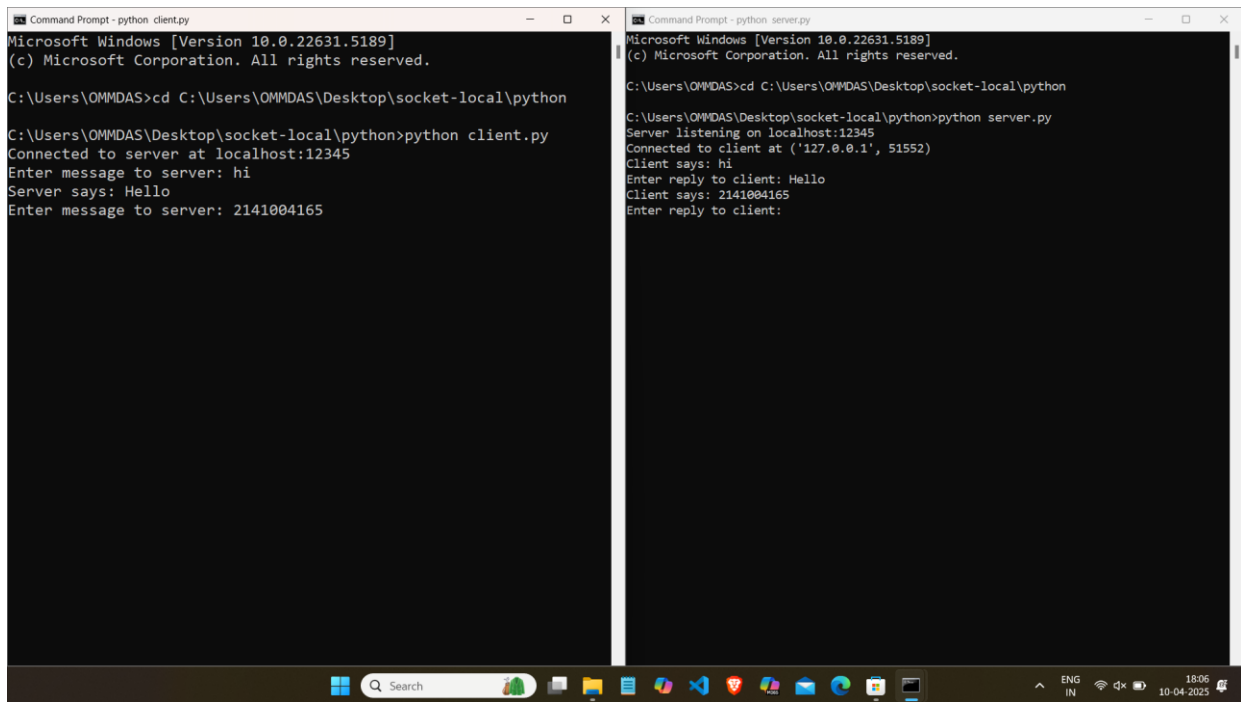


Name - Sai Subhamaya Das

Reg no.- 2141004165

Capstone 4

Python Local Code:



The image shows two side-by-side Windows Command Prompt windows. The left window is titled 'python client.py' and shows the execution of a client script. The right window is titled 'python server.py' and shows the execution of a server script. Both windows are running in a Windows 10 environment, as indicated by the taskbar at the bottom.

```
Command Prompt - python client.py
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\OMMDAS>cd C:\Users\OMMDAS\Desktop\socket-local\python

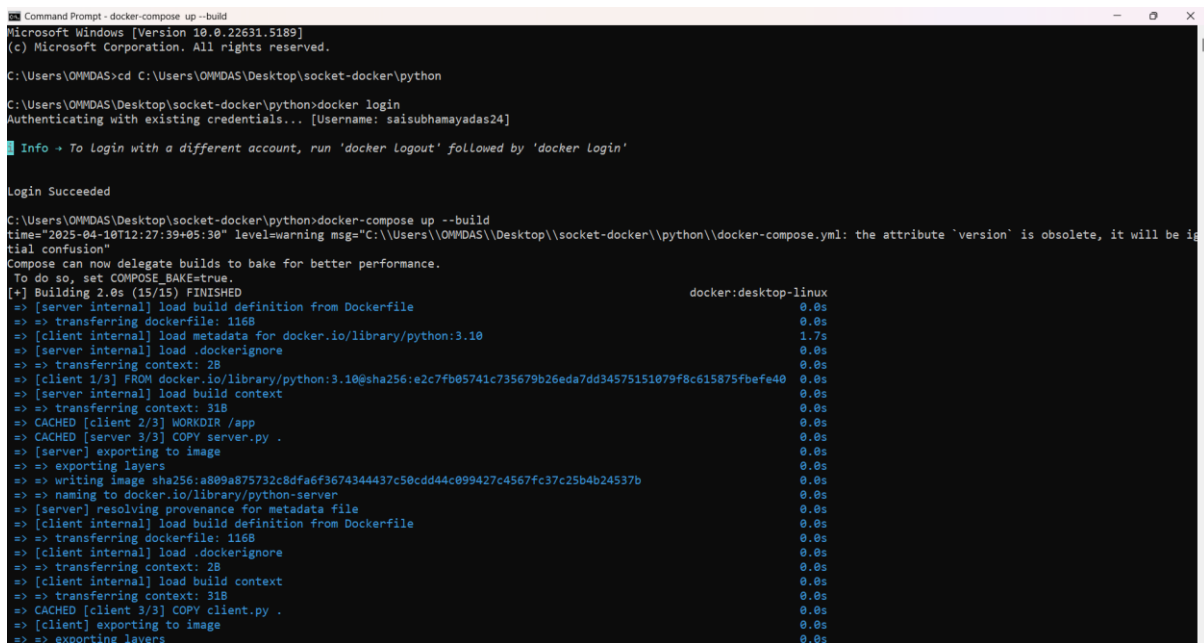
C:\Users\OMMDAS\Desktop\socket-local\python>python client.py
Connected to server at localhost:12345
Enter message to server: hi
Server says: Hello
Enter message to server: 2141004165

Command Prompt - python server.py
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\OMMDAS>cd C:\Users\OMMDAS\Desktop\socket-local\python

C:\Users\OMMDAS\Desktop\socket-local\python>python server.py
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 51552)
Client says: hi
Enter reply to client: Hello
Client says: 2141004165
Enter reply to client:
```

Python Docker Code:



