_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# Define the host and port
host = 'localhost'
port = 12345

# Bind the socket to the host and port
server_socket.bind((host, port))

# Start listening for connections (up to 5 clients)
server_socket.listen(5)
print(f"Server listening on {host}:{port}")

# Accept a connection
client_socket, addr = server_socket.accept()
print(f"Connected to client at {addr}")
```



```
C:\Program Files\WindowsAp  x  +  v  -  □  x
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 51725)
Client says: HIII
Enter reply to client: HELLO
Client says: HOW ARE YOU?
Enter reply to client: I'M FINE
```

### client.py

```
import socket

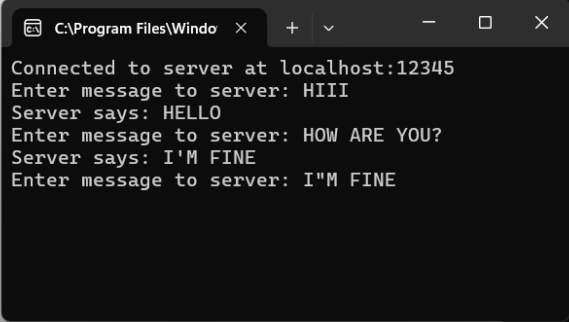
# Create a socket object
client_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# Define the host and port to connect to
host = 'localhost'
port = 12345

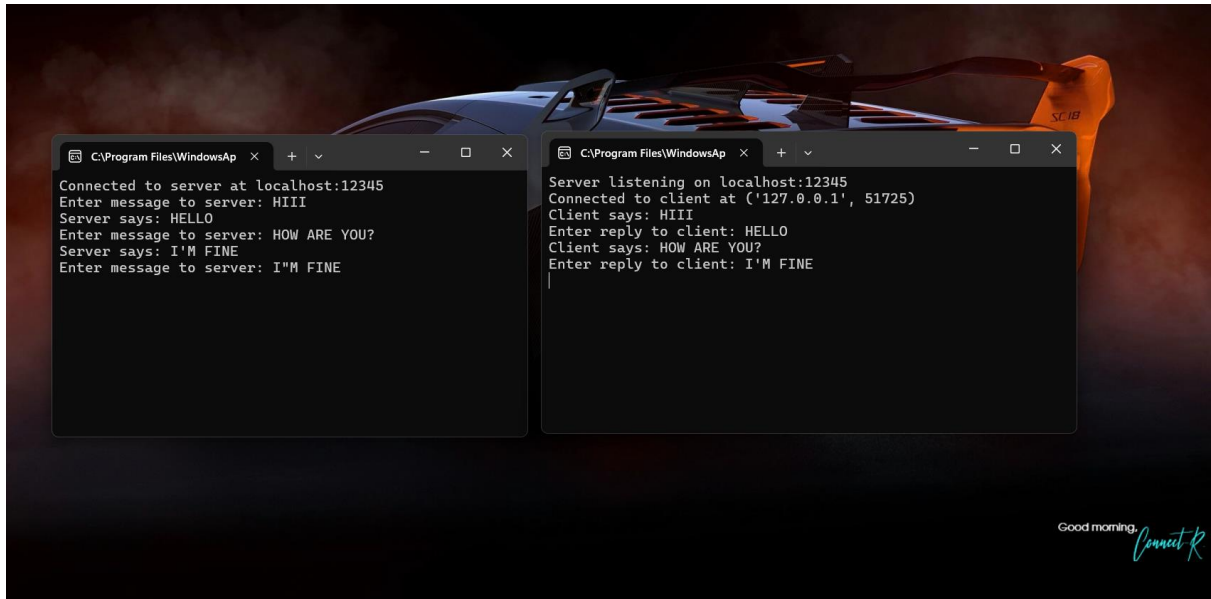
# Connect to the server
client_socket.connect((host, port))
print(f"Connected to server at {host}:{port}")

