

Docker compose : simple Flask app in app.py

# Create a new project folder

## FlaskDockerDemo

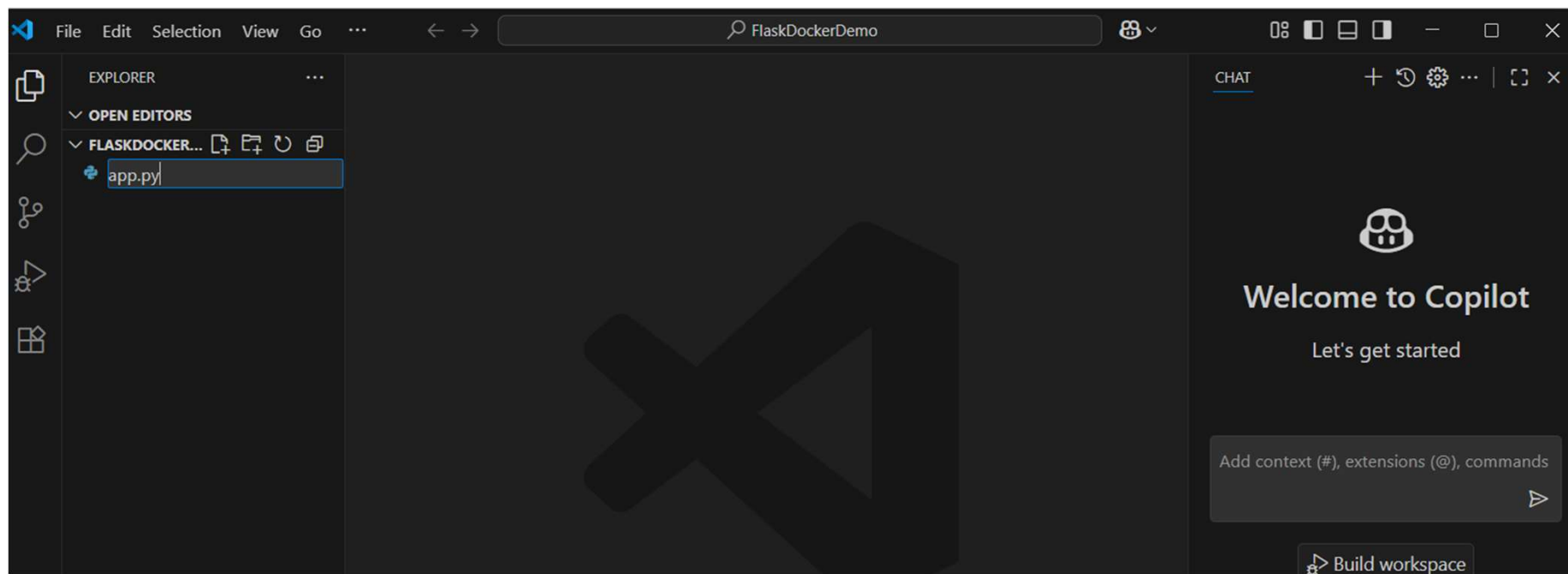


open folder and go to terminal

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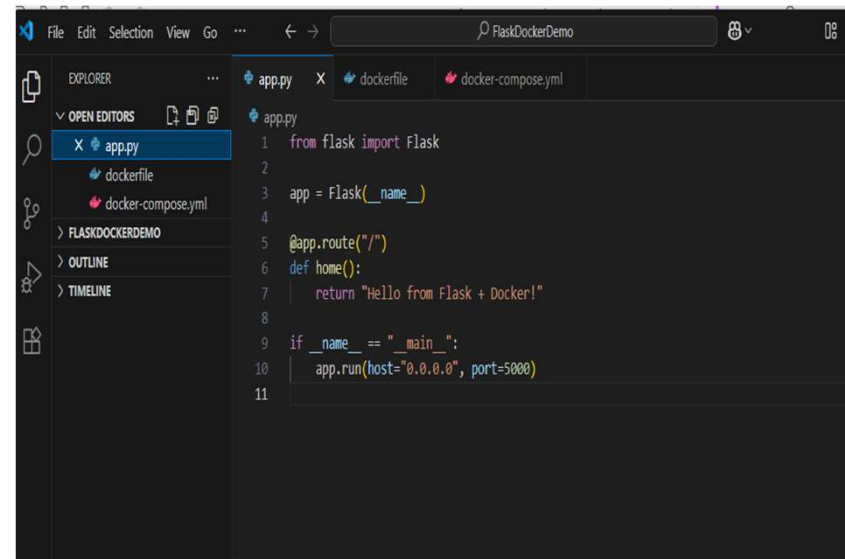
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> code .|
