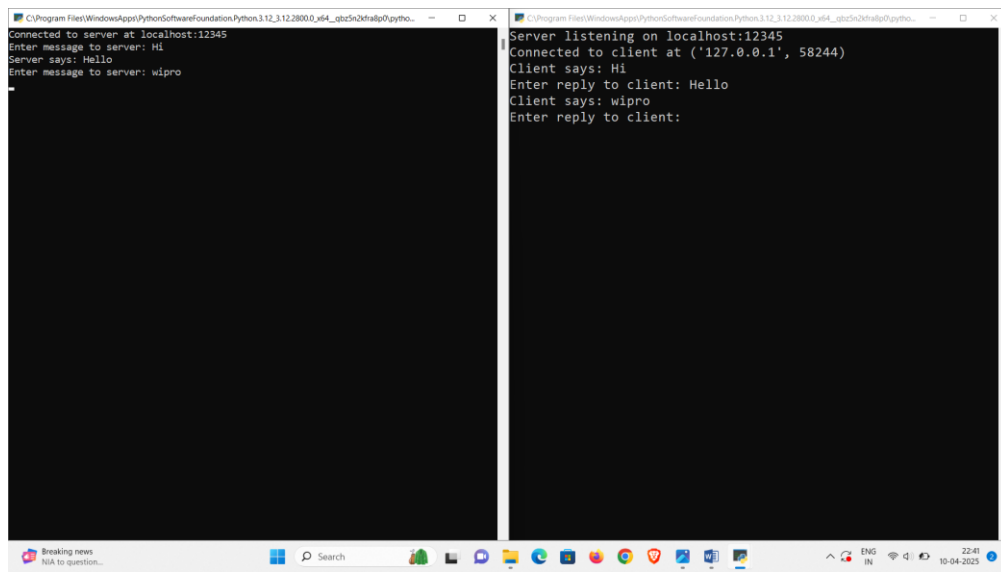


Name – Abinash Samantaray

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## CAPSTONR 4

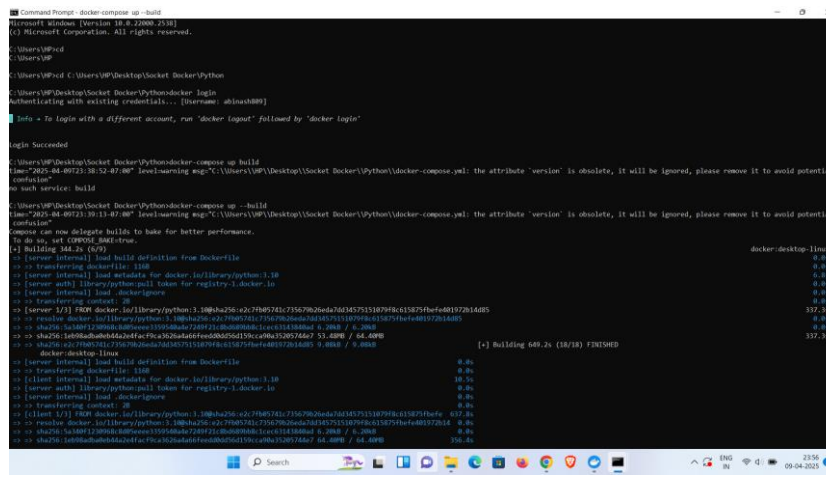
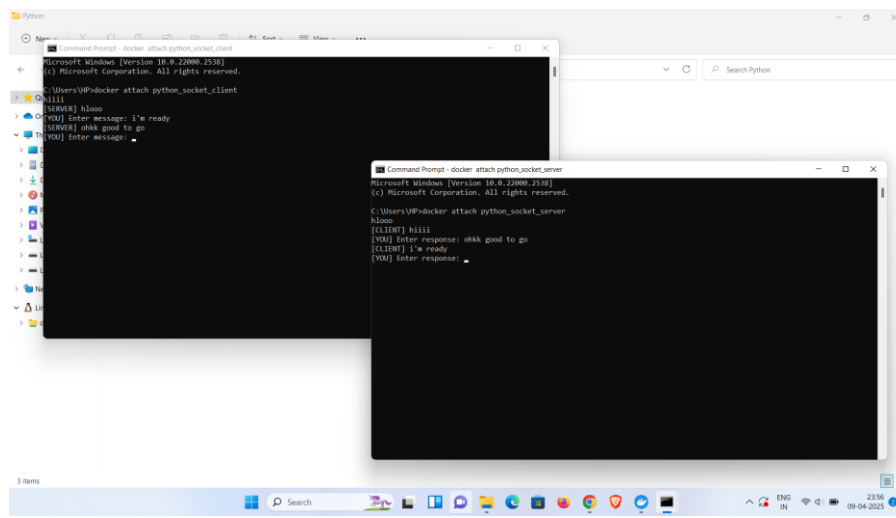
### PYTHON LOCAL:



