ADVANCED PYTHON PROGRAMMING

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SLOT:L7+L8+L27+L28

FLASK:

Open vs code create new folder as flask

Then in that folder create new files called,

One.py:

```
from flask import Flask
import webbrowser
from threading import Timer

app = Flask(__name__)

@app.route('/')
def home():
    return "Flask is running"

def open_browser():
    webbrowser.open_new("http://127.0.0.1:5000/")

if __name__ == '__main__':
```

```
    Timer(1, open_browser).start()
    app.run(debug=True,port=5000)
```

plot.py:

```
from flask import Flask, Response
import matplotlib.pyplot as plt
import io, random, webbrowser
from threading import Timer
app = Flask(__name__)
@app.route('/')
def home():
    return (
        "Simple Flask Data Dashboard<br><br>"
        "Use:<br>"
        "/plot — to view a random data chart"
    )

@app.route('/plot')
def plot():
    x = [1, 2, 3, 4, 5, 6, 7, 8, 9]
    y = [random.randint(10, 100) for _ in x]
    plt.plot(x, y, marker='o')
    plt.title("Random Data Plot")
    plt.xlabel("X")
    plt.ylabel("Y")
    buf = io.BytesIO()
    plt.savefig(buf, format='png')
    plt.close()
    buf.seek(0)
    return Response(buf.getvalue(), mimetype='image/png')
```

```
def open_browser():
    webbrowser.open_new("http://127.0.0.1:5004/")
if __name__ == '__main__':
    Timer(1, open_browser).start()
    app.run(debug=True,port=5004)
```

todo.py:

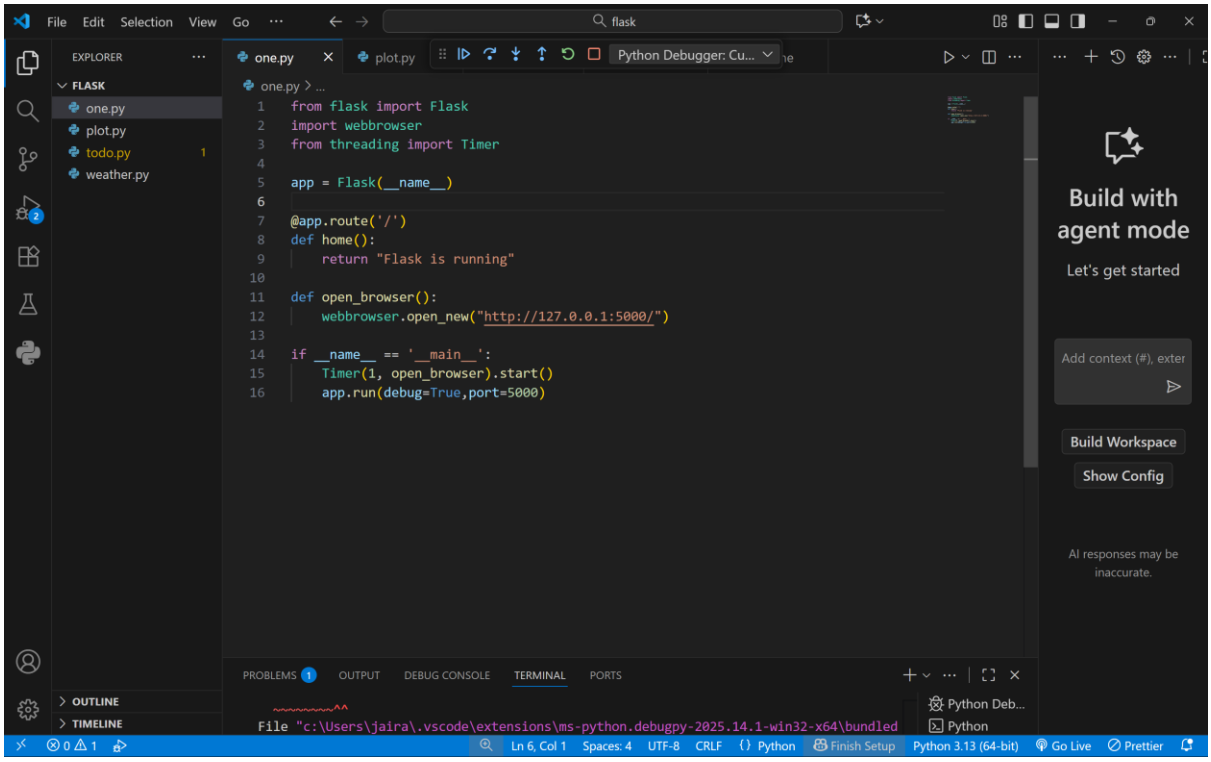
```
from flask import Flask, request
app = Flask(__name__)
tasks = []
@app.route('/')
def home():
    return (
        "Flask To-Do List App!<br><br>"
        "Use these endpoints:<br>"
        "/add?task=YourTaskName — to add a task<br>"
        "/list — to view all tasks<br>"
        "/delete?task=YourTaskName — to delete a task"
    )
@app.route('/add')
def add_task():
    task = request.args.get('task')
    if not task:
        return "Please add a task using /add?task=TaskName"
    tasks.append(task)
    return f"Task added: {task}"
@app.route('/list')
def list_tasks():
    if not tasks:
        return "No tasks added yet!"
```

```
 output = "<br>".join([f"{i+1}. {task}" for i, task in enumerate(tasks)])
    return f"Your Tasks:<br>{output}"
@app.route('/delete')
def delete_task():
    task = request.args.get('task')
    if not task:
        return "Please specify a task using /delete?task=TaskName"
    if task in tasks:
        tasks.remove(task)
        return f"Task deleted: {task}"
    else:
        return "Task not found!"
def open_browser():
    webbrowser.open_new("http://127.0.0.1:5002/")
if __name__ == '__main__':
    app.run(debug=True, port=5002)
```