# Message loop
while True:
    message = input("Enter message to server: ")
    client_socket.send(message.encode())

    if message.lower() == 'exit':
```



```
C:\Program Files\Window  x  +  v  -  □  x
Connected to server at localhost:12345
Enter message to server: HIII
Server says: HELLO
Enter message to server: HOW ARE YOU?
Server says: I'M FINE
Enter message to server: I'M FINE
```



## 2) SOCKET DOCKER PYTHON

```

Microsoft Windows [Version 10.0.22631.5039]
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C:\Users\mohan>cd "C:\Users\mohan\OneDrive\Desktop\socket-docker"

C:\Users\mohan\OneDrive\Desktop\socket-docker>cd python

C:\Users\mohan\OneDrive\Desktop\socket-docker\python>docker-compose up --build
time="2025-04-19T12:02:01+05:30" level=warning msg="C:\Users\mohan\OneDrive\Desktop\socket-docker\python\docker-compose.yml: the attribute 'version' i
s obsolete, it will be ignored, please remove it to avoid potential confusion"
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[+] Building 25.5s (18/18) FINISHED
=> [server internal] load build definition from Dockerfile
=> => transferring dockerfile: 116B
=> [client internal] load metadata for docker.io/library/python:3.10
=> [server auth] library/python:pull token for registry-1.docker.io
=> [server internal] load .dockerignore
=> => transferring context: 2B
=> [client 1/3] FROM docker.io/library/python:3.10@sha256:e2c7fb05741c735679b26eda7dd34575151079f8c615875fbef4 15.3s
=> => resolve docker.io/library/python:3.10@sha256:e2c7fb05741c735679b26eda7dd34575151079f8c615875fbef401972b14 0.1s
=> => sha256:d877749e7e8482366a677c46b54831fa8ed9e217760353e2654f46f78776145e 251B / 251B 0.5s
=> => sha256:af8e3845afdcf84d8f7c373c732dfcb9261fdd63a13bbb3f430d253034e9c29e 21.39MB / 21.39MB 9.1s
=> => sha256:35a6ae16d0f03d1e758190b59a7b0495277bbe894fe2fbf7f91083d2aad3ef98 6.16MB / 6.16MB 7.7s
=> => extracting sha256:35a6ae16d0f03d1e758190b59a7b0495277bbe894fe2fbf7f91083d2aad3ef98 0.4s
=> => extracting sha256:af8e3845afdcf84d8f7c373c732dfcb9261fdd63a13bbb3f430d253034e9c29e 1.0s
=> => extracting sha256:d877749e7e8482366a677c46b54831fa8ed9e217760353e2654f46f78776145e 0.1s
=> [server internal] load build context
=> => transferring context: 727B 0.0s
=> [server auth] library/python:pull token for registry-1.docker.io 0.0s
=> [server auth] library/python:pull token for registry-1.docker.io 0.0s
=> CACHED [client 2/3] WORKDIR /app 0.2s
=> [server 3/3] COPY server.py . 0.1s
=> [server] exporting to image 0.0s
=> => exporting layers 0.3s
=> => exporting manifest sha256:718a7e45942383df69d31b6309904e5b02e0cb3fcf9a7cc2e1187718535748e6 0.0s
=> => exporting config sha256:8cfeddc40c3f257e6aca37514ba09ee9121853d3e235b57711d41af2b52a98e7 0.0s
=> => exporting attestation manifest sha256:c0161c62e75dc689add802eb8611602cbddf2c2043873f7d4871a5a31afef1669 0.1s
=> => exporting manifest list sha256:ed4a691d78c75bed1558fb8defca015eb30677f784cb6c538c72aa282263fa35 0.0s
=> => naming to docker.io/library/python-server:latest 0.0s
=> => unpacking to docker.io/library/python-server:latest 0.1s
=> [server] resolving provenance for metadata file 0.0s
=> [client internal] load build definition from Dockerfile 0.1s
=> => transferring dockerfile: 116B 0.0s

```

