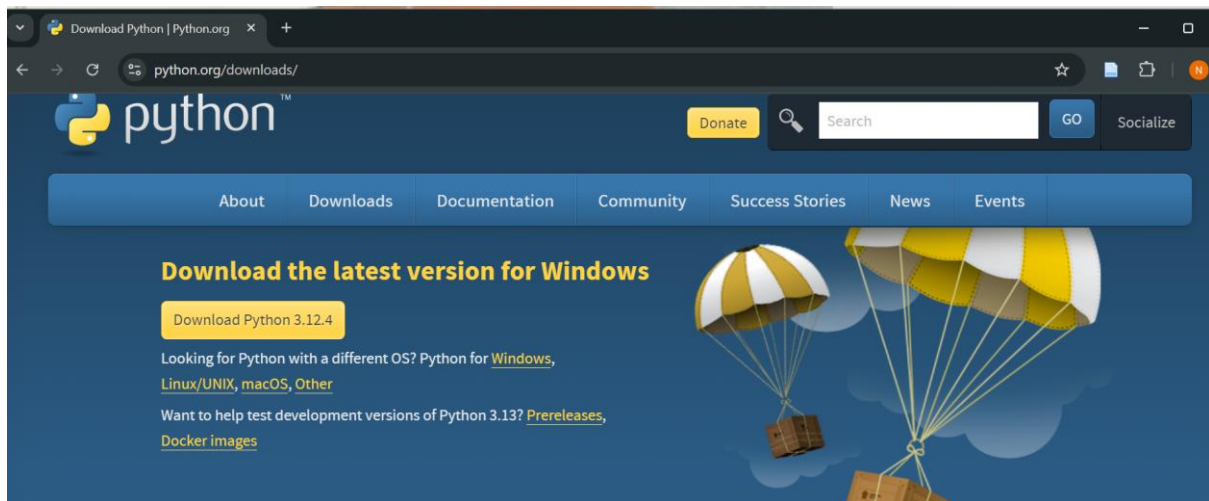




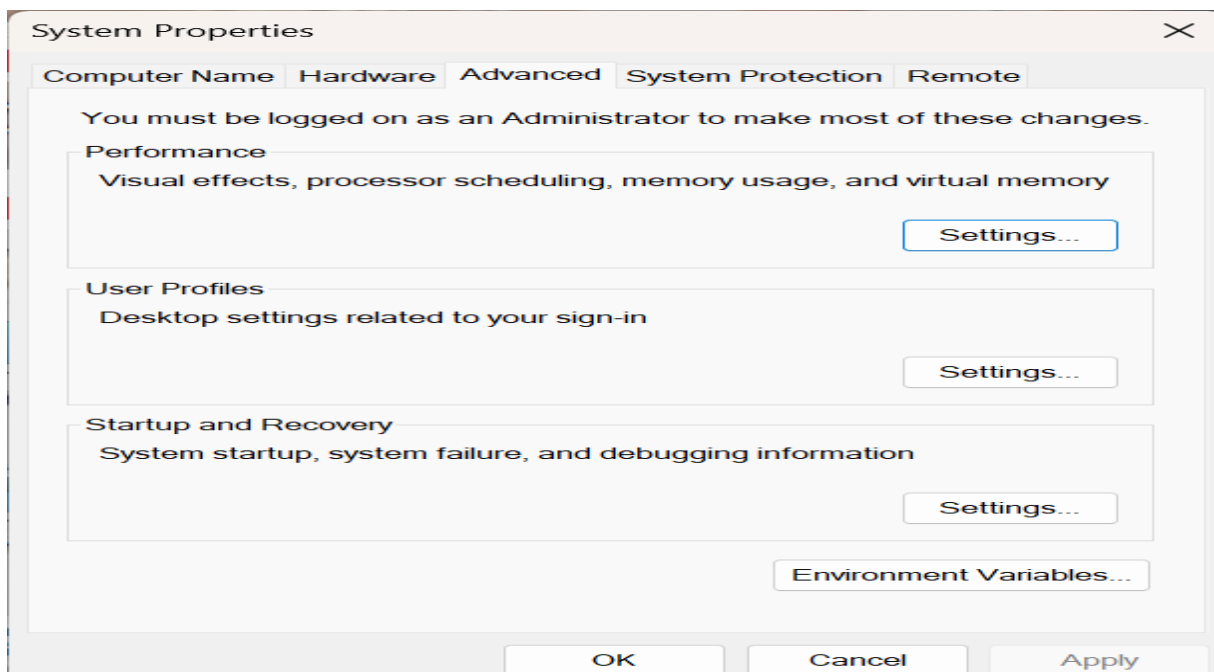
## Overview of Python:

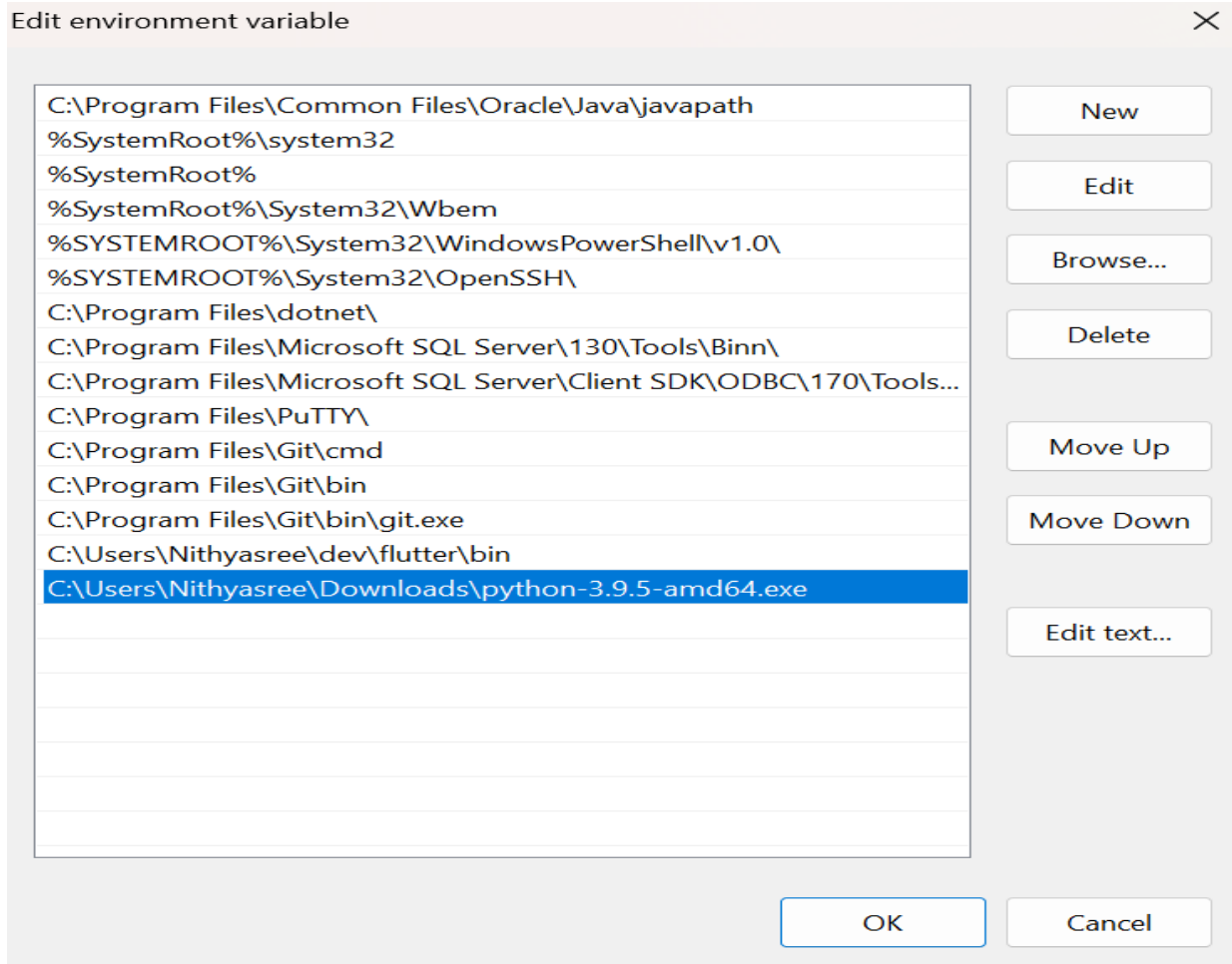
### 1. L1 - In Local Windows Machine Install and setup Environment Variable for Python

#### Download python



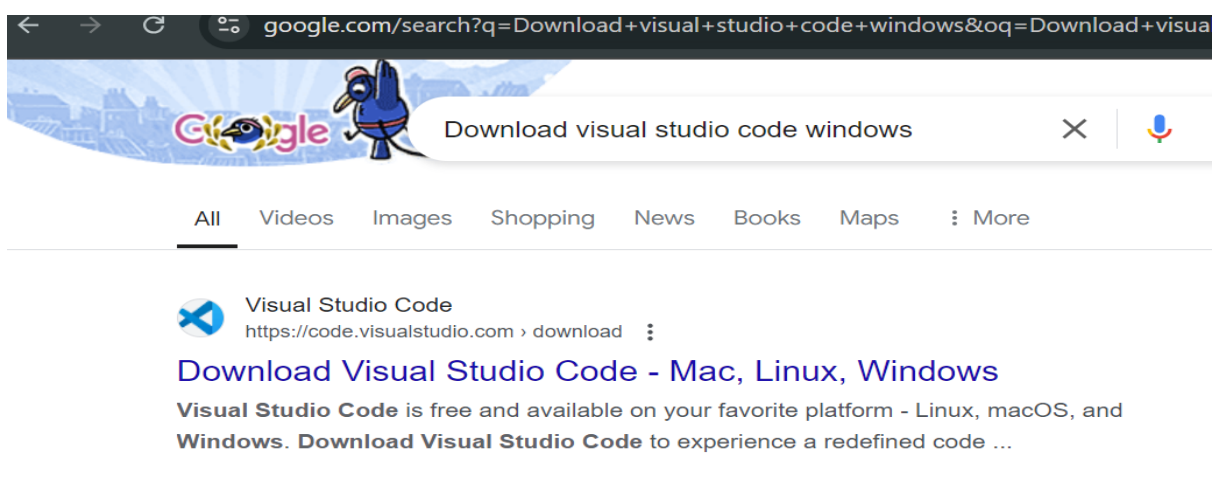
#### Open Environment variables