The image shows a Windows Command Prompt window titled 'docker-compose up --build'. It displays the output of the 'docker login' command and the 'docker-compose up --build' command. The output shows the Docker login process for 'saisubhamayadas24' and the subsequent build process for a Docker Compose project. The build process includes downloading Dockerfile, transferring Dockerfile, and building the image.

```
Command Prompt - docker-compose up --build
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\OMMDAS>cd C:\Users\OMMDAS\Desktop\socket-docker\python

C:\Users\OMMDAS\Desktop\socket-docker\python>docker login
Authenticating with existing credentials... [Username: saisubhamayadas24]

Info - To Login with a different account, run 'docker logout' followed by 'docker login'

Login Succeeded

C:\Users\OMMDAS\Desktop\socket-docker\python>docker-compose up --build
time="2025-04-10T12:27:39+05:30" level=warning msg="C:\Users\OMMDAS\Desktop\socket-docker\python\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored in a future release, please remove it to avoid tial confusion"
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[*] Building 2.0s (15/15) FINISHED
=> [server internal] load build definition from Dockerfile 0.0s
=> [server internal] load metadata for docker.io/library/python:3.10 1.7s
=> [server internal] load .dockerignore 0.0s
=> [server internal] transfer 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
=> [server internal] transfer 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
=> [server] writing image sha256:a809a875732c8dfa6f3674344437c50cdd44c099427c4567fc37c25b4b24537b 0.0s
