

CREATING A DOCKER CONTAINER ENVIRONMENT FOR PYTHON DEVELOPMENT:

1. Creating a Project Directory for Docker (docker-app)

2. Creating sample Python file:

a. App.py:
app.py

```
def main():  
    print("Hello, world!")
```

```
if __name__ == "__main__":  
    main()
```

3. Create a Requirements File (Optional)

a. Requirements.txt
Flask

4. Create a Dockerfile

a. Dockerfile:

```
# Use the official Python image as a base  
FROM python:3.9
```

```
# Set the working directory in the container  
WORKDIR /app
```

```
# Copy the dependencies file to the working directory  
COPY requirements.txt .
```

```
# Install dependencies  
RUN pip install -r requirements.txt
```

```
# Copy the content of the local src directory to the working directory  
COPY . .
```

```
# Run the Python script  
CMD ["python", "app.py"]
```

5. Build the Docker Image

```
docker build -t <directory-name> .
```

6. Run the Docker Container

```
docker run <directory-name>
```

Docker CONTAINER Created:

The screenshot shows the Docker Desktop interface. The left sidebar has 'Containers' selected. The main panel displays 'Containers' with a search bar and a toggle for 'Only show running containers'. Below this is a table with one container:

	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
<input type="checkbox"/>	elegant_carson e2d890a8fed1	docker-app	Exited	N/A		5 minutes ago	▶ ⋮ 🗑

Below the table, it says 'Showing 1 item'. At the bottom, there's a 'Walkthroughs' section with two cards: 'Multi-container applications' (8 mins) and 'Containerize your application' (3 mins). The status bar at the bottom shows 'Engine running', RAM 3.89 GB, CPU 0.38%, and 'Signed in'.

Docker IMAGE Created:

The screenshot shows the Docker Desktop interface with 'Images' selected in the sidebar. The main panel displays 'Images' with tabs for 'Local' and 'Hub'. The 'Local' tab is active, showing a summary of '1 GB / 0 Bytes in use' and '1 images'. Below this is a table with one image:

	Name	Tag	Status	Created	Size	Actions
<input type="checkbox"/>	docker-app f0b6eab37ea4	latest	In use	1 minute ago	1 GB	▶ ⋮ 🗑

Below the table, it says 'Showing 1 item'. At the bottom, there's a 'Walkthroughs' section with two cards: 'How do I run a container?' (6 mins) and 'Run Docker Hub images' (5 mins). The status bar at the bottom shows 'Engine running', RAM 3.89 GB, CPU 0.13%, and 'Signed in'.