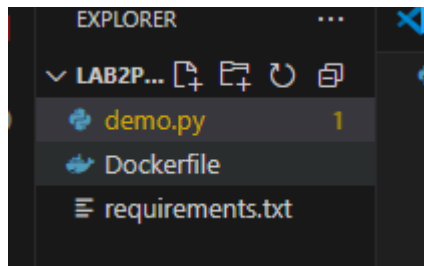# Aim: First Dockerfile:

->

After setting up this files in the system:

Dockerizing the Project:
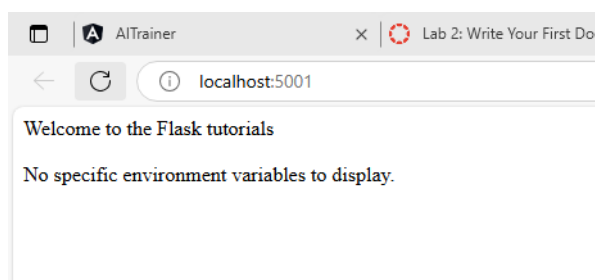
1. Build the Docker Image


```
C:\Users\admin\Documents\Lab2Practice>docker build --tag flask-docker-demo-app .
[+] Building 32.8s (10/10) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 181B
 => [internal] load metadata for docker.io/library/python:alpine3.12
 => [auth] library/python:pull token for registry-1.docker.io
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/4] FROM docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603492e89c9bf330caf689e856a018f135f0
 => => resolve docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603492e89c9bf330caf689e856a018f135f0
 => => sha256:16dfeab63973685b8873492c8f83e1f79b8e7884c43e3811a6260da40de8f08e 2.35MB / 2.35MB
 => => sha256:70bbe8425d57bcb506cb90f90d592fb7ad26a244ebd63628193f4eeaad6fb7c4 231B / 231B
```
Ln 21, Col 51   Spaces: 4   UTF-8   CRLF   Python

2. Running the created docker image:


```
C:\Users\admin\Documents\Lab2Practice>docker run -d --name flask-docker-demo-app -p 5001:5001 flask-docker-demo-app
69092c26b20297c1fc8b1252533ec53e5a853b348be92b9175c069f5d759815a

C:\Users\admin\Documents\Lab2Practice>
```
Ln 21, Col 51   Spaces: 4   UTF-8   CR

3. Test the App:

localhost:5001

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No specific environment variables to display.

passing environment variables to app:

Option A: Passing Environment Variables at Runtime Individually:

Build the app,

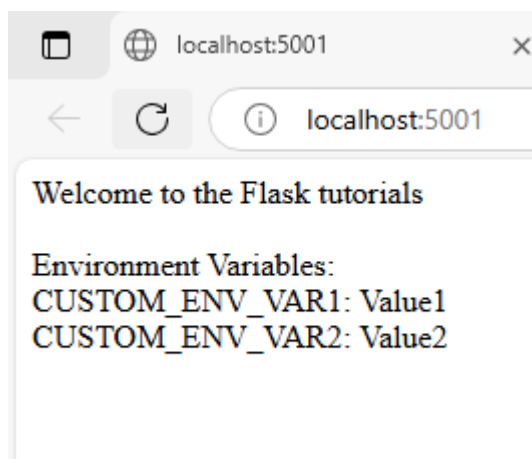docker build --tag flask-docker-demo-app .

```
C:\Users\admin\Documents\Lab2Practice>docker build --tag flask-docker-demo-app .
[+] Building 3.7s (10/10) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 181B
 => [internal] load metadata for docker.io/library/python:alpine3.12
 => [auth] library/python:pull token for registry-1.docker.io
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/4] FROM docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603492e89c9bf330caf689e856a018f135f0
 => => resolve docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603492e89c9bf330caf689e856a018f135f0
```

Pass the variables during runtime,

docker run -d --name flask-docker-demo-app -p 5001:5001 -e CUSTOM_ENV_VAR1=Value1 -e CUSTOM_ENV_VAR2=Value2 flask-docker-demo-app

```
C:\Users\admin\Documents\Lab2Practice>docker run -d --name flask-docker-demo-app -p 5001:5001 -e CUSTOM_ENV_VAR1=Value1 -e CUSTOM_ENV_VAR2=Value2 flask-docker-
demo-app
4196a597c5175d1e4ef25195a03ce2d8056a216e7006dba6c5c5068e194bc21f

C:\Users\admin\Documents\Lab2Practice>
```

Open http://localhost:5001:

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Environment Variables:
CUSTOM_ENV_VAR1: Value1
CUSTOM_ENV_VAR2: Value2

Option B: Passing Environment Variables at Runtime Using a file

Build the app,
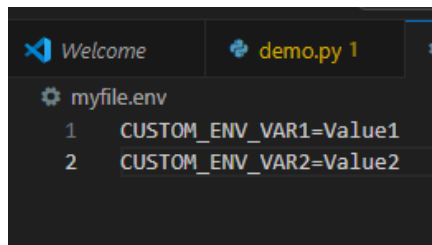
docker build --tag flask-docker-demo-app .

```
C:\Users\admin\Documents\Lab2Practice>docker build --tag flask-docker-demo-app .
[+] Building 1.9s (9/9) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 181B
 => [internal] load metadata for docker.io/library/python:alpine3.12
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/4] FROM docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603
 => => resolve docker.io/library/python:alpine3.12@sha256:7f73901e568630443fc50e358b76603
```