The image shows two side-by-side terminal windows running Python scripts. The left window shows a server script that has connected to a client at localhost:12345. The client has sent the message 'Hi', and the server has responded with 'Hello'. The client has then sent 'wipro', and the server is waiting for a reply. The right window shows a client script that has connected to a server at localhost:12345. The server has sent the message 'Hi', and the client has responded with 'Hello'. The client has then sent 'wipro', and the client is waiting for a reply. The Windows taskbar is visible at the bottom of the image.

```
C:\Program Files\WindowsApps\PythonSoftwareFoundation.Python.3.12.312.28000_x64_gbln2khalp0.pytho...  
Connected to server at localhost:12345  
Enter message to server: Hi  
Server says: Hello  
Enter message to server: wipro  
Enter reply to server:   
C:\Program Files\WindowsApps\PythonSoftwareFoundation.Python.3.12.312.28000_x64_gbln2khalp0.pytho...  
Server listening on localhost:12345  
Connected to client at ('127.0.0.1', 58244)  
Client says: Hi  
Enter reply to client: Hello  
Client says: wipro  
Enter reply to client:   
Breaking news  
NIA to question...  
Search  
ENG  
IN  
22:41  
10-04-2025
```

# PYTHON DOCKER:





## C LOCAL:

```
Windows PowerShell
root@DESKTOP-LHQ3E8R:~# cd /mnt/c/Users/HP/Desktop/socccccc/C Local\ Code
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# gcc client.c -o client
gcc: error: unrecognized command-line option '-o'
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# gcc client.c -o client
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# ./client
Enter a message for server: Hello
Message from server: Hi

Enter a message for server: setup is ready
Message from server: good to go

Enter a message for server: 
```

```
Windows PowerShell
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# gcc server.c -o server
Setting up libde265-0:amd64 (1.0.15-1build3) ...
Setting up libc-dev-bin (2.39-0ubuntu8.4) ...
Setting up libcc1-0:amd64 (14.2.0-4ubuntu2-24.04) ...
Setting up liblsan0:amd64 (14.2.0-4ubuntu2-24.04) ...
Setting up libitm1:amd64 (14.2.0-4ubuntu2-24.04) ...
Setting up cpp-x86-64-linux-gnu (13.3.0-6ubuntu2-24.04) ...
Setting up libgcc-13-dev:amd64 (13.3.0-6ubuntu2-24.04) ...
Setting up libc6-dev:amd64 (2.39-0ubuntu8.4) ...
Setting up cpp-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...
Setting up cpp-13 (13.3.0-6ubuntu2-24.04) ...
Setting up gcc-13-x86-64-linux-gnu (13.3.0-6ubuntu2-24.04) ...
Setting up gcc-13 (13.3.0-6ubuntu2-24.04) ...
Setting up cpp (4:13.2.0-7ubuntu1) ...
Setting up gcc-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...
Setting up gcc (4:13.2.0-7ubuntu1) ...
Setting up libheif-plugin-aomdec:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libheif1:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libg3:amd64 (2.3.3-9ubuntu5) ...
Setting up libc-devtools (2.39-0ubuntu8.4) ...
Setting up libheif-plugin-libde265:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libheif-plugin-aomenc:amd64 (1.17.6-1ubuntu4.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
Processing triggers for man-db (2.12.0-4build2) ...
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# gcc server.c -o server
root@DESKTOP-LHQ3E8R:/mnt/c/Users/HP/Desktop/socccccc/C Local Code# ./server
Server is listening on port 8080
Message from client: Hello

Enter a message for client: Hi
Message from client: setup is ready

Enter a message for client: good to go
```