weather.py:

```
from flask import Flask, request
import random
app = Flask(__name__)
@app.route('/')
def home():
    return "Welcome to the Flask Weather App!\n\nUse /weather?city=YourCity to get weather info."
@app.route('/weather')
def weather():
    city = request.args.get('city', 'Unknown')
    conditions = ["Sunny", "Cloudy", "Rainy", "Windy", "Stormy", "Clear Night"]
    condition = random.choice(conditions)
    temp = random.randint(20, 38)
    humidity = random.randint(40, 90)
```

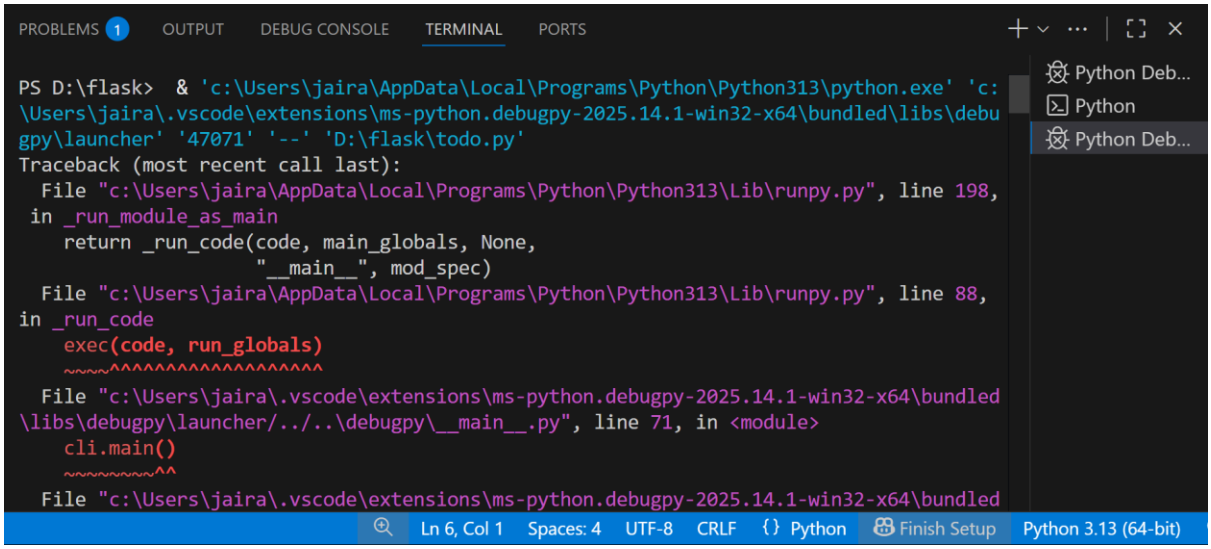
```
    wind = round(random.uniform(2.0, 12.0), 1)
    return (
        f"Weather Report for {city}\n"
        f"Condition: {condition}\n"
        f"Temperature: {temp}°C\n"
        f"Humidity: {humidity}%\n"
        f"Wind Speed: {wind} km/h\n"
    )
if __name__ == '__main__':
    app.run(host='127.0.0.1', port=5005,debug=True)
```



