

PYTHON LOCAL-

The image shows two separate windows of a terminal or command-line interface. Both windows have the title bar 'C:\windows\py.exe' and show the same text output, indicating a successful connection and message exchange between a client and a server using Python's socket module.

```
Connected to server at localhost:12345
Enter message to server: hii
Server says: hello
Enter message to server: hello
Server says: how r u
Enter message to server: fine

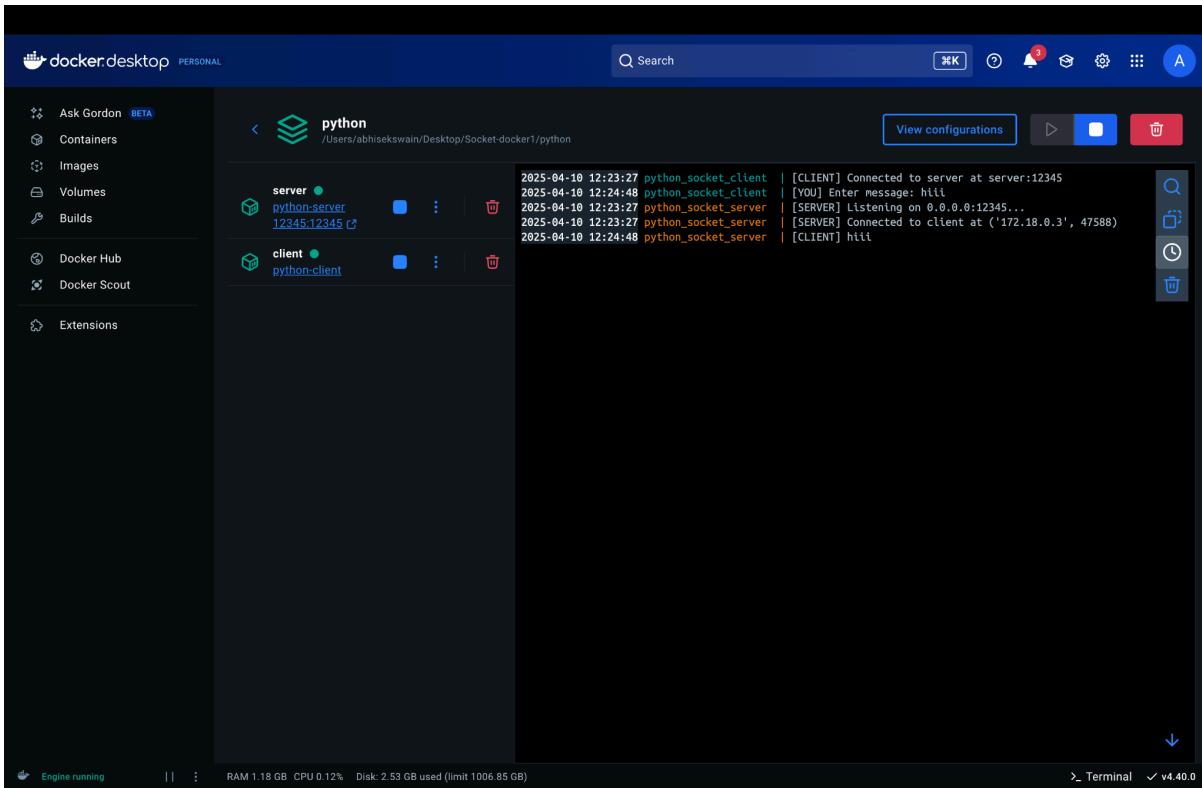
Server listening on localhost:12345
Connected to client at ('127.0.0.1', 53821)
Client says: hii
Enter reply to client: hello
Client says: hello
Enter reply to client: how r u
Client says: fine
Enter reply to client: |
```

