

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)

```

The screenshot shows the Visual Studio Code interface with a dark theme. The Explorer sidebar on the left lists files in a 'FLASK' folder: one.py, plotpy, todo.py, and weather.py. The 'one.py' file is selected and open in the main editor area, containing the provided Python code. The bottom status bar shows the file path as 'File "c:/Users/jaira/.vscode/extensions/ms-python.debugpy-2025.14.1-win32-x64/bundled'.

Then give run and debug :

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

!pip install flask

PS D:\flask> & 'c:\Users\jaira\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\jaira\.vscode\extensions\ms-python.debugpy-2025.14.1-win32-x64\bundled\libs\debugpy\launcher' '47071' '--' 'D:\flask\todo.py'

Traceback (most recent call last):

```
  File "c:\Users\jaira\AppData\Local\Programs\Python\Python313\Lib\runpy.py", line 198,  
in _run_module_as_main  
    return _run_code(code, main_globals, None,  
                      "__main__", mod_spec)  
  File "c:\Users\jaira\AppData\Local\Programs\Python\Python313\Lib\runpy.py", line 88,  
in _run_code  
    exec(code, run_globals)  
~~~~~  
  File "c:\Users\jaira\.vscode\extensions\ms-python.debugpy-2025.14.1-win32-x64\bundled  
\libs\debugpy\launcher/../../debugpy\__main__.py", line 71, in <module>  
    cli.main()  
~~~~~^  
  File "c:\Users\jaira\.vscode\extensions\ms-python.debugpy-2025.14.1-win32-x64\bundled
```

After I solved error I got the output:

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

Press CTRL+C to quit

```
* Restarting with watchdog (windowsapi)
* Debugger is active!
* Debugger is active!
* Debugger PIN: 947-306-342
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET / HTTP/1.1" 200 -
* Debugger PIN: 947-306-342
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [08/Nov/2025 22:52:32] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [08/Nov/2025 22:52:33] "GET / HTTP/1.1" 200 -
[
```

Ln 6, Col 1 Spaces: 4 UTF-8 CRLF {} Python ⚙ Finish Setup Python 3.13 (64-bit)

