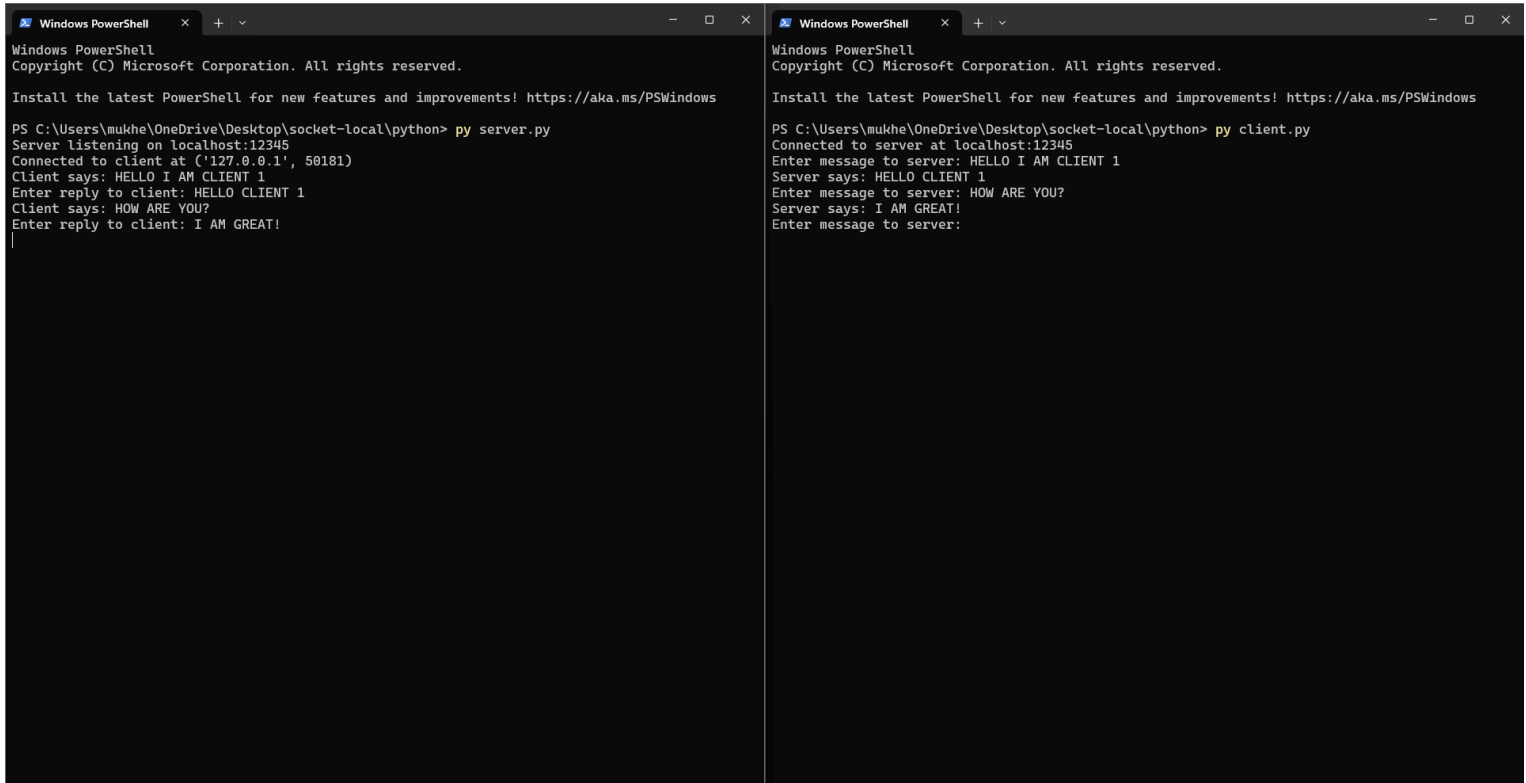


# CAPSTONE-4

Name: Shaan Rout  
Regd No: 2141018101

- socket-local/python



```
Windows PowerShell
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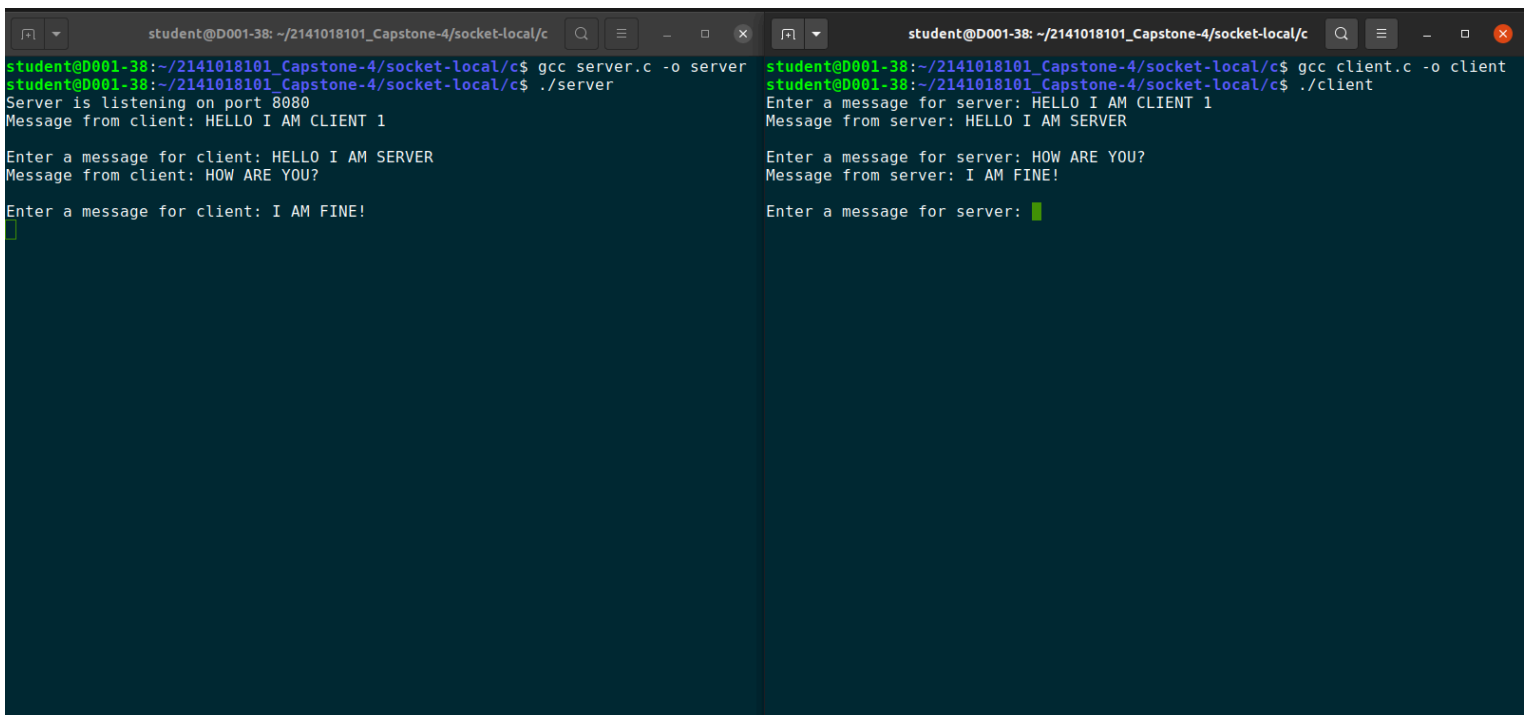
PS C:\Users\mukhe\OneDrive\Desktop\socket-local\python> py server.py
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 50181)
Client says: HELLO I AM CLIENT 1
Enter reply to client: HELLO CLIENT 1
Client says: HOW ARE YOU?
Enter reply to client: I AM GREAT!

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PS C:\Users\mukhe\OneDrive\Desktop\socket-local\python> py client.py
Connected to server at localhost:12345
Enter message to server: HELLO I AM CLIENT 1
Server says: HELLO CLIENT 1
Enter message to server: HOW ARE YOU?
Server says: I AM GREAT!
Enter message to server:
```

- socket-local/c



```
student@D001-38: ~/2141018101_Capstone-4/socket-local/c
student@D001-38:~/2141018101_Capstone-4/socket-local/c$ gcc server.c -o server
student@D001-38:~/2141018101_Capstone-4/socket-local/c$ ./server
Server is listening on port 8080
Message from client: HELLO I AM CLIENT 1

Enter a message for client: HELLO I AM SERVER
Message from client: HOW ARE YOU?

Enter a message for client: I AM FINE!

student@D001-38: ~/2141018101_Capstone-4/socket-local/c
student@D001-38:~/2141018101_Capstone-4/socket-local/c$ gcc client.c -o client
student@D001-38:~/2141018101_Capstone-4/socket-local/c$ ./client
Enter a message for server: HELLO I AM CLIENT 1
Message from server: HELLO I AM SERVER

Enter a message for server: HOW ARE YOU?
Message from server: I AM FINE!

Enter a message for server:
```

