

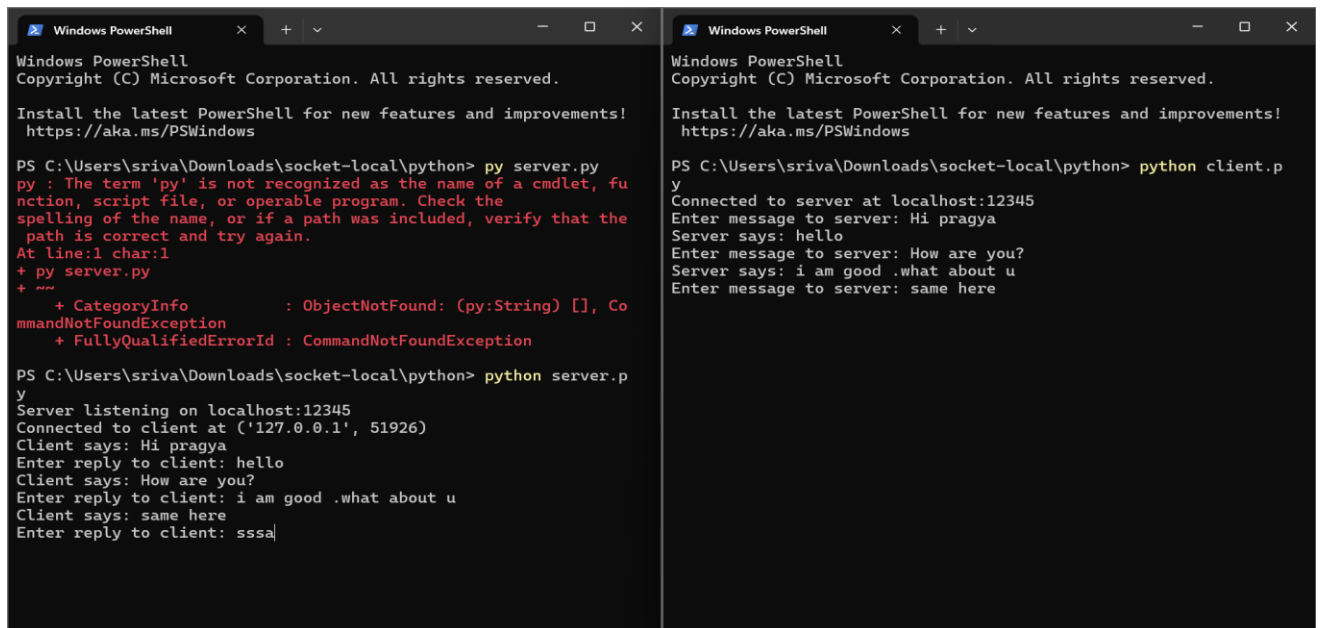
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Regd number-2141019301

## Capstone-4

### Socket-Local

### Python



```
Windows PowerShell
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PS C:\Users\sriva\Downloads\socket-local\python> py server.py
py : The term 'py' is not recognized as the name of a cmdlet, fu
nction, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the
path is correct and try again.
At line:1 char:1
+ py server.py
+ ~~~
+ CategoryInfo          : ObjectNotFound: (py:String) [], Co
mmandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