```

Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

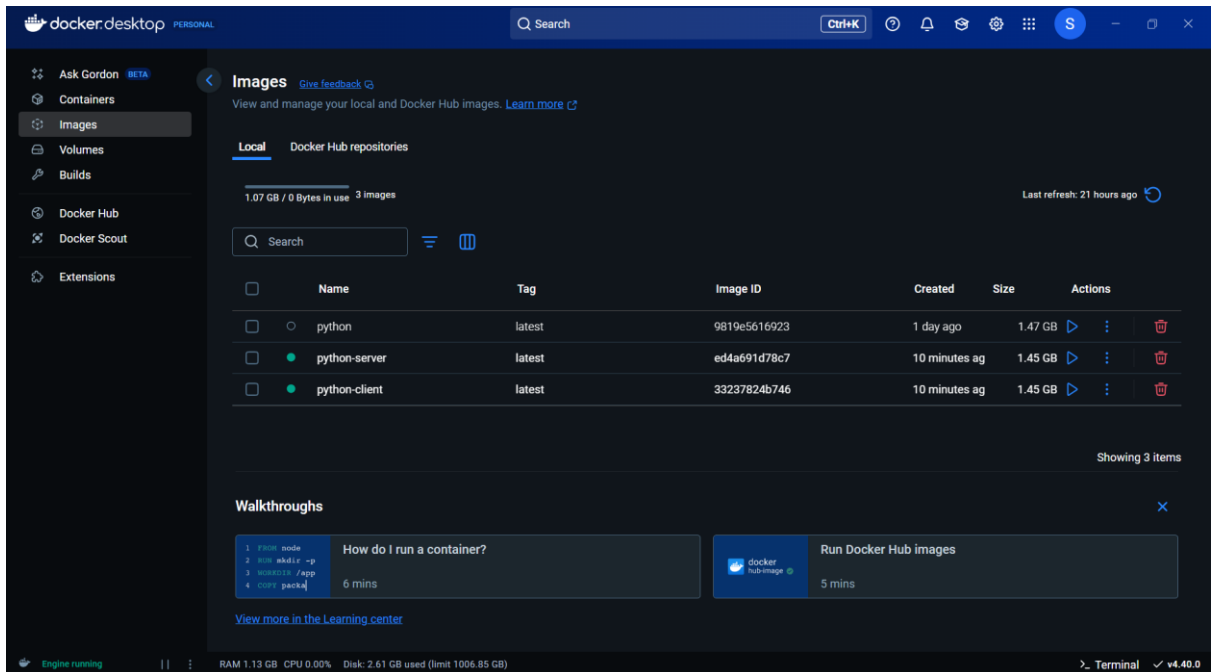
PS C:\Users\mohan> docker attach python_socket_server

```

```
Command Prompt - docker-cc x Windows PowerShell x Windows PowerShell x + v
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mohan> docker attach python_socket_client
|
```



