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## Python local:

```
Windows PowerShell
PS C:\Users\kumar\OneDrive\Desktop\socket-local\python> python server.py
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 52913)
Client says: Hii
Enter reply to client: |

Windows PowerShell
PS C:\Users\kumar\OneDrive\Desktop\socket-local\python> python client.py
Connected to server at localhost:12345
Enter message to server: Hii
```

```
Windows PowerShell
PS C:\Users\kumar\OneDrive\Desktop\socket-local\python> python server.py
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 52913)
Client says: Hii
Enter reply to client: hello client how are you
Client says: I am fine
Enter reply to client: |

Windows PowerShell
PS C:\Users\kumar\OneDrive\Desktop\socket-local\python> python client.py
Connected to server at localhost:12345
Enter message to server: Hii
Server says: hello client how are you
Enter message to server: I am fine
|
```

## Python Docker:

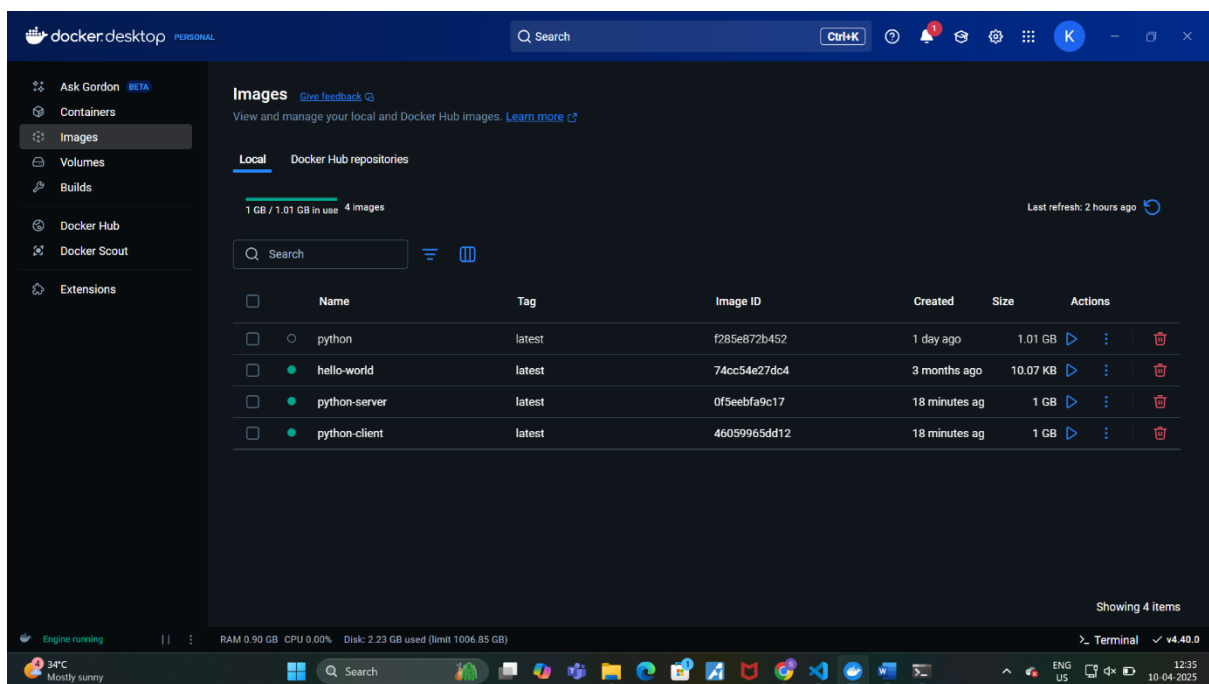
```
C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\socket-docker\python

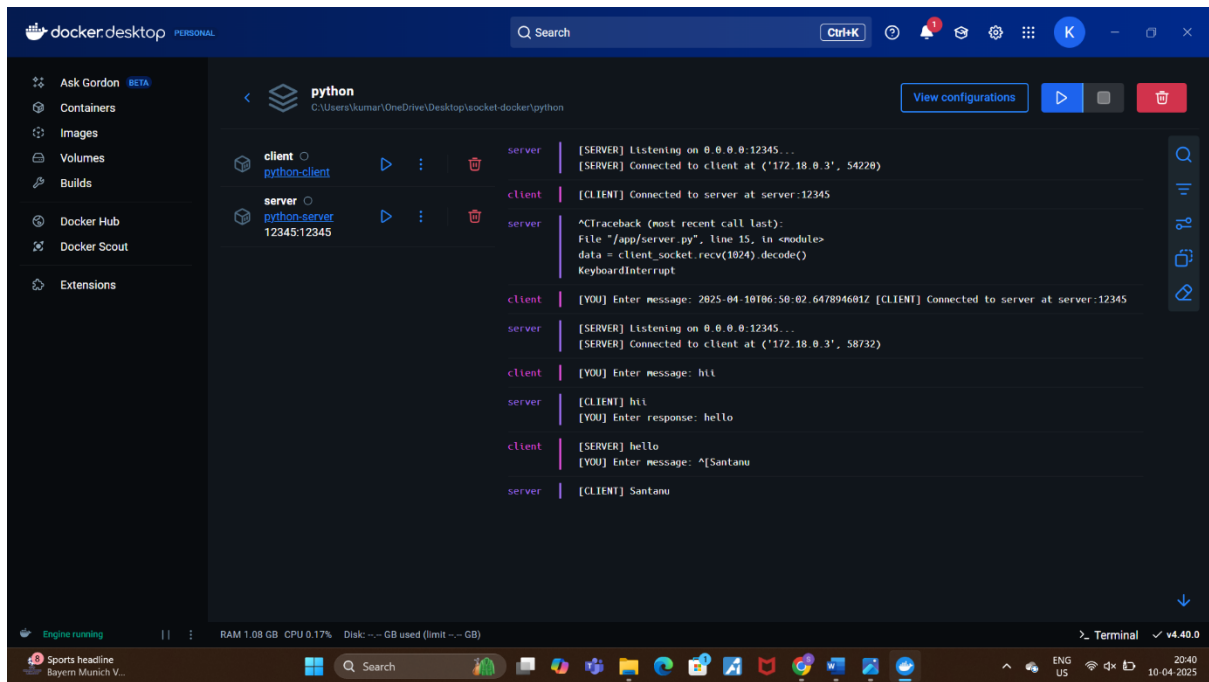
C:\Users\kumar\OneDrive\Desktop\socket-docker\python>docker-compose up --build
time="2025-04-10T12:19:57+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\socket-docker\\python\\docker-compose.yml: the attribute 'version'
is obsolete, it will be ignored, please remove it to avoid potential confusion"
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[+] Building 3.1s (16/16) FINISHED
=> [server internal] load build definition from Dockerfile                                0.0s
=> transferring dockerfile: 116B                                                         0.0s
=> [client internal] load metadata for docker.io/library/python:3.10                    2.3s
=> [server auth] library/python:pull token for registry-1.docker.io                     0.0s
=> [server internal] load .dockerignore                                                  0.0s
=> transferring context: 2B                                                              0.0s
=> [client 1/3] FROM docker.io/library/python:3.10@sha256:e2c7fb05741c735679b26eda7dd34575151079f8c615875fbefe40 0.0s