```



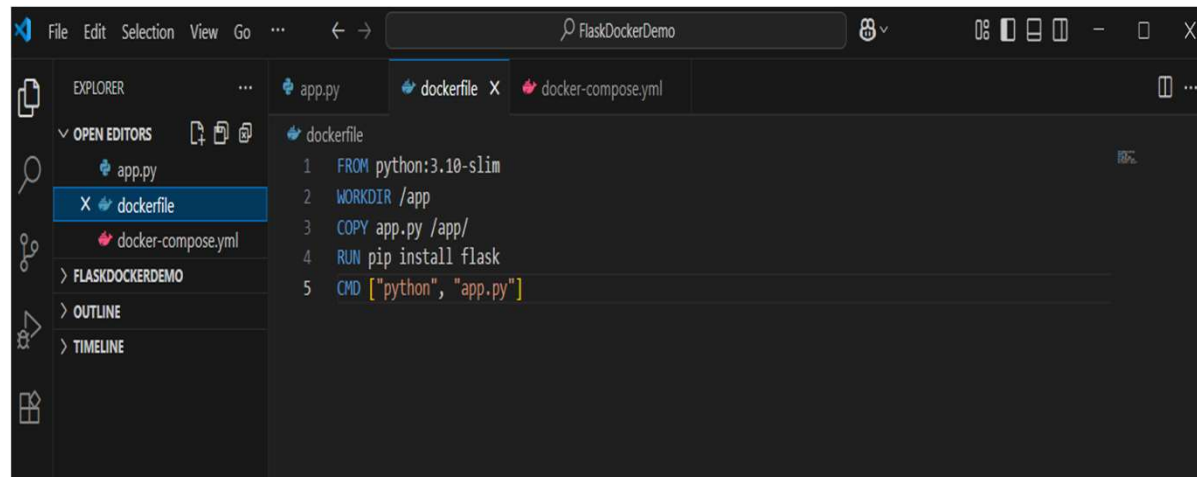
Task : Try this  
Create a simple Flask app in app.py:

```
from flask import Flask
app = Flask(__name__)
@app.route("/")
def home():
    return "Hello from Flask + Docker!"
if __name__ == "__main__":
    app.run(host="0.0.0.0", port=5000)
```



# Add a Dockerfile in the same folder:

```
FROM python:3.10-slim
WORKDIR /app
COPY app.py /app/
RUN pip install flask
CMD ["python", "app.py"]
```



# Update docker-compose.yml:

web:

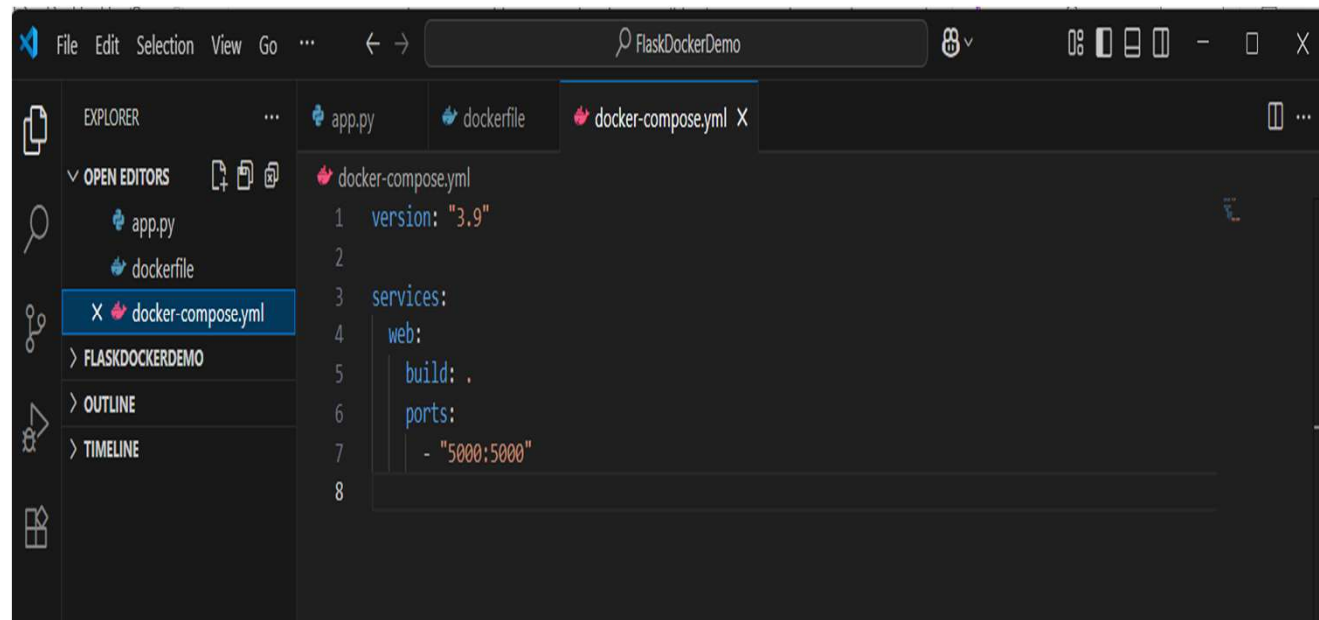
build: .

ports:

- "5000:5000"

depends\_on:

- db



The screenshot shows a Visual Studio Code editor window with the file explorer on the left and the editor area on the right. The file explorer shows the project structure with files app.py, dockerfile, and docker-compose.yml. The editor area shows the content of docker-compose.yml, which is a YAML file defining a Docker service named 'web'. The service is configured with version '3.9', build path '.', and port mapping '5000:5000'.

```
1 version: "3.9"
2
3 services:
4   web:
5     build: .
6     ports:
7       - "5000:5000"
8
```

# docker-compose up --build

```
PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> docker compose up --build
validating C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo\docker-compose.yml: additional properties 'web'
ot allowed
PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> docker compose up --build
time="2025-08-29T16:33:42+05:30" level=warning msg="C:\\Users\\BHARGAVI KUMBHAM\\OneDrive\\Desktop\\FlaskDockerDemo\\do
ker-compose.yml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
#1 [internal] load local bake definitions
#1 reading from stdin 584B done
#1 DONE 0.0s

#2 [internal] load build definition from dockerfile
#2 transferring dockerfile: 140B 0.0s done
#2 DONE 0.1s

#3 [internal] load metadata for docker.io/library/python:3.10-slim
#3 ...

#4 [auth] library/python:pull token for registry-1.docker.io
#4 DONE 0.0s

#3 [internal] load metadata for docker.io/library/python:3.10-slim
#3 DONE 4.1s

#5 [internal] load .dockerignore
#5 transferring context: 2B done
#5 DONE 0.0s
```

```
#11 exporting to image
#11 exporting layers
#11 exporting layers 0.6s done
#11 exporting manifest sha256:bdf79c71876e4e7845c1ad1ffc64b9bba323708277bfb9036879780ac991a146 0.0s done
#11 exporting config sha256:9e760aa79ccdeb0350297ba215cec46a6bec37d666ed60d29c10d5c7cba30bfc 0.0s done
#11 exporting attestation manifest sha256:428be61cbcb528329cdbc2f7bd36eadd0413ebf266025f6681b098a6abe4758e 0.0s done
#11 exporting manifest list sha256:759fe2ddebb684dbea248207e4765f02bdf7b6ae55bc57c09617181ddb9a47b4 0.0s done
#11 naming to docker.io/library/flaskdockerdemo-web:latest done
#11 unpacking to docker.io/library/flaskdockerdemo-web:latest
#11 unpacking to docker.io/library/flaskdockerdemo-web:latest 0.2s done
#11 DONE 0.9s