## • socket-docker/python

```
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PS C:\Users\mukhe\OneDrive\Desktop\socket-docker\python> docker attach python_socket_server
[CLIENT] Hello
[YOU] Enter response: Hi
[CLIENT] I AM CLIENT 1
[YOU] Enter response: I AM SERVER
[CLIENT] HOW ARE YOU?
[YOU] Enter response: I AM FINE

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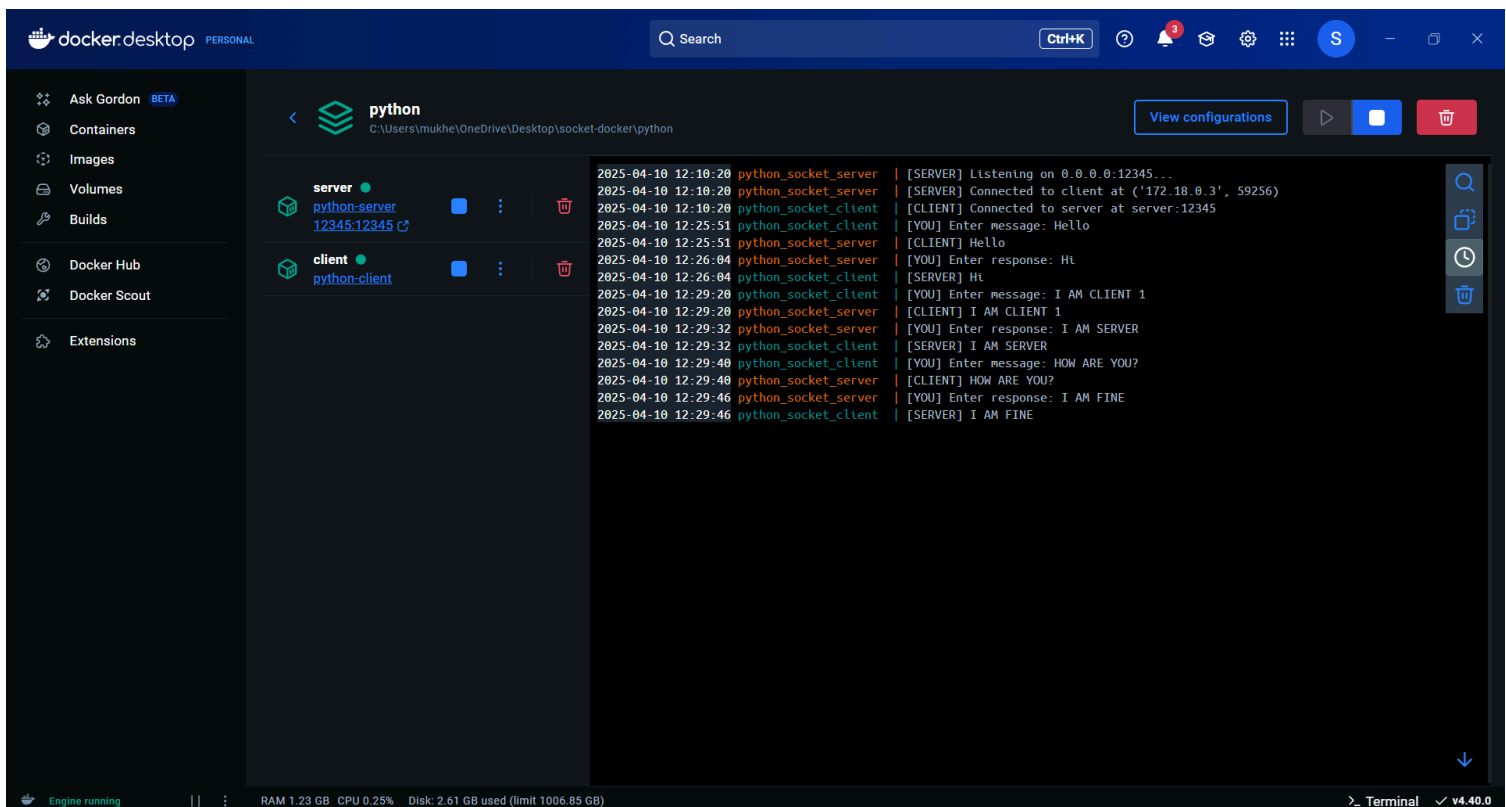
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\mukhe\OneDrive\Desktop\socket-docker\python> docker attach python_socket_client
Hello
[SERVER] Hi
[YOU] Enter message: I AM CLIENT 1
[SERVER] I AM SERVER
[YOU] Enter message: HOW ARE YOU?
[SERVER] I AM FINE
[YOU] Enter message: |

=> => exporting manifest list sha256:ab7aa6a2c75441a5f73bef53cac9bf3bac8acfa44183c40a0157ddc34e2a597      0.0s
=> => naming to docker.io/library/python-client:latest                                           0.0s
=> => unpacking to docker.io/library/python-client:latest                                         0.0s
=> [client] resolving provenance for metadata file                                                 0.0s
[+] Running 5/5
✓client Built 0.0s
✓server Built 0.0s
✓Network python_default Created 0.1s
✓Container python_socket_server Created 0.1s
✓Container python_socket_client Created 0.1s
Attaching to python_socket_client, python_socket_server
python_socket_server | [SERVER] Listening on 0.0.0.0:12345...
python_socket_server | [SERVER] Connected to client at ('172.18.0.3', 59256)
python_socket_client | [CLIENT] Connected to server at server:12345

python_socket_client | [YOU] Enter message: Hello
python_socket_server | [CLIENT] Hello
python_socket_server | [YOU] Enter response: Hi
python_socket_client | [SERVER] Hi
python_socket_client | [YOU] Enter message: I AM CLIENT 1
python_socket_server | [CLIENT] I AM CLIENT 1
python_socket_server | [YOU] Enter response: I AM SERVER
python_socket_client | [SERVER] I AM SERVER
python_socket_client | [YOU] Enter message: HOW ARE YOU?
python_socket_server | [CLIENT] HOW ARE YOU?
python_socket_server | [YOU] Enter response: I AM FINE
python_socket_client | [SERVER] I AM FINE
```