## C DOCKER:

The image displays two side-by-side Windows PowerShell terminal windows. Both windows show the same initial text: 'Windows PowerShell', 'Copyright (C) Microsoft Corporation. All rights reserved.', and a message about installing the latest PowerShell features. The left window shows the execution of 'docker-compose run client', which outputs a warning about the 'version' attribute in the Docker Compose file and then shows the creation and starting of the 'chat\_server' container. The right window shows the execution of 'docker-compose run server', which also outputs the same warning and shows the creation of the 'c\_chatnet' network. It then displays 'Server waiting for connection...' and 'Hello wipro'.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\WP\Desktop\Socket Docker> docker-compose run client
time="2025-04-10T22:06:56-07:00" level=warning msg="C:\Users\WP\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
```

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\WP\Desktop\Socket Docker> docker-compose run server
time="2025-04-10T22:06:28-07:00" level=warning msg="C:\Users\WP\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 0.8s

Server waiting for connection...
Hello
wipro
```

```
title=2023-08-10T21:59:15-07:00 level=warning msg=C:\Users\WOP\Desktop/socket Docker>c:\docker>conda.yml: the attribute "version" is obsolete, it will be ignored, please remove it to avoid potential c
Compose can now delegate builds to bake for better performance.
```

```
[+] Building 376.2s (23/23) FINISHED                                docker:desktop-linux
=> Server internal load build definition from Dockerfile           0.0s
=> transferring dockerd:latest                                     30.0s
[client internal] load metadata for docker.io/library/gcc:latest   8.0s
[server auth] library/gcc:pull token for registry-1.docker.io      0.0s
[Server internal] load dockergoimage                              0.0s
=> transferring context: 2B                                         0.0s
[client 3/6] FROM docker.io/library/gcc:latest@sha256:9f5f98eead2b3fafe0eac38c3e31acf9dc0599eb6d7c776677: 36d.1s
[server resolve] sha256:9f5f98eead2b3fafe0eac38c3e31acf9dc0599eb6d7c776677: 36d.1s
[server pull] adfb303c97755ed3e3e3c97869a6c9798921825f82af68da2d7c7ecb2 2.61kB / 2.61kB    30.0s
=> sha256:b5f98eead2b3fafe0eac38c3e31acf9dc0599eb6d7c776677: 6.66kB / 7.66kB             0.0s
=> sha256:1ddae99eb9dbab32cf3ffca13bc3e181fba0bd80cb0552bac3a7176d7f9ea0f: 2.49kB / 2.49kB    0.0s
=> sha256:f4899eb9dbab32cf3ffca13bc3e181fba0bd80cb0552bac3a7176d7f9ea0f: 7.36kB / 7.36kB     30.0s
=> sha256:dcd905c9b9dbab32cf3ffca13bc3e181fba0bd80cb0552bac3a7176d7f9ea0f: 187.73MB / 187.73MB 0.0s
=> sha256:b07fc97d3a5debfefcfce49f189be1c9f0e870699ffrc9a76882c45e96b8 9.41kB / 9.41kB     0.0s
=> sha256:1ddae99eb9dbab32cf3ffca13bc3e181fba0bd80cb0552bac3a7176d7f9ea0f: 1.78kB / 1.78kB 0.0s
=> extracting sha256:a8ffcfd35b187f3569cbb3aac2087f6099c6cf9798921825f82af68da2d7c7ecb2       0.1s
=> extracting sha256:c8d89b3c18e18a3aa3187f64c2b07fec08257d6853c1b3dad9642a559c0b         0.0s
=> extracting sha256:b07fc97d3a5debfefcfce49f189be1c9f0e870699ffrc9a76882c45e96b8              0.0s
[Server internal] load build context                               0.0s
=> transferring context: 2.93kB                                      0.0s
CACHED [client 2/6] <none>/App                                    0.0s
[Server 3/6] COPY server.c .                                        0.0s
[Server 3/6] COPY client.c .                                       0.0s
[Server 3/6] RUN gcc -o server server.c                            0.0s
[Server 3/6] RUN gcc -o client client.c                             0.0s
[Server] exporting to Image                                        0.0s
=> exporting layers                                                 0.1s
=> writing image sha256:51aaeda6356ef6a27f436d72ace6f33c527b6d66c79c330d2a8d399e1eba        0.0s
=> naming to docker.io/library/c-client                             0.0s
[Client resolving provenance for metadata file                    0.0s
[client internal] load build definition from Dockerfile          0.0s
[client resolve] sha256:51aaeda6356ef6a27f436d72ace6f33c527b6d66c79c330d2a8d399e1eba: 20B 0.0s
[client auth] library/gcc:pull token for registry-1.docker.io    0.0s
[client internal] load dockergoimage                              0.0s
=> transferring context: 2B                                         0.0s
[client internal] load build context                               0.0s
=> transferring context: 8kB                                          0.0s
CACHED [client 3/6] COPY server.c .                                 0.0s
CACHED [client 3/6] COPY client.c .                                  0.0s
CACHED [client 3/6] RUN gcc -o server server.c                     0.0s
CACHED [client 3/6] RUN gcc -o client client.c                      0.0s
[client] exporting to Image                                        0.0s
=> exporting layers                                                 0.0s
=> writing image sha256:b9bc7caa32f7c7cd0292996c32b08aff20b8da2d7c7ecb2f18f6f8096963e22        0.0s
=> naming to docker.io/library/c-client                             0.0s
[Client resolving provenance for metadata file                    0.0s
[client] resolving provenance for metadata file                   0.0s
[+] Building 2/2                                                    0.0s
#server built                                                      0.0s
PS C:\Users\WOP\Desktop\socket Docker>c|
```