=> [server] 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
=> [client internal] transfer context: 116B 0.0s
=> [client internal] load .dockerignore 0.0s
=> [client internal] transfer context: 2B 0.0s
=> [client internal] load build context 0.0s
=> [client internal] transfer context: 31B 0.0s
=> CACHED [client 3/3] COPY client.py . 0.0s
=> [client] exporting to image 0.0s
=> [client] exporting layers 0.0s
```

```
Select Command Prompt - docker-compose up --build

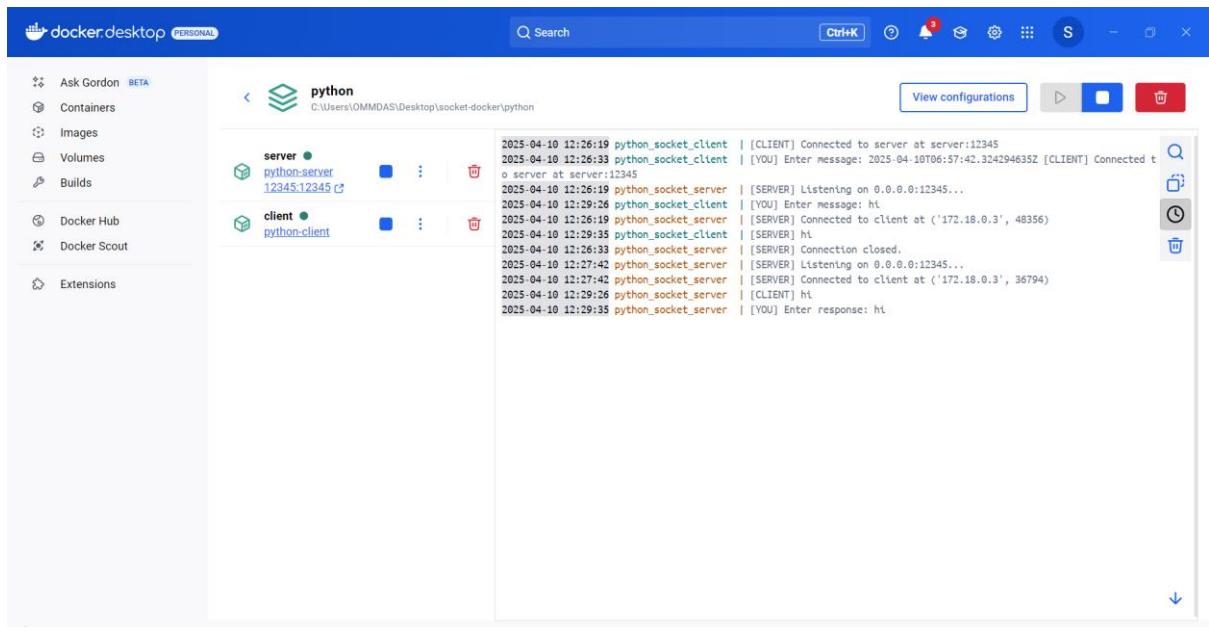
=> => writing image sha256:a809a875732c8dfa6f3674344437c50cdd44c099427c4567fc37c25b4b24537b 0.0s
=> => naming to docker.io/library/python-server 0.0s
=> [server] resolving provenance for metadata file 0.0s
=> [client internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 116B 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 sha256:9ee0ad9f48c999ddd1d956766d0329fa30d5aed390a1c2c41a35c08fa05bdb5 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', 36794)
python_socket_client | [YOU] Enter message: hi
python_socket_server | [CLIENT] hi
python_socket_server | [YOU] Enter response: hi
python_socket_client | [SERVER] hi
```

```
Command Prompt - docker attach python_socket_client
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

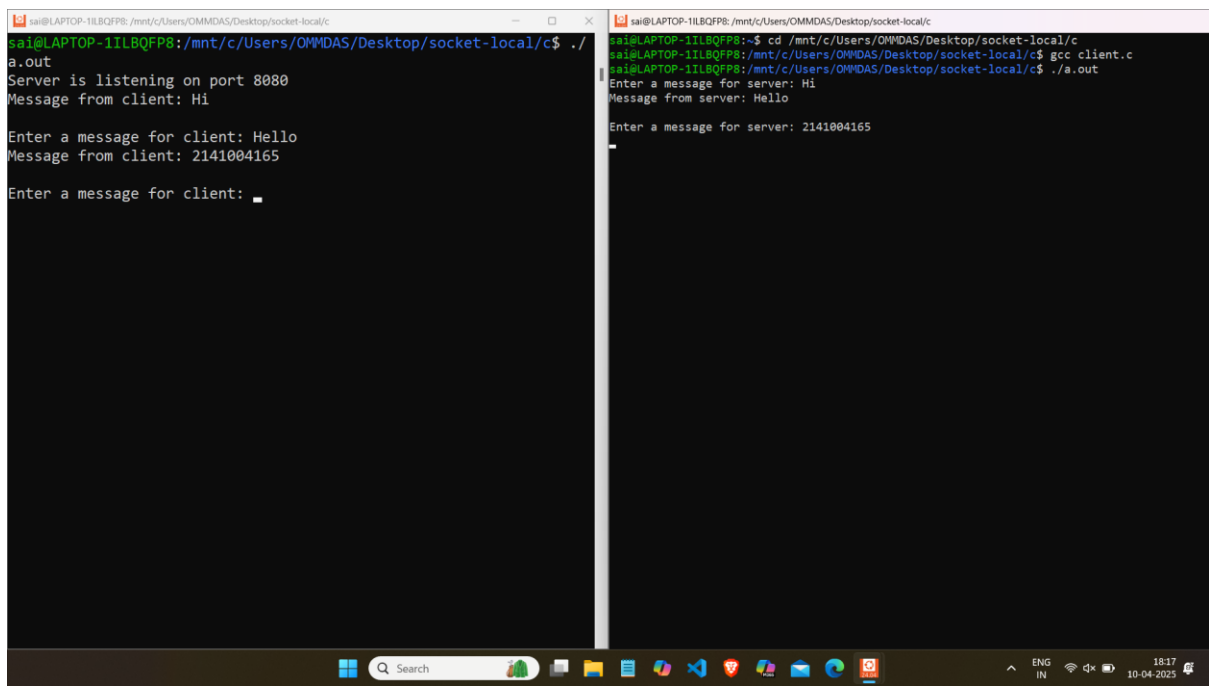
C:\Users\OWPDAS>docker attach python_socket_client
hi
[SERVER] hi
[YOU] Enter message:

Command Prompt - docker attach python_socket_server
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.

C:\Users\OWPDAS>docker attach python_socket_server
[CLIENT] hi
[YOU] Enter response: hi
```