=> [server internal] load build context                                                0.0s
=> transferring context: 31B                                                            0.0s
=> CACHED [client 2/3] WORKDIR /app                                                    0.0s
=> CACHED [server 3/3] COPY server.py .                                                0.0s
=> [server] exporting to image                                                         0.0s
=> exporting layers                                                                    0.0s
=> writing image sha256:0f5eebfa9c178ff3bfb5e44178f392b6d5b75b05d1a228bdc2e2e49be45a0e10 0.0s
=> naming to docker.io/library/python-server                                          0.0s
=> [server] resolving provenance for metadata file                                     0.0s
=> [client internal] load build definition from Dockerfile                                0.0s
=> transferring dockerfile: 114B                                                         0.0s
=> [client internal] load .dockerignore                                                  0.0s
=> transferring context: 2B                                                              0.0s
=> [client internal] load build context                                                0.0s
=> transferring context: 31B                                                            0.0s
=> CACHED [client 3/3] COPY client.py .                                                0.0s
=> [client] exporting to image                                                         0.0s
=> exporting layers                                                                    0.0s
=> writing image sha256:46059965dd12c606571aa40e2fb301c7cd6b061f617475f5d423b5c4f4846262 0.0s
=> naming to docker.io/library/python-client                                          0.0s
=> [client] resolving provenance for metadata file                                     0.0s
[+] Running 4/4
  ✓client                               Built                                0.0s
  ✓server                               Built                                0.0s
  ✓Container python_socket_server       Created                             0.0s
```

```
Microsoft Windows [Version 10.0.22631.5189]