## DOCKER DESKTOP (PYTHON)



- socket-docker/c

```
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PS C:\Users\mukhe\OneDrive\Desktop\socket-docker> docker-compose run server
time="2025-04-10T14:01:59+05:30" level=warning msg="C:\Users\mukhe\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...

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

PS C:\Users\mukhe\OneDrive\Desktop\socket-docker> docker-compose run client
time="2025-04-10T14:02:07+05:30" level=warning msg="C:\Users\mukhe\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
    0.2s
[*] Running 1/1
  ✓ Container chat_server Started
    0.3s
Connected to server!
Client: HELLO

=> exporting manifest sha256:55dccbdaabadaca8011459520afb31589a13af6f83c81ec68995dbfea88da469      0.0s
=> exporting config sha256:604c9a79b39f8a174687f8e898911f0b632d996a3532450ce6039fbed0981eb      0.0s
=> exporting attestation manifest sha256:e24971cf37035a4211e11d6c4dabbbeba8840bdf2859965e84a29fafc801900 0.0s
=> exporting manifest list sha256:8b269aa720804ef2605a11c88279d26e75cae8096c97223fa8f805dcccab277b 0.0s
=> naming to docker.io/library/c-server:latest      0.0s
=> unpacking to docker.io/library/c-server:latest    0.1s
=> [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
=> [client internal] load build context               0.0s
=> CACHED [client 3/6] COPY server.c .                0.0s
=> CACHED [client 4/6] COPY client.c .                 0.0s
=> CACHED [client 5/6] RUN gcc -o server server.c      0.0s
=> CACHED [client 6/6] RUN gcc -o client client.c      0.0s
=> [client] exporting to image                       0.2s
=> exporting layers                                  0.0s
=> exporting manifest sha256:de839183691af84f68c9aa171c2f53da902a3c2c19a8dbdef8aadfccad786ac9 0.0s
=> exporting config sha256:b13cb7660f866f5d40acbd9b8ff762fc7a99f990f8aa76eea21388be2610c31    0.0s
=> exporting attestation manifest sha256:fe2f3731e3db324b234a8f30174cc3a4ae34e2dd357d2adb5988c6d932990835 0.0s
=> exporting manifest list sha256:395e62a30423d827305adf7743d1d0baaf9282c1a02146e803477fc49a085bfb 0.0s
=> naming to docker.io/library/c-client:latest      0.0s
=> unpacking to docker.io/library/c-client:latest    0.0s
=> [client] resolving provenance for metadata file    0.0s
[*] Building 2/2
  ✓ client Built
  ✓ server Built
PS C:\Users\mukhe\OneDrive\Desktop\socket-docker> |
```

## DOCKER DESKTOP (C)