C Local Code:



```

Command Prompt - docker-compose run server
Microsoft Windows [version 10.0.22H1.5189]
(C) Microsoft Corporation. All rights reserved.

C:\Users\OWMDAS>cd c:\Users\OWMDAS\Desktop\socket-docker\c
C:\Users\OWMDAS\Desktop\socket-docker>cd socket-docker-compose build
no configuration file provided: not found

C:\Users\OWMDAS\Desktop\socket-docker>cd socket-docker-compose build
no configuration file provided: not found

C:\Users\OWMDAS\Desktop\socket-docker>cd socket-docker-compose build
time="2023-04-18T12:52:19+08:30" level=warning msg="C:\Users\OWMDAS\Desktop\socket-docker\c\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 51.8s (22/22) FINISHED

>> [server internal] load build definition from Dockerfile
0.0s
>> transferring dockerfile: 2918
0.0s
>> [client internal] load metadata for docker.io/library/gcc:latest
0.9s
[server web] library/gcc pull token for registry-1.docker.io
0.0s
>> [server internal] load .dockerignore
0.0s
>> transferring context: 20
0.0s
[client 1/6] FROM docker.io/library/gcc:latest@sha256:9f5f98eeab238fae0bc013c1acf9dc0599e0efc726073f14449fddc1
41.9s
>> resolve docker.io/library/gcc:latest@sha256:9f5f98eeab238fae0bc013c1acf9dc0599e0efc726073f14449fddc1
0.0s
>> sha256:9f5f98eeab238fae0bc013c1acf9dc0599e0efc726073f14449fddc1 7.6ksha / 7.6ksha
0.0s
>> sha256:54ee58e0e2477f6c1c1cf8a0e205521c1272d170e4f7 7.3ksha / 7.3ksha
0.0s
>> sha256:e4d09c0e2d22b06b0ef1f8a35a5e2c8eebc160ef7a7c1bbabc0c9936dcf 157.7ksha / 157.7ksha
22.4s
>> sha256:14d09c0e2c796ee0c9eaa0a45e2c1100c27340726073f14449fddc1 2.4ksha / 2.4ksha
0.0s
>> sha256:a0f74381f5933ba043069c437978931255f458a3a3773c0bc0 2.8ksha / 2.8ksha
3.5s
>> sha256:407c7d7514d05e0cf4f65974d99c1e9f0067045e09ffcf60a7680c2d0596d0 9.6ksha / 9.6ksha
1.5s
>> sha256:420973022307f6043074e482706c13f3300602d0596d0 1.7ksha / 1.7ksha
2.2s
>> extracting sha256:a0f74381f5933ba043069c437978931255f458a3a3773c0bc0
0.1s
>> extracting sha256:e4d09c0e2d22b06b0ef1f8a35a5e2c8eebc160ef7a7c1bbabc0c9936dcf
19.2s
>> extracting sha256:407c7d7514d05e0cf4f65974d99c1e9f0067045e09ffcf60a7680c2d0596d0
0.0s
>> extracting sha256:e4d09c0e2d22b06b0ef1f8a35a5e2c8eebc160ef7a7c1bbabc0c9936dcf
0.0s
[server internal] load build context
0.0s
>> transferring context: 2.8ksha
1.1s
>> CACHED [client 2/6] WORKDIR /app
0.1s
>> [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
0.7s
>> [server 6/6] RUN gcc -o client client.c
0.5s
>> [server] exporting to image
0.1s
>> writing image sha256:872840f70cc147912077cf5811c7423f11b10ef3c0ee44ed59570fc12e30a
0.0s
>> naming to docker.io/library/c-server
0.0s
>> [server] resolving provenance for metadata file
0.0s
>> [client internal] load build definition from Dockerfile
0.0s
>> transferring dockerfile: 2918
0.0s
>> [client internal] load .dockerignore
0.0s
>> transferring context: 20
0.0s
>> [client internal] load build context
0.0s
>> transferring context: 50
0.0s
>> CACHED [client 1/6] 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
0.0s
>> exporting layers
0.0s
>> writing image sha256:4bf98cae8bd3852c0ee4ae73472c0ee84d50be91118550b41b022fe08ba050
0.0s
>> naming to docker.io/library/c-client
0.0s
>> [client] resolving provenance for metadata file
0.0s
[*] Building 2/2
0.0s
>> client built
0.0s
>> client built
0.0s

C:\Users\OWMDAS\Desktop\socket-docker\c>cd socket-docker-compose run server
time="2023-04-18T12:53:44+08:30" level=warning msg="C:\Users\OWMDAS\Desktop\socket-docker\c\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_chained created
server waiting for connection...
0.1s

```

```
Command Prompt - docker-compose run server
(C) Microsoft Corporation. All rights reserved.

C:\Users\QWIDAS>cd C:\Users\QWIDAS\Desktop\socket-docker\c
C:\Users\QWIDAS\Desktop\socket-docker\c>docker-compose run server
time="2025-04-10T13:05:29+05:30" level=warning msg="C:\Users\QWIDAS\Desktop\socket-docker\c\docker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
Server waiting for connection...
hello

Command Prompt - docker-compose run client
C:\Users\QWIDAS>cd C:\Users\QWIDAS\Desktop\socket-docker\c
C:\Users\QWIDAS\Desktop\socket-docker\c>docker-compose run client
time="2025-04-10T13:04:26+05:30" level=warning msg="C:\Users\QWIDAS\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
    0.1s
[*] Running 1/1
  ✔ Container chat_server Started
    0.2s
Connected to server!
Client: hi
yes
```