Create a file with .env extension like - myfile.env,

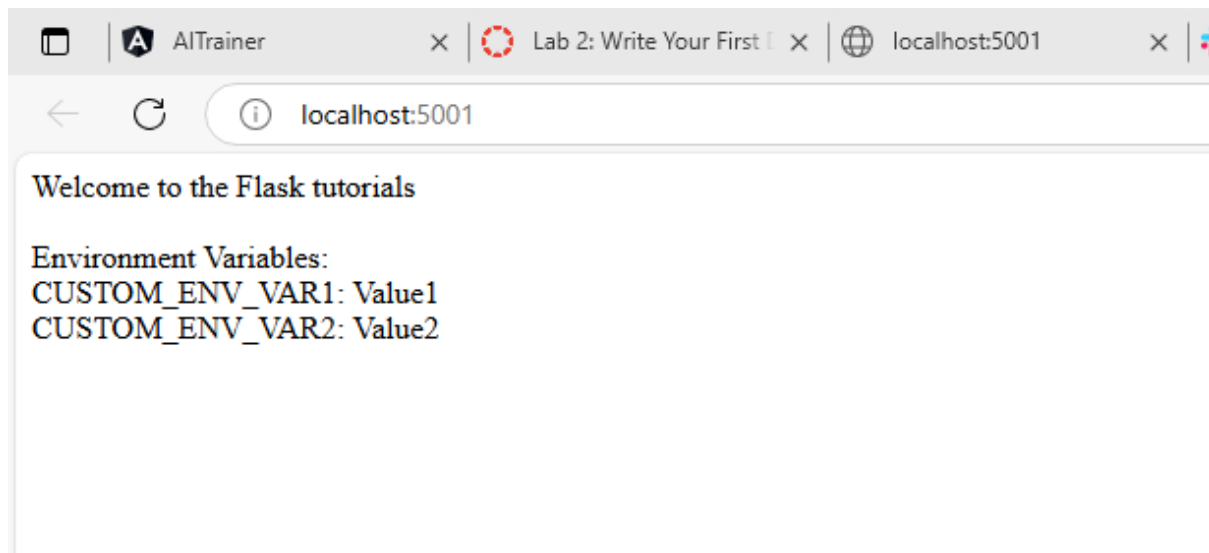Adding all the variables and their values.

CUSTOM_ENV_VAR1= Value1
CUSTOM_ENV_VAR2= Value2

```
Welcome          demo.py 1
myfile.env
  1    CUSTOM_ENV_VAR1=Value1
  2    CUSTOM_ENV_VAR2=Value2
```

Pass the variables during runtime through a file,

docker run -d --name flask-docker-demo-app -p 5001:5001 --env-file
myfile.env flask-docker-demo-app

```
C:\Users\admin\Documents\Lab2Practice>docker run -d --name flask-docker-demo-app -p 5001:5001 --env-file myfile
844b8da05fd0112a92b12dd325825717b93d37de1833a7052d3ae170be90c141

C:\Users\admin\Documents\Lab2Practice>
```

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Environment Variables:
CUSTOM_ENV_VAR1: Value1
CUSTOM_ENV_VAR2: Value2

Option C: Passing Environment Variables at Build Time:

Modify the Dockerfile:


```
FROM python:alpine3.12
WORKDIR /app
COPY . .

ARG CUSTOM_ENV_VAR1
ENV CUSTOM_ENV_VAR1=${CUSTOM_ENV_VAR1}

ARG CUSTOM_ENV_VAR2
ENV CUSTOM_ENV_VAR2=${CUSTOM_ENV_VAR2}

RUN pip install -r requirements.txt
EXPOSE 5001
ENTRYPOINT ["python"]
CMD ["demo.py"]
```

Pass the environment variables during the build time,

docker build --tag flask-docker-demo-app --build-arg CUSTOM_ENV_VAR1=Value1 --build-arg CUSTOM_ENV_VAR2=Value2 .

```
C:\Users\admin\Documents\Lab2Practice>docker build --tag flask-docker-demo-app --build-arg CUSTOM_ENV_VAR1=Value1 --build-arg CU
[+] Building 6.6s (2/3)
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 303B
 => [internal] load metadata for docker.io/library/python:alpine3.12
 => [auth] library/python:pull token for registry-1.docker.io
```

Start the container,

docker run --name flask-docker-demo-app -p 5001:5001
flask-docker-demo-app

```
C:\Users\admin\Documents\Lab2Practice>docker run --name flask-docker-demo-app -p 5001:5001 flask-docker-demo-app
 * Serving Flask app 'demo'
 * Debug mode: on
```

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Environment Variables:
CUSTOM_ENV_VAR1: Value1
CUSTOM_ENV_VAR2: Value2