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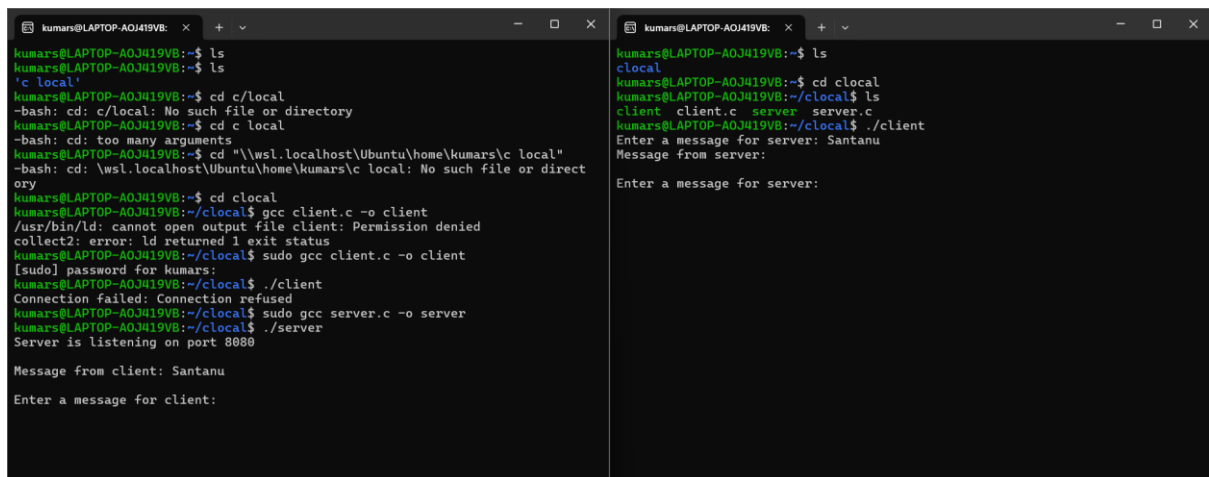
C:\Users\kumar>docker attach python_socket_server
[CLIENT] hii
[YOU] Enter response: hello
[CLIENT] Santanu
[YOU] Enter response: |

=> CACHED [server 3/3] COPY server.py .                                0.0s
=> [server] exporting to image                                          0.0s
=> => exporting layers                                                  0.0s
=> => writing image sha256:0f5eebfa9c178ff3bfb5e44178f392b6d5b75b05d1a228bdc2e2e49be45a0e10 0.0s
=> => naming to docker.io/library/python-server                        0.0s
=> [server] resolving provenance for metadata file                     0.0s
=> [client internal] load build definition from Dockerfile             0.0s
=> => transferring dockerfile: 114B                                     0.0s
=> [client internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                          0.0s
=> [client internal] load build context                                0.0s
=> => transferring context: 31B                                         0.0s
=> CACHED [client 3/3] COPY client.py .                                0.0s
=> [client] exporting to image                                          0.0s
=> => exporting layers                                                  0.0s
=> => writing image sha256:46059965dd12c606571aa40e2fb301c7cd6b061f617475f5d423b5c4f4846262 0.0s
=> => naming to docker.io/library/python-client                        0.0s
=> [client] resolving provenance for metadata file                     0.0s
[*] Running 4/4
✓client Built 0.0s
✓server Built 0.0s
✓Container python_socket_server Created 0.0s
✓Container python_socket_client Created 0.0s
Attaching to python_socket_client, python_socket_server
python_socket_server | [SERVER] Listening on 0.0.0.0:12345...
python_socket_client | [CLIENT] Connected to server at server:12345
python_socket_server | [SERVER] Connected to client at ('172.18.0.3', 58732)
python_socket_client | [YOU] Enter message: hii
python_socket_server | [CLIENT] hii
python_socket_server | [YOU] Enter response: hello
python_socket_client | [SERVER] hello
```





## C Local :



# C Docker:

```
Command Prompt
(c) Microsoft Corporation. All rights reserved.