```
Command Prompt x Windows PowerShell x + v - o x Windows PowerShell x + v
Windows PowerShell
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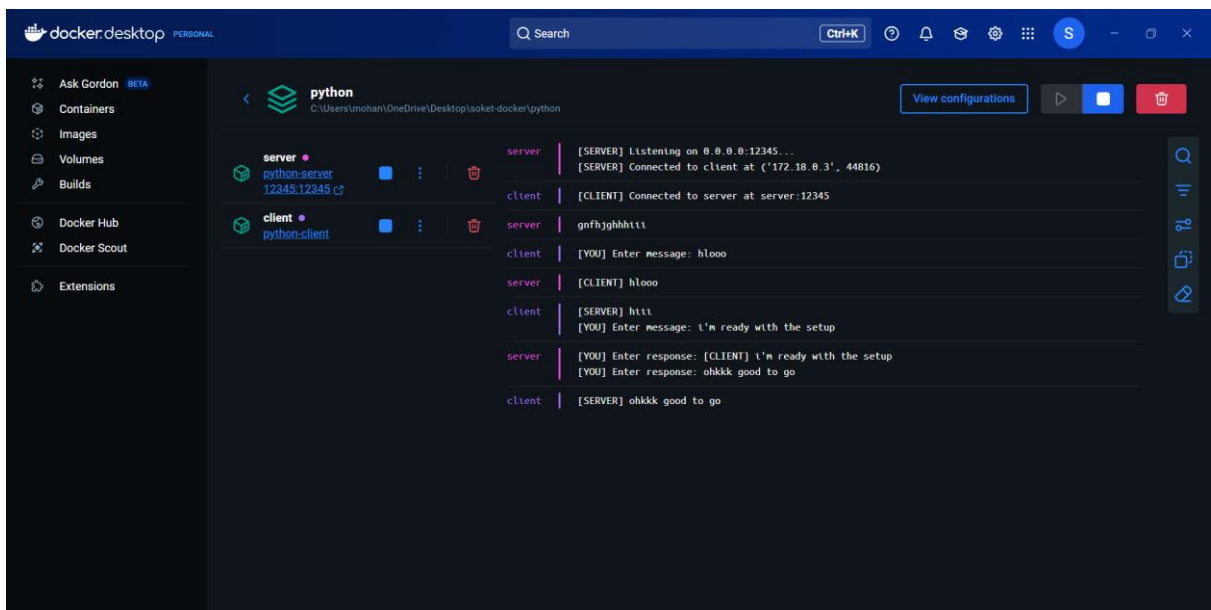
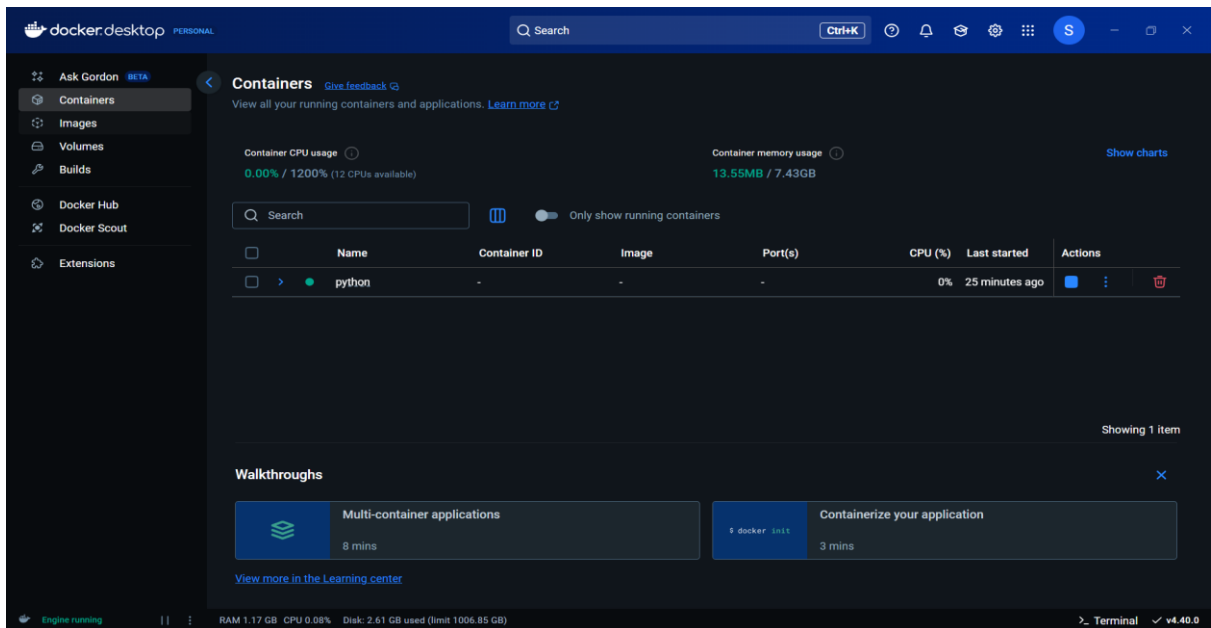
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mohan> docker attach python_socket_server
hihi
[CLIENT] hlooo
[YOU] Enter response: [CLIENT] i'm ready with the setup
[YOU] Enter response: ohkkk good to go