PYTHON DOCKER-

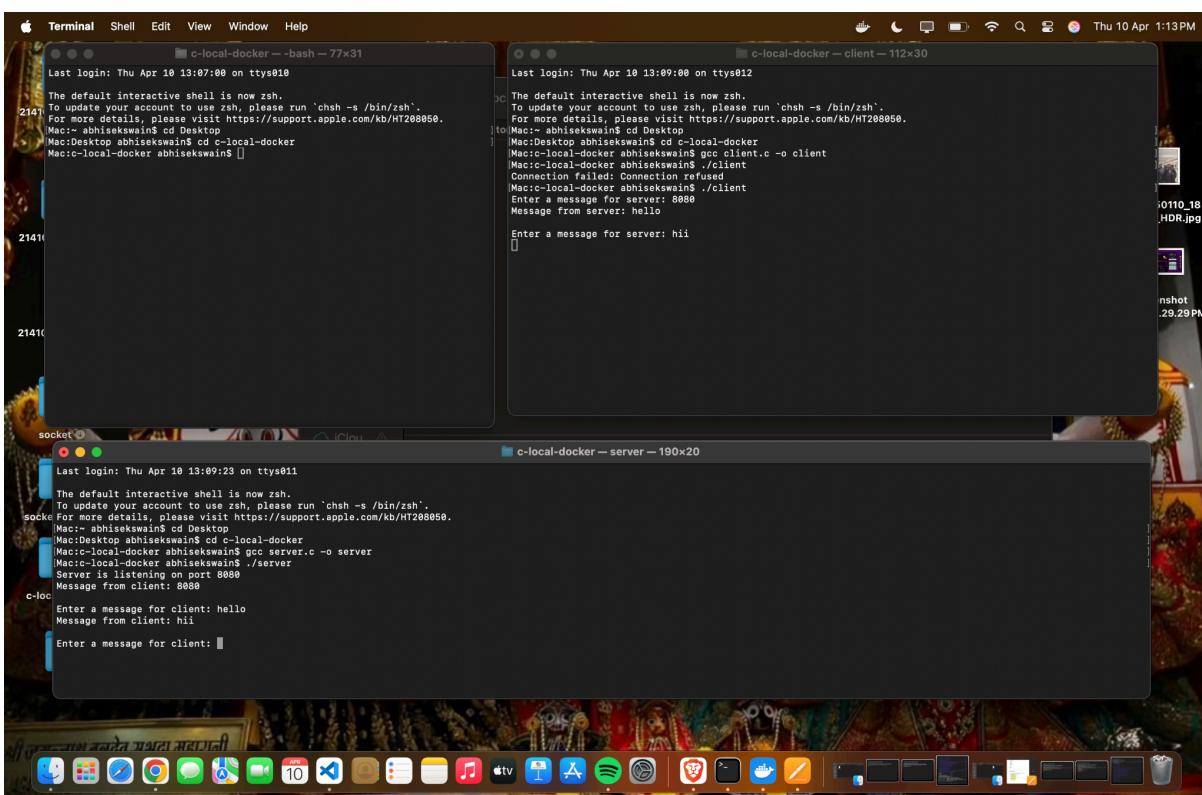
The image shows a Mac OS X desktop with two terminal windows open. The left window shows a client-side interaction with a Docker container, while the right window shows a server-side interaction. Both terminals are running Python code using Docker's socket API.

```
Last login: Thu Apr 10 12:23:35 on ttys004
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Mac:~ abhishekswain$ docker attach python_socket_client -- 85x28
[client] hii
[YOU] Enter response: |
```

```
Last login: Thu Apr 10 12:14:40 on ttys005
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Mac:~ abhishekswain$ cd Desktop
Mac:Desktop abhishekswain$ cd Socket-docker1
Mac:Socket-docker1 abhishekswain$ cd python
Mac:python abhishekswain$ docker-compose up --build
WARN[0000] /Users/abhishekswain/Desktop/Socket-docker1/python/docker-compose.y
the attribute `version` is obsolete, it will be ignored, please remove it to av
oid potential confusion
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[+] Building 4.1s (15/15) FINISHED
          docker:desktop-linu
=> [server internal] load build definition from Dockerfile
=> => transferring dockerfile: 163B
=> [client internal] load metadata for docker.io/library/python:3.10
=> [server internal] load .dockerignore
=> => transferring context: 28
=> [client 1/3] WORKDIR /app
=> [server internal] load build context
=> => transferring context: 78B
=> CACHED [client 2/3] WORKDIR /app
=> CACHED [server 3/3] COPY server.py .
=> [server] exporting to image
=> => exporting layers
=> => writing image sha256:9c5905dabb42b77a39d5efa4ff03cf3925d9ef594df5c
=> => naming to docker.io/library/python-server
=> [server] resolving provenance for metadata file
=> [client internal] load build definition from Dockerfile
=> => transferring dockerfile: 163B
=> [client internal] load .dockerignore
=> => transferring context: 28
=> [client internal] load build context
```



C LOCAL-



C DOCKER-

The screenshot shows two Terminal windows side-by-side on a Mac desktop. Both windows are running Docker commands.

