

Running Container in Interactive mode

Python Program To be Run in Container: -

python program to print the sum of two user-defined numbers:

```
python

# Program to find the sum of two numbers (user-defined)

# Taking input from the user
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

# Calculating sum
sum = num1 + num2

# Displaying result
print("The sum of", num1, "and", num2, "is:", sum)
```

Output: -

The screenshot shows the Visual Studio Code interface with a Python application running in an interactive Docker container. The left sidebar displays the project structure with files like Dockerfile, myapp.py, and Dockerfile.U. The main editor shows the code for calculating the sum of two numbers. The terminal tab at the bottom shows the command being run and the resulting output, where the user inputs 20 and 40, and the output is 60.0.

```
PS C:\Users\pande\Desktop\project\myapp\interactive> python myapp.py
Enter first number: 20
Enter second number: 40
The sum of 20.0 and 40.0 is: 60.0
PS C:\Users\pande\Desktop\project\myapp\interactive>
```

Create Docker File: -

The screenshot shows the Visual Studio Code interface. On the left is the Explorer sidebar with a project structure:

```
myapp
  ├── interactive
  ├── public
  ├── src
  └── .gitignore
```

The main editor area shows a Dockerfile and a myapp.py file. The Dockerfile contains:WORKDIR /myapp
COPY ./myapp.py .
CMD ["python", "./myapp.py"]

The myapp.py file contains a simple script that prompts for two numbers and prints their sum:#!/usr/bin/python
print("Enter first number: ")
num1 = input()
print("Enter second number: ")
num2 = input()
sum = float(num1) + float(num2)
print("The sum of " + num1 + " and " + num2 + " is: " + str(sum))

The terminal tab at the bottom shows the output of running the application:

```
PS C:\Users\pande\Desktop\project\myapp\interactive> python myapp.py
Enter first number: 20
Enter second number: 40
The sum of 20.0 and 40.0 is: 60.0
PS C:\Users\pande\Desktop\project\myapp\interactive>
```

Now, Create Docker Image: -

The screenshot shows the Visual Studio Code interface. The Dockerfile is selected in the Explorer sidebar.

The terminal tab at the bottom shows the output of running the docker build command:

```
PS C:\Users\pande\Desktop\project\myapp\interactive> docker build -t python01 ...
PS C:\Users\pande\Desktop\project\myapp\interactive> docker build -t python01 ...
> [auth] library/python:pull token for registry-1.docker.io
> [internal] load .dockerignore
> => transferring context: 2B
> [internal] load build context
> => transferring context: 322B
> [1/3] FROM docker.io/library/python:latest@sha256:eb1f7011589cc717a5112e6fdb56217e9e734a57e4cb50216e912b068b392a8
> => resolve docker.io/library/python:latest@sha256:eb1f7011589cc717a5112e6fdb56217e9e734a57e4cb50216e912b068b392a8
> => sha256:1a907fccdb52406789b7f76c3813fc14bf1b10165dfe1e0fc0bca415e5 248B 0.08
> => sha256:2fbf02c04055ee28543076a502ce51fa1a1895e386e4462739fb1b526dc371425e 2.10MB 0.1s
> => sha256:8f5fb10be9dd4525dc6941af4e2a587d1d3edb7442cda0eebb1a389b6183dd 0B 0.09MB
> => sha256:23d55a674b2e3641a37b7f2053f00af6feaf2a89576ffb917d47b4deaf24591 0B 235.94MB
> => sha256:72e8e93b0d018b135d833207c6feaba205653ac52e0a80d214477ec0de239dee 0B 67.78MB
```

Created Docker Image: -

The screenshot shows the Visual Studio Code interface. On the left is the Explorer sidebar with a 'PROJECT' folder containing 'myapp' (with 'interactive' and 'public' subfolders), '.gitignore', 'Dockerfile', 'package-lock.json', 'package.json', and 'README.md'. The 'Dockerfile' is selected. In the center, the Editor tab shows the Dockerfile content:

```
myapp > interactive > Dockerfile > ...
2
3 WORKDIR /myapp
4
5 COPY ./myaap.py .
6
7 CMD [ "python", "./myaap.py" ]
```

Below the editor is the Terminal tab, which displays the command 'docker image ls' and its output:

```
PS C:\Users\pande\Desktop\project\myapp\interactive> docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
python01 latest 5fd5868de2e6 15 seconds ago 1.61GB
<none> <none> 99cd62671d91 24 hours ago 2.11GB
```

The status bar at the bottom indicates 'Ln 7, Col 31' and other file-related information.

Name: - python01

Run a Container without Interactive Mode: -

The screenshot shows the Visual Studio Code interface. The Explorer sidebar is identical to the previous one. The Editor tab shows the same Dockerfile content as before. The Terminal tab now shows the command 'docker run' being run:

```
PS C:\Users\pande\Desktop\project\myapp\interactive> docker run 5fd5868de2e6
Enter first number: Traceback (most recent call last):
  File "/myapp/.myaap.py", line 4, in <module>
    num1 = float(input("Enter first number: "))
               ^^^^^^^^^^^^^^
EOFError: EOF when reading a line
```

The status bar at the bottom indicates 'Ln 7, Col 31' and other file-related information.

Command: - Docker run image_id

Run a Container in Interactive Mode: -

The screenshot shows the VS Code interface with a dark theme. On the left is the Explorer sidebar showing a project structure with files like Dockerfile, myapp.py, package-lock.json, package.json, and README.md. The main area displays the Dockerfile content:

```

myapp > interactive > Dockerfile > ...
2
3 WORKDIR /myapp
4
5 COPY ./myapp.py .
6
7 CMD [ "python", "./myapp.py" ]

```

Below the code editor is the Terminal tab, which shows the output of running a Docker container:

```

PS C:\Users\pande\Desktop\project\myapp\interactive> docker run -it 5fd5868de2e6
Enter first number: 10
Enter second number: 20
The sum of 10.0 and 20.0 is: 30.0
PS C:\Users\pande\Desktop\project\myapp\interactive>

```

The status bar at the bottom indicates the file is main*, and there are 0 errors, 0 warnings, and 3 info messages.

Command: - Docker run -it image_id

Docker Desktop: -

Images: -

The screenshot shows the Docker Desktop application window. The left sidebar has options like Ask Gordon (BETA), Containers, Images (selected), Volumes, Kubernetes, Builds, Models, MCP Toolkit (BETA), Docker Hub, Docker Scout, and Extensions. The main area is titled 'Images' with a 'Local' tab selected, showing 'My Hub'. It displays 2 images with the following details:

Name	Tag	Image ID	Created	Size	Actions
<none>	<none>	99cd62671d91	24 hours ago	2.1 GB	
python01	latest	5fd5868de2e6	4 minutes ago	1.61 GB	

At the bottom, it says 'Showing 2 items'. The status bar at the bottom shows 'Engine running', 'RAM 4.70 GB CPU 9.21%', 'Disk: 5.80 GB used (limit 1006.85 GB)', and 'Terminal v4.50.0'.

Container: -

See last two Container....