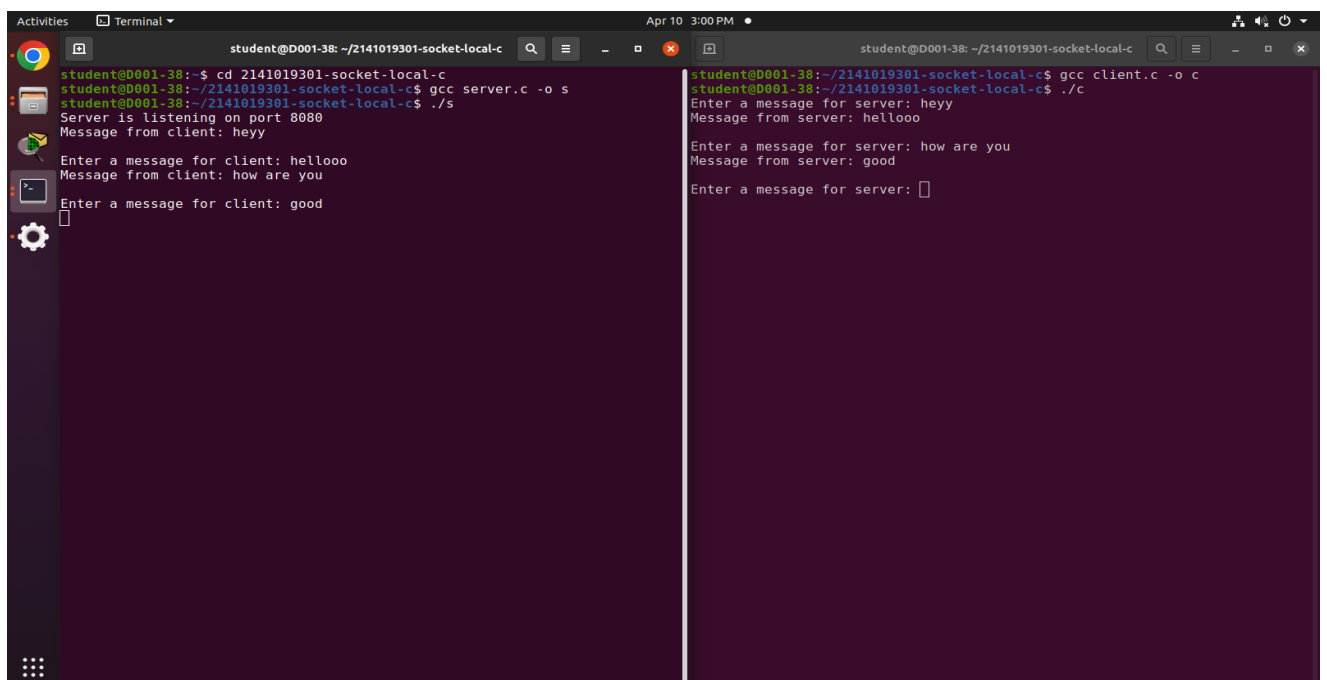
PS C:\Users\sriva\Downloads\socket-local\python> python server.p
y
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 51926)
Client says: Hi pragya
Enter reply to client: hello
Client says: How are you?
Enter reply to client: i am good .what about u
Client says: same here
Enter reply to client: sssal
```