Left Terminal:

```
Last login: Thu Apr 10 12:52:07 on ttys007
The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208050.
Mac:~ abhisekswain$ cd Desktop
Mac:Desktop abhisekswain$ cd /Users/abhisekswain/Desktop/docker
Mac:docker abhisekswain$ docker-compose run server
WARN[0000] /Users/abhisekswain/Desktop/docker/docker-compose.yml: the attribute 'version' is obsolete
it will be ignored, please remove it to avoid potential confusion
[+] Creating server ...
  Network docker_chatnet Created
Server waiting for connection...
hi
```

Right Terminal:

```
Last login: Thu Apr 10 12:46:37 on ttys007
The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208050.
Mac:~ abhisekswain$ cd Desktop
Mac:Desktop abhisekswain$ docker-compose build
Mac:docker abhisekswain$ docker-compose up
WARN[0000] /Users/abhisekswain/Desktop/docker/docker-compose.yml: the attribute 'version' is obsolete
Compose can now delegate builds to bake for better performance.
[+] Do so, see COMPOSE_BAKE=true.
[+] Building 68.7s (2/22) FINISHED
   => [server internal] buildfile definition from Dockerfile
   => > transferring dockerfile: 33B
      0.0s
   => > [client internal] load metadata for docker.io/library/gcc:latest
      0.0s
   => [server auth] library/gcc:pull 0.0s for registry-1.docker.io
      0.0s
   => [server internal] load .dockerrcignore
      0.0s
   => > transferring context: 2B
      0.0s
   => [client 1/6] FROM docker.io/library/gcc:latest@sha256:95f598eaa2b238fae0bc0a18c9e31ac1f9dc0597e5a0ef2c70671f14449fdcb1
      0.0s
   => > resolve docker.io/library/gcc@latest@sha256:95f598eaa2b238fae0bc0a18c9e31ac1f9dc0597e5a0ef2c70671f14449fdcb1
      0.0s
   => > sha25s:dd8a3e91#87f5d7fa2229e0a44082ae85c453d471eb5d5eccdc4841bc1ac564 149.20MB / 149.20MB
      43.7s
   => > sha25s:5e79f81bbbaace4fb187f01ee7c9d8da4401831ca46acd02e0802d2f0f0a226 9.61KB / 9.61KB
      0.0s
   => > sha25s:644a8d8ff497574663b3fe1e1#35537622a8c7b6d5228d1e15bf350918 7.36KB / 7.36KB
      0.0s
   => > sha25s:ceea2e15dbeff30a2d39a15b5d86ea2ac3f8784d2861c7c672a3157d96cf3e 2.49KB / 2.49KB
      0.0s
   => > sha25s:02e19e4bbdb3993a377ed6954268729999b8314b3b756821e6a47e4a3e8d9b 2.73MB / 2.73MB
      0.7s
   => > sha25s:95f598eaa2b238fae0bc0a18c9e31ac1f9dc0597e5a0ef2c70671f14449fdcb1 7.64KB / 7.64KB
      0.0s
   => > sha25s:4870e51f233498fb28c5d91c171472d35894cd0b591c93def1de441594f 1.88KB
      0.0s
   => > extracting sha25s:02e19e4bbdb3993a377ed6954268729999b8314b3b756821e6eaa74a2c84d8b
      0.1s
   => > extracting sha25s:id9a95198rfr77fa2229e0a44082ae85c453d471eb5d5eccdc4841bc1ac564
      0.2s
   => > extracting sha25s:5e79f81bbbaace4fb187f01ee7c9d8da4401831ca46acd02e0802d2f0f0a226
      0.0s
   => > extracting sha25s:644a8d8ff497574663b3fe1e1#35537622a8c7b6d5228d1e15bf350918
      0.0s
   => [server internal] load build context
      0.0s
   => > transferring context: 3.02KB
      0.0s
   => CACHED [client 2/6] WORKDIR /app
      0.2s
   => [server 3/6] COPY server.c .
      0.0s
   => [server 4/6] COPY client.c .
      0.0s
   => [server 5/6] RUN gcc -o server server.c
      0.0s
   => [server 6/6] RUN gcc -o client client.c
      0.1s
   => [server] exporting to image
      0.0s
```

