

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"

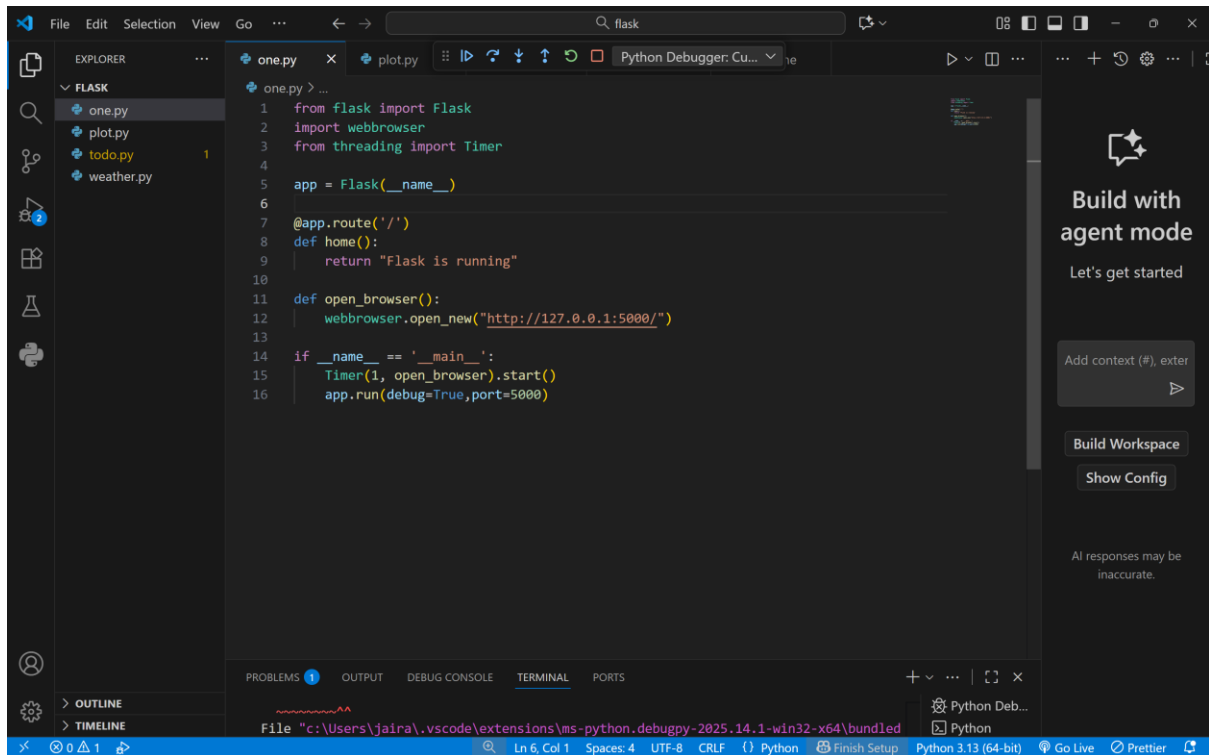
    f"Wind Speed: {wind} km/h\n"

)

if __name__ == '__main__':

    app.run(host='127.0.0.1', port=5005, debug=True)