C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\C Docker File

C:\Users\kumar\OneDrive\Desktop\C Docker File>docker-compose build
time="2025-04-10T12:52:23+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\docker-compose.yml: the attribute 'version' is 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 25.4s (22/22) FINISHED
=> [server internal] load build definition from Dockerfile
=> => transferring dockerfile: 291B
=> [client internal] load metadata for docker.io/library/gcc:latest
=> [server auth] library/gcc:pull token for registry-1.docker.io
=> [server internal] load .dockerignore
=> => transferring context: 2B
=> [client 1/6] FROM docker.io/library/gcc:latest@sha256:95f598eea2b230fae0bca018c9e31acf9dc0599e5e06f2c70671f14449fde
=> => resolve docker.io/library/gcc:latest@sha256:95f598eea2b230fae0bca018c9e31acf9dc0599e5e06f2c70671f14449fde
=> => sha256:95f598eea2b230fae0bca018c9e31acf9dc0599e5e06f2c70671f14449fde 7.64kB / 7.64kB
=> => sha256:14dab890a5a7098e80e5a9e8aada5aee291140632734b72e8e702798d8dea5d 2.49kB / 2.49kB
=> => sha256:54059b0e9deadd432ff3bca1bc50c101f9ba8d8dc8bb5528ac71276d17e04f01 7.34kB / 7.34kB
=> => sha256:e4dd9c082dd2bb0fbb6de1f18a350e5c0aeabcc16e0fa702c1aba0c09c9936cd 2.81MB / 2.81MB
=> => sha256:8b77cd7514d65ebffdfc56971b896c1e9f0067d45e9ffcf96a76802cbd596d6 9.61kB / 9.61kB
=> => extracting sha256:a0fcfad35b187f556943bae42047e6b09c6a79788921825df88a820773ec0ecb
=> => sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad00642ab59c4b4 1.78kB / 1.78kB
=> => extracting sha256:e4dd9c082dd2bb0fbb6de1f18a350e5c0aeabcc16e0fa702c1aba0c09c9936cd
=> => extracting sha256:8b77cd7514d65ebffdfc56971b896c1e9f0067d45e9ffcf96a76802cbd596d6
=> => extracting sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad00642ab59c4b4
=> [server internal] load build context
=> => transferring context: 2.93kB
=> CACHED [client 2/6] WORKDIR /app
=> [server 3/6] COPY server.c .
=> [server 4/6] COPY client.c .
=> [server 5/6] RUN gcc -o server server.c
=> [server 6/6] RUN gcc -o client client.c
=> [server] exporting to image
=> => exporting layers
=> => writing image sha256:21aac609ef44ad11d60ff2acd823f1bdb45e4136a8317457492ba3cfb5972cac
=> => naming to docker.io/library/cdockerfile-server
=> [server] resolving provenance for metadata file
```

```
Command Prompt
=> => extracting sha256:a0fcfad35b187f556943bae42047e6b09c6a79788921825df88a820773ec0ecb
=> => sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad00642ab59c4b4 1.78kB / 1.78kB
=> => extracting sha256:e4dd9c082dd2bb0fbb6de1f18a350e5c0aeabcc16e0fa702c1aba0c09c9936cd
=> => extracting sha256:8b77cd7514d65ebffdfc56971b896c1e9f0067d45e9ffcf96a76802cbd596d6
=> => extracting sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad00642ab59c4b4
=> [server internal] load build context
=> => transferring context: 2.93kB
=> CACHED [client 2/6] WORKDIR /app
=> [server 3/6] COPY server.c .
=> [server 4/6] COPY client.c .
=> [server 5/6] RUN gcc -o server server.c
=> [server 6/6] RUN gcc -o client client.c
=> [server] exporting to image
=> => exporting layers
=> => writing image sha256:21aac609ef44ad11d60ff2acd823f1bdb45e4136a8317457492ba3cfb5972cac
=> => naming to docker.io/library/cdockerfile-server
=> [server] resolving provenance for metadata file
=> [client internal] load build definition from Dockerfile
=> => transferring dockerfile: 291B
=> [client internal] load .dockerignore
=> => transferring context: 2B
=> [client internal] load build context
=> => transferring context: 58B
=> CACHED [client 3/6] COPY server.c .
=> CACHED [client 4/6] COPY client.c .
=> CACHED [client 5/6] RUN gcc -o server server.c
=> CACHED [client 6/6] RUN gcc -o client client.c
=> [client] exporting to image
=> => exporting layers
=> => writing image sha256:9e91829bb58ba4f2309fd9d94d8b591352d3ede900a4843e6c64d8a468e6715
=> => naming to docker.io/library/cdockerfile-client
=> [client] resolving provenance for metadata file
[+] Building 2/2
✓client Built
✓server Built

C:\Users\kumar\OneDrive\Desktop\C Docker File>
```

```
Command Prompt - docker-c
Microsoft Windows [Version 10.0.22631.5189]
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C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\C Docker File

C:\Users\kumar\OneDrive\Desktop\C Docker File>docker-compose run server
time="2025-04-10T12:56:38+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Creating 1/1
✓Network cdockerfile_chatnet Created
Server waiting for connection...
```

```
Command Prompt - docker-c x + v
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kumar>docker-compose run server
no configuration file provided: not found

C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\C Docker File

C:\Users\kumar\OneDrive\Desktop\C Docker File>docker-compose run client
time="2025-04-10T12:57:06+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\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 0.1s
[+] Running 1/1
  ✓Container chat_server Started 0.2s
Connected to server!