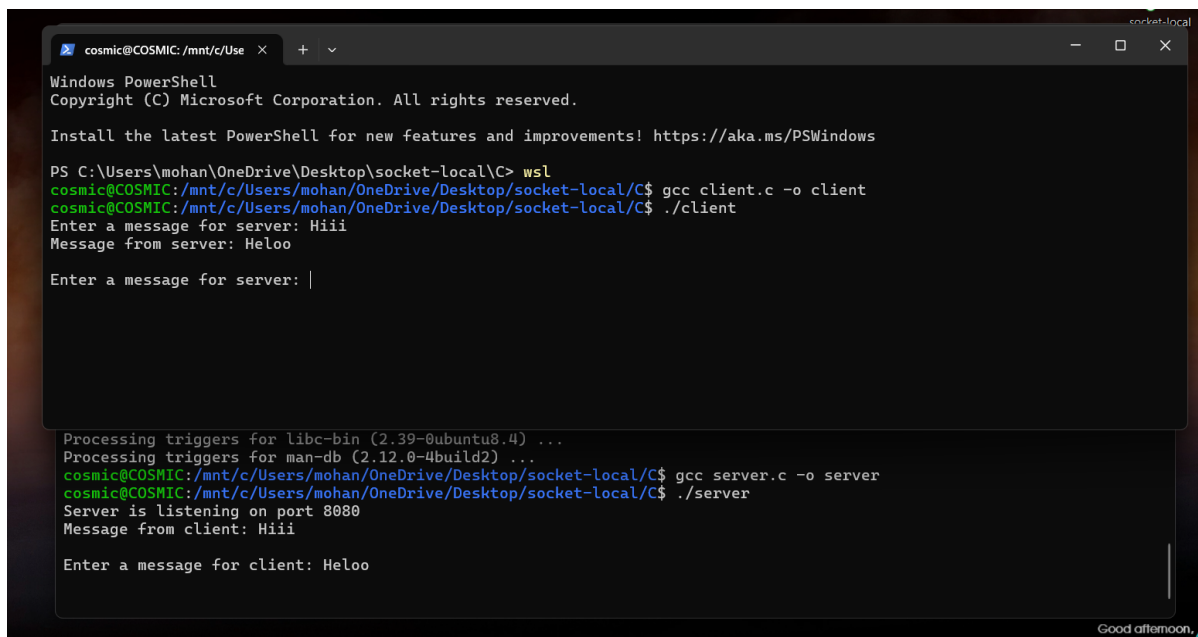
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mohan> docker attach python_socket_client
hlooo
[SERVER] hihi
[YOU] Enter message: i'm ready with the setup
[SERVER] ohkkk good to go
[YOU] Enter message:
```



### 3) SOCKET\_LOCAL\_C



```
cosmic@COSMIC: /mnt/c/Use x + v
Windows PowerShell
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PS C:\Users\mohan\OneDrive\Desktop\socket-local\C> wsl
cosmic@COSMIC: /mnt/c/Users/mohan/OneDrive/Desktop/socket-local/C$ gcc client.c -o client
cosmic@COSMIC: /mnt/c/Users/mohan/OneDrive/Desktop/socket-local/C$ ./client
Enter a message for server: Hiii
Message from server: Hello