```
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PS C:\Users\sriva\Downloads\socket-local\python> python client.p
y
Connected to server at localhost:12345
Enter message to server: Hi pragya
Server says: hello
Enter message to server: How are you?
Server says: i am good .what about u
Enter message to server: same here
```

### C

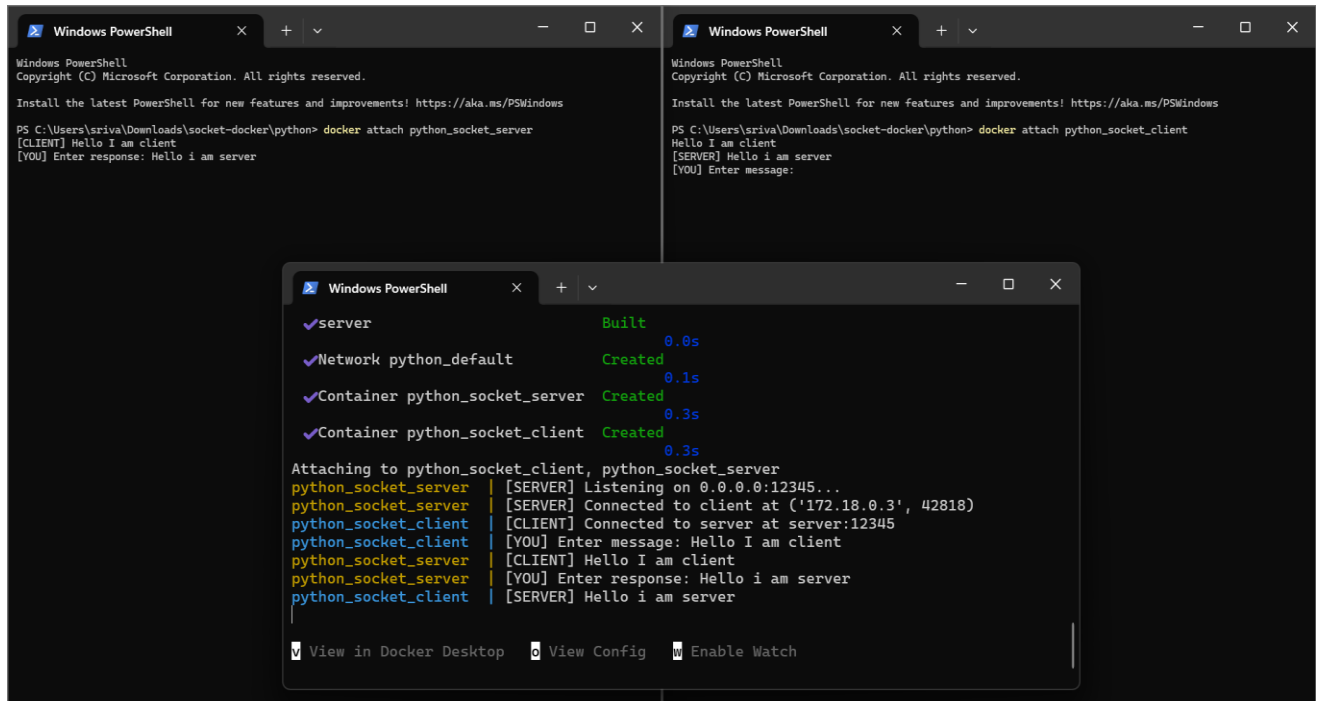


```
student@D001-38: ~/2141019301-socket-local-c
student@D001-38:~$ cd 2141019301-socket-local-c
student@D001-38:~/2141019301-socket-local-c$ gcc server.c -o s
student@D001-38:~/2141019301-socket-local-c$ ./s
Server is listening on port 8080
Message from client: hey
Enter a message for client: hellooo
Message from client: how are you
Enter a message for client: good
```

```
student@D001-38:~/2141019301-socket-local-c$ gcc client.c -o c
student@D001-38:~/2141019301-socket-local-c$ ./c
Enter a message for server: hey
Message from server: hellooo
Enter a message for server: how are you
Message from server: good
Enter a message for server: 
```

# Socket-Docker

## Python



The image shows three Windows PowerShell windows. The top-left window shows the command `docker attach python_socket_server` and its output: `[CLIENT] Hello I am client` and `[YOU] Enter response: Hello i am server`. The top-right window shows the command `docker attach python_socket_client` and its output: `Hello I am client`, `[SERVER] Hello i am server`, and `[YOU] Enter message:`. The bottom window shows the Docker Desktop interface with a list of containers: `server` (Built 0.0s), `Network python_default` (Created 0.1s), `Container python_socket_server` (Created 0.3s), and `Container python_socket_client` (Created 0.3s). It also shows the logs for the `python_socket_client` container, which include the same messages as the PowerShell windows.

```
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PS C:\Users\sriya\Downloads\socket-docker\python> docker attach python_socket_server
[CLIENT] Hello I am client
[YOU] Enter response: Hello i am server