Client: hii
```

```
Command Prompt - docker-c x + v
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\C Docker File

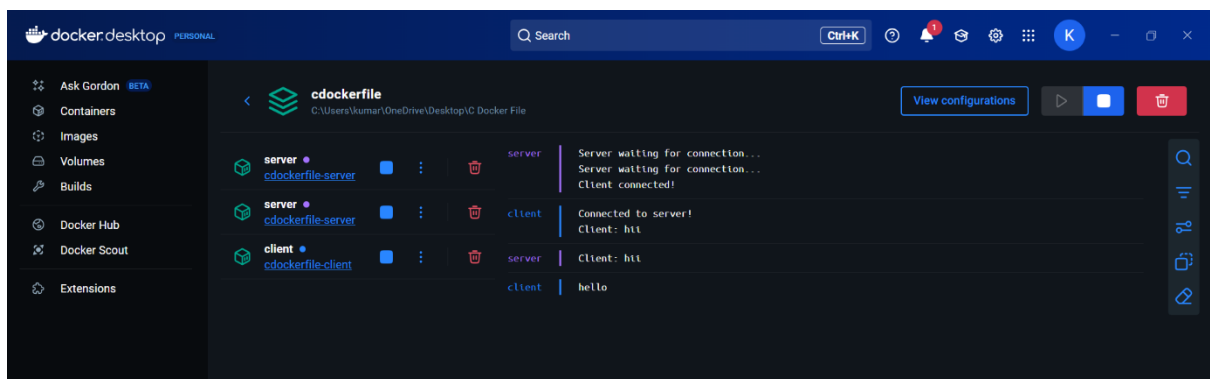
C:\Users\kumar\OneDrive\Desktop\C Docker File>docker-compose run server
time="2025-04-10T12:56:38+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Creating 1/1
  ✓Network cdockerfile_chatnet Created 0.1s
Server waiting for connection...

Command Prompt - docker-c x + v
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kumar>docker-compose run server
no configuration file provided: not found

C:\Users\kumar>cd C:\Users\kumar\OneDrive\Desktop\C Docker File

C:\Users\kumar\OneDrive\Desktop\C Docker File>docker-compose run client
time="2025-04-10T12:57:06+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\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 0.1s
[+] Running 1/1
  ✓Container chat_server Started 0.2s
Connected to server!
Client: hii
hello
```



```
Command Prompt
=> => extracting sha256:a0fcfad35b187f556943bae42047e6b09c6a79788921825df88
a020772ec0ecb 0.1s
=> => sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad00642ab59c4
b4 1.78kB / 1.78kB 1.1s
=> => extracting sha256:e4dd9c002dd2bb0fbb6de1f18a350e5c0aeabcc16e0fa702c1a
ba0c09c9936cd 3.0s
=> => extracting sha256:8b77cd7514d65ebffdfc56971b896c1e9f0067d45e9ffcfc96a
76802cbd596d6 0.0s
=> => extracting sha256:ea589c0b318a435eaaa443207f64cbb47ec482575de53c1b3ad
00642ab59c4b4 0.0s
=> [server internal] load build context 0.1s
=> => transferring context: 2.93kB 0.0s
=> CACHED [client 2/6] WORKDIR /app 0.4s
=> [server 3/6] COPY server.c . 0.1s
=> [server 4/6] COPY client.c . 0.1s
=> [server 5/6] RUN gcc -o server server.c 0.8s
=> [server 6/6] RUN gcc -o client client.c 0.5s
=> [server] exporting to image 0.2s
=> => exporting layers 0.1s
=> => writing image sha256:21aac609ef44ad11d60ff2acd823f1bdb45e4136a8317457
492ba3c5b5972cac 0.0s
=> => naming to docker.io/library/cdockerfile-server 0.0s
=> [server] resolving provenance for metadata file 0.0s
=> [client internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 291B 0.0s
=> [client internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s

Command Prompt - docker-c x + v
time="2025-04-10T12:56:38+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Creating 1/1
  ✓Network cdockerfile_chatnet Created 0.1s
Server waiting for connection...

Command Prompt - docker-c x + v
time="2025-04-10T12:57:06+05:30" level=warning msg="C:\\Users\\kumar\\OneDrive\\Desktop\\C Docker File\\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 0.1s
[+] Running 1/1
  ✓Container chat_server Started 0.2s
Connected to server!
Client: hii
hello
```