#12 resolving provenance for metadata file
#12 DONE 0.0s
[+] Running 3/3
  ✓ flaskdockerdemo-web          Built                                0.0s
  ✓ Network flaskdockerdemo_default Created                          0.1s
  ✓ Container flaskdockerdemo-web-1 Created                          0.2s
Attaching to web-1
```

Visit <http://localhost:5000>





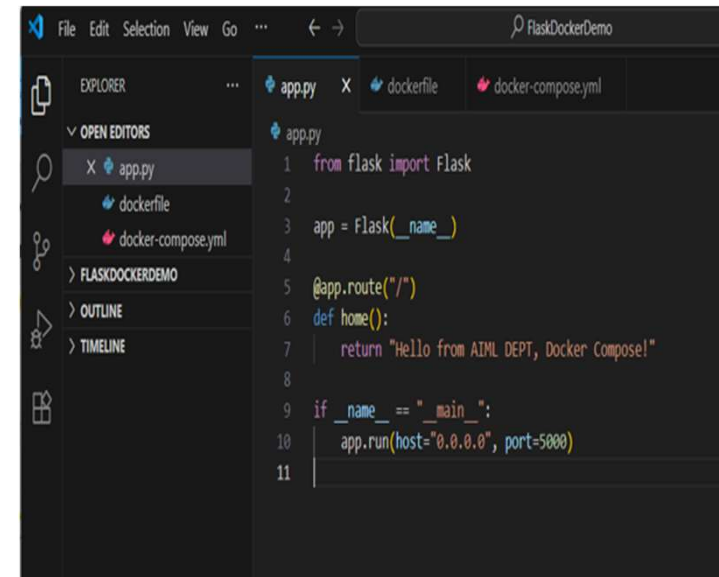
Change the return text in app.py (e.g., "Hello from AIML DEPT,Docker Compose!").

- Rebuild:

`docker compose up --build`

Expected Output:

- New message appears instantly after rebuild.

A screenshot of the Visual Studio Code editor interface. The Explorer sidebar on the left shows a project named 'FLASKDOCKERDEMO' with files 'app.py', 'dockerfile', and 'docker-compose.yml'. The 'app.py' file is open in the editor, showing Python code for a Flask application. The code includes imports, app initialization, a route for '/', and a 'home()' function that returns a string. The string is currently 'Hello from AIML DEPT, Docker Compose!'. The code is as follows:

```
1 from flask import Flask
2
3 app = Flask(__name__)
4
5 @app.route("/")
6 def home():
7     return "Hello from AIML DEPT, Docker Compose!"
8
9 if __name__ == "__main__":
10     app.run(host="0.0.0.0", port=5000)
11
```

Change the text in app.py (e.g., "Hello from AIML DEPT,Docker Compose!").

Rebuild:

```
docker compose up --build
```



press Ctrl + c to come out of this

```
web-1 | * Running on http://172.21.0.2:5000
web-1 | Press CTRL+C to quit
web-1 | 172.21.0.1 - - [29/Aug/2025 11:21:15] "GET / HTTP/1.1" 200 -
web-1 | 172.21.0.1 - - [29/Aug/2025 11:21:15] "GET / HTTP/1.1" 200 -
Gracefully Stopping... press Ctrl+C again to force
Container flaskdockerdemo-web-1 Stopping
Container flaskdockerdemo-web-1 Stopped

PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> |
v View in Docker Desktop o View Config W Enable Watch
```

# Remove containers

## docker-compose down

```
WARNING: DOCKER_INSECURE_NO_IPTABLES_RAW is set
PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> docker compose down
time="2025-08-29T22:09:18+05:30" level=warning msg="C:\\Users\\BHARGAVI KUMBHAM\\OneDrive\\Desktop\\FlaskDockerDemo\\docker-compose.yml:
the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 2/2
  ✓ Container flaskdockerdemo-web-1   Removed    0.0s
  ✓ Network flaskdockerdemo_default   Removed    0.3s
PS C:\Users\BHARGAVI KUMBHAM\OneDrive\Desktop\FlaskDockerDemo> |
```