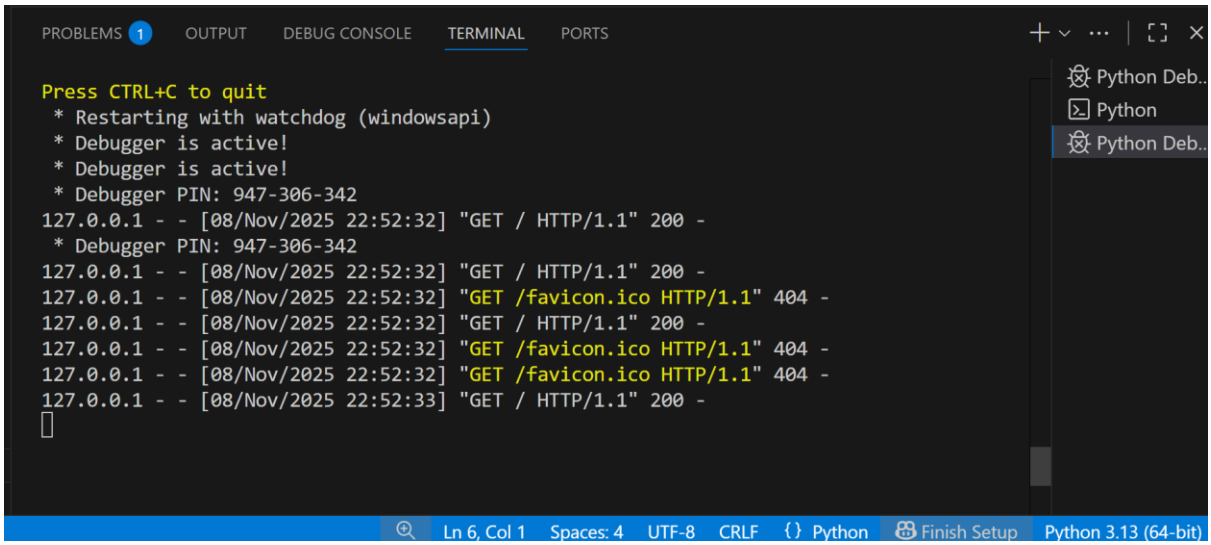
Then give run and debug :

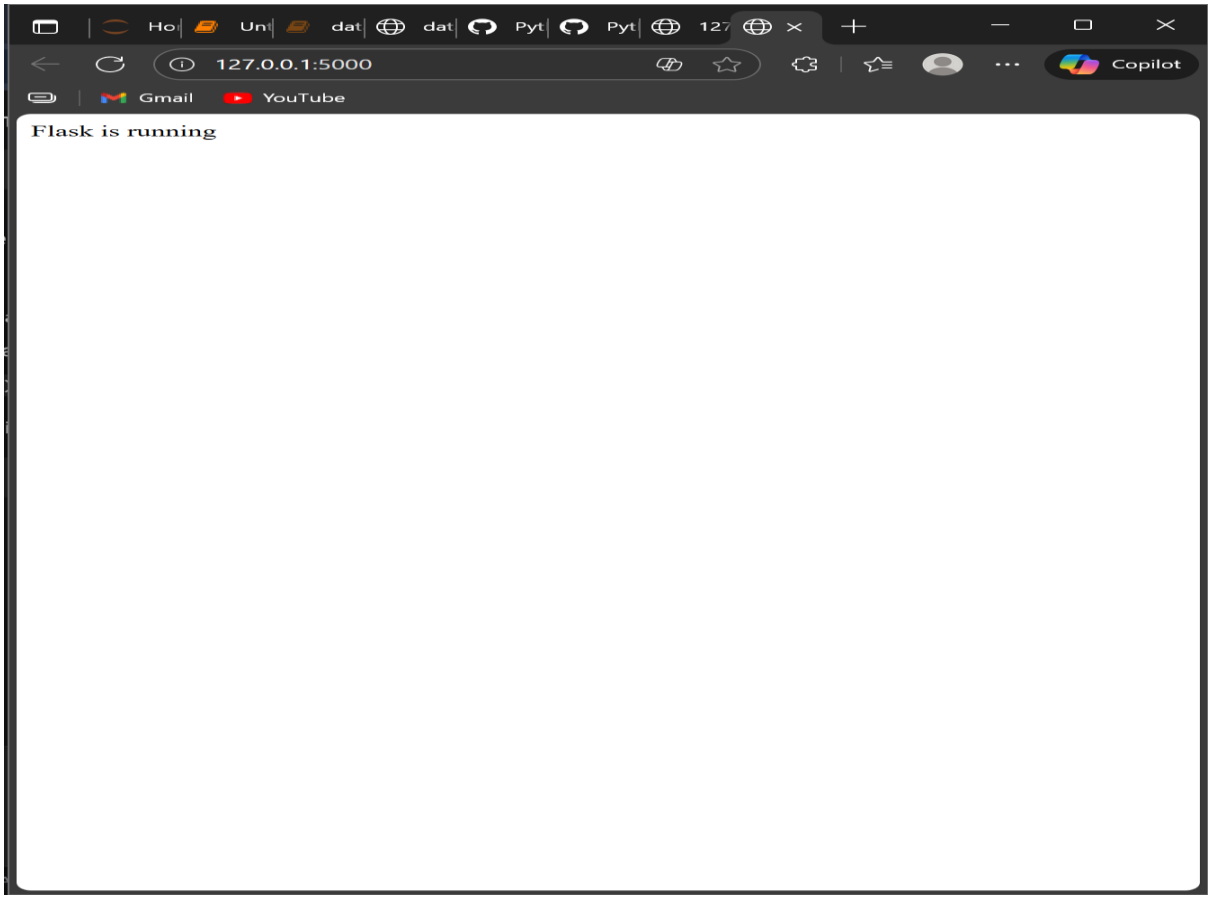
First I got error because I did not installed flask so I installed it by using

!**pip install flask**



After I solved error I got the output:




127.0.0.1:5000
Copilot
Gmail
YouTube
Flask is running