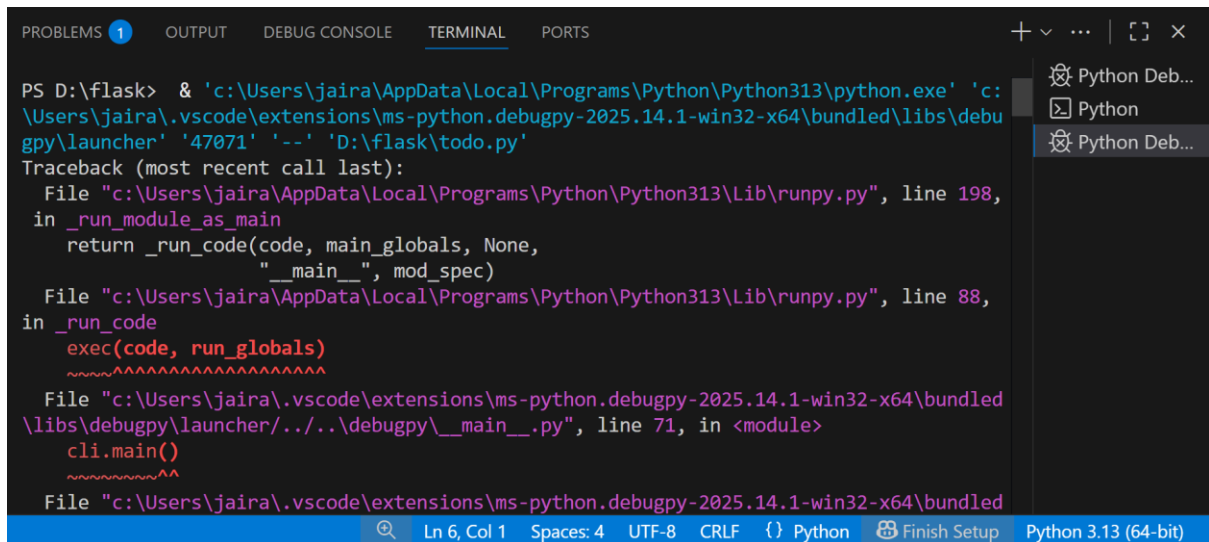
```



Then give run and debug :

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

!pip install flask



PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

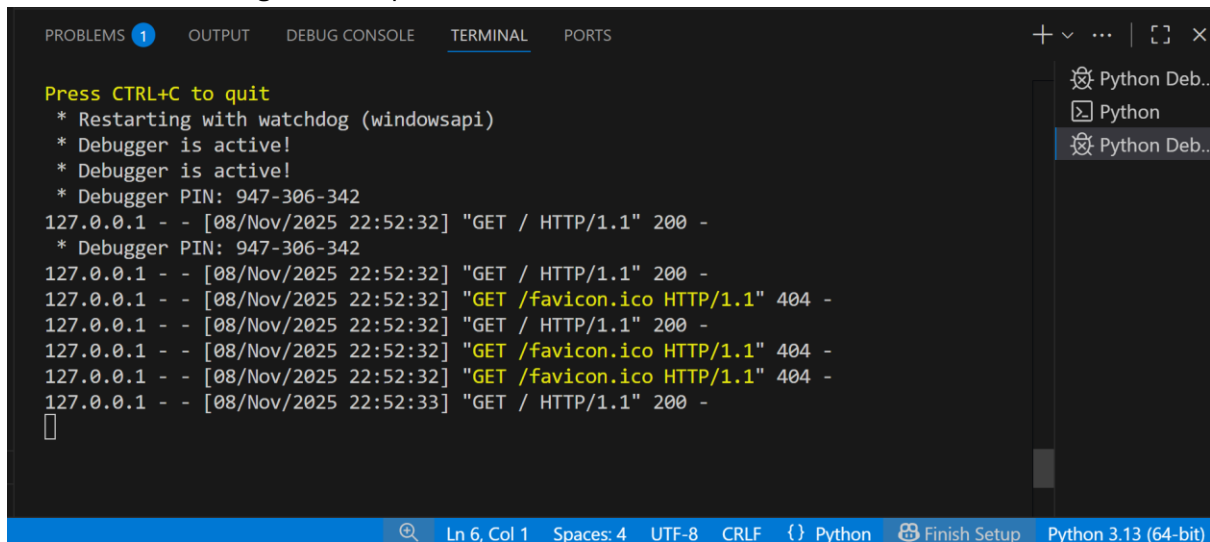
```
PS D:\flask> & 'c:\Users\jaira\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\jaira\.vscode\extensions\ms-python.debugpy-2025.14.1-win32-x64\bundled\libs\debugpy\launcher' '47071' '--' 'D:\flask\todo.py'
```

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\libs\debugpy\launcher\..\debugpy_main_.py", line 71, in `<module>`
 - `cli.main()`

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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 -

```

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