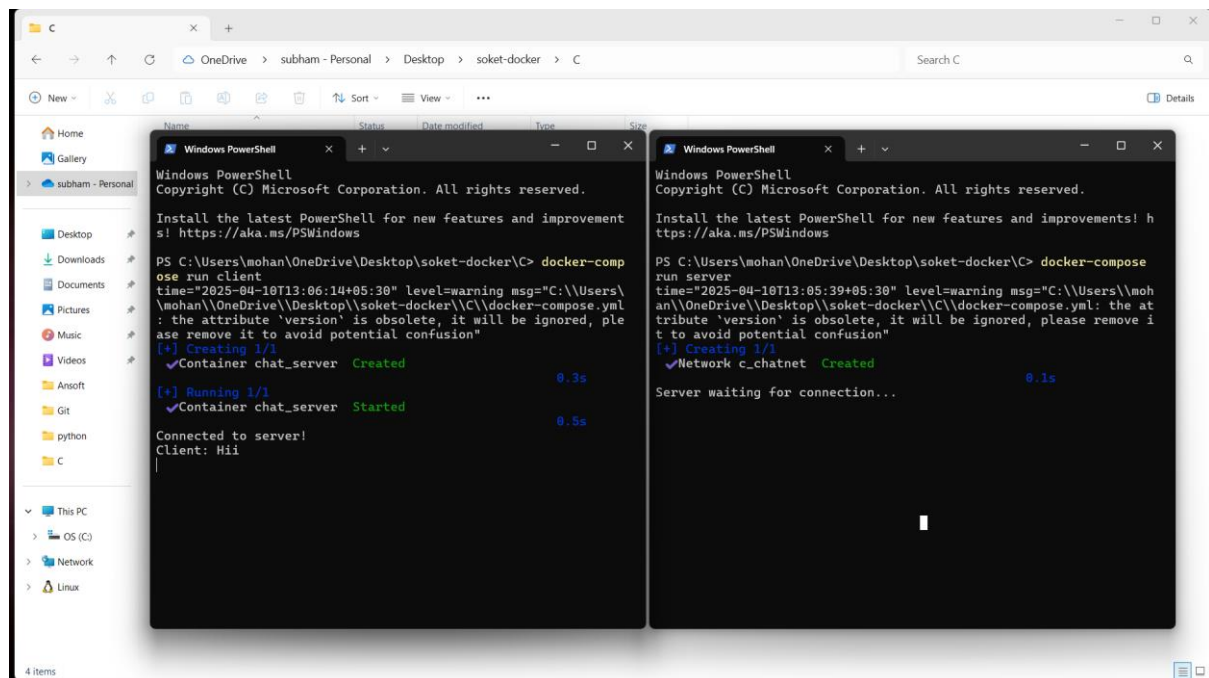
Enter a message for server: |

Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
Processing triggers for man-db (2.12.0-4build2) ...
cosmic@COSMIC: /mnt/c/Users/mohan/OneDrive/Desktop/socket-local/C$ gcc server.c -o server
cosmic@COSMIC: /mnt/c/Users/mohan/OneDrive/Desktop/socket-local/C$ ./server
Server is listening on port 8080
Message from client: Hiii

Enter a message for client: Hello

Good afternoon,
```

### 4) SOCKET\_DOCKER\_C



```
C
OneDrive > subham - Personal > Desktop > socket-docker > C

subham - Personal
Desktop
Downloads
Documents
Pictures
Music
Videos
Ansoft
Git
python
C

This PC
OS (C)
Network
Linux

4 items

Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mohan\OneDrive\Desktop\socket-docker\C> docker-compose run client
time="2025-04-10T13:06:14+05:30" level=warning msg="C:\\Users\\mohan\\OneDrive\\Desktop\\socket-docker\\C\\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Creating 1/1
  Container chat_server Created 0.3s
[+] Running 1/1
  Container chat_server Started 0.8s
Connected to server!
Client: Hii

Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mohan\OneDrive\Desktop\socket-docker\C> docker-compose run server
time="2025-04-10T13:05:39+05:30" level=warning msg="C:\\Users\\mohan\\OneDrive\\Desktop\\socket-docker\\C\\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Creating 1/1
  Network c_chatnet Created 0.1s
Server waiting for connection...
```

