App.py

from flask import Flask, request, render\_template

app = Flask(\_\_name\_\_)

@app.route('/')

def calculator():

return render\_template('calculator.html')

@app.route('/result', methods=['POST'])

def result():

try:

num1 = float(request.form['num1'])

num2 = float(request.form['num2'])

operation = request.form['operation']

if operation == 'add':

result = num1 + num2

elif operation == 'subtract':

result = num1 - num2

elif operation == 'multiply':

result = num1 \* num2

elif operation == 'divide':

if num2 == 0:

return "Error! Division by zero."

result = num1 / num2

else:

return "Invalid operation."

return f"The result of the operation is: {result}"

except ValueError:

return "Invalid input. Please enter numeric values."

if \_\_name\_\_ == '\_\_main\_\_':

app.run(host='0.0.0.0', port=5000)

Dockerfile

# Use the official Python image

FROM python:3.9-slim

# Set the working directory

WORKDIR /app

# Copy the application code into the container

COPY . .

# Install Flask RUN

RUN pip install flask

# Expose the port the app runs on

EXPOSE 5000

# Run the application

CMD ["python", "app.py"]

templates/calculate.html

**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>Calculator</title>**

**</head>**

**<body>**

**<h1>Simple Calculator</h1>**

**<form action="/result" method="post">**

**<label for="num1">First Number:</label>**

**<input type="number" step="any" id="num1" name="num1" required><br><br>**

**<label for="num2">Second Number:</label>**

**<input type="number" step="any" id="num2" name="num2" required><br><br>**

**<label for="operation">Operation:</label>**

**<select id="operation" name="operation" required>**

**<option value="add">Add</option>**

**<option value="subtract">Subtract</option>**

**<option value="multiply">Multiply</option>**

**<option value="divide">Divide</option>**

**</select><br><br>**

**<button type="submit">Calculate</button>**

**</form>**

**</body> </html>**

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docker build -t flask-calculator .

docker run -p 5000:5000 flask-calculator

<http://localhost:5000>

<http://localhost:5000/result>

docker tag flask-calculator id/flask-calculator:latest

docker push id/flask-calculator:latest