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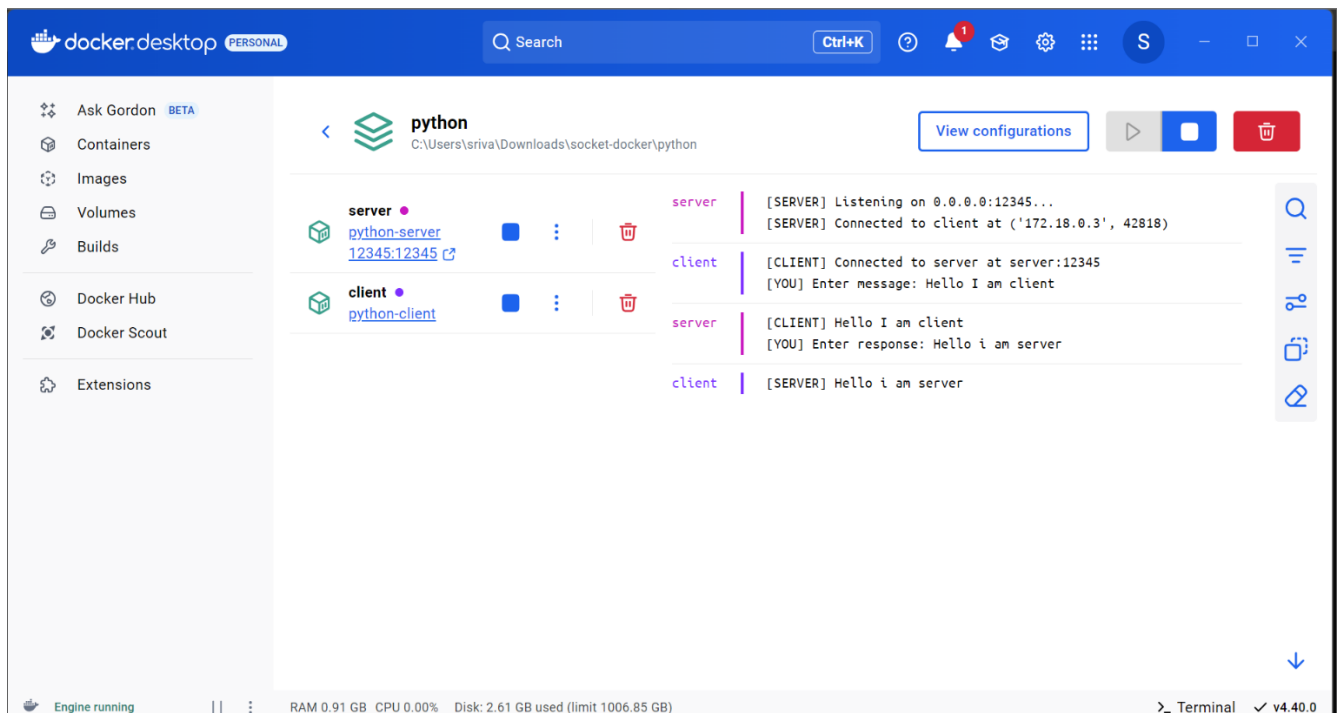
PS C:\Users\sriya\Downloads\socket-docker\python> docker attach python_socket_client
Hello I am client
[SERVER] Hello i am server
[YOU] Enter message:

server Built 0.0s
Network python_default Created 0.1s
Container python_socket_server Created 0.3s
Container python_socket_client Created 0.3s

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', 42818)
python_socket_client | [CLIENT] Connected to server at server:12345
python_socket_client | [YOU] Enter message: Hello I am client
python_socket_server | [CLIENT] Hello I am client
python_socket_server | [YOU] Enter response: Hello i am server
python_socket_client | [SERVER] Hello i am server

View in Docker Desktop View Config Enable Watch
```

## Docker



# C

```
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PS C:\Users\sriva\Downloads\socket-docker> docker-compose run server
time="2025-04-10T20:03:48+05:30" level=warning msg="C:\\Users\\sriva\\Downloads\\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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PS C:\Users\sriva\Downloads\socket-docker> docker-compose run client
time="2025-04-10T20:04:00+05:30" level=warning msg="C:\\Users\\sriva\\Downloads\\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 I am Client

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PS C:\Users\sriva\Downloads\socket-docker>
=> => exporting attestation manifest sha256:2f153bb686ef7e3563dd51211211feffdfdb150ce578c1799a097cb54531477c 0.0s
=> => exporting manifest list sha256:ac9ca4f67abd8bfcf2fd268e22480d1fd9d3db963afdee38ef9dc12f2789a9e4 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 0.0s
  ✓ server Built 0.0s
PS C:\Users\sriva\Downloads\socket-docker> |
```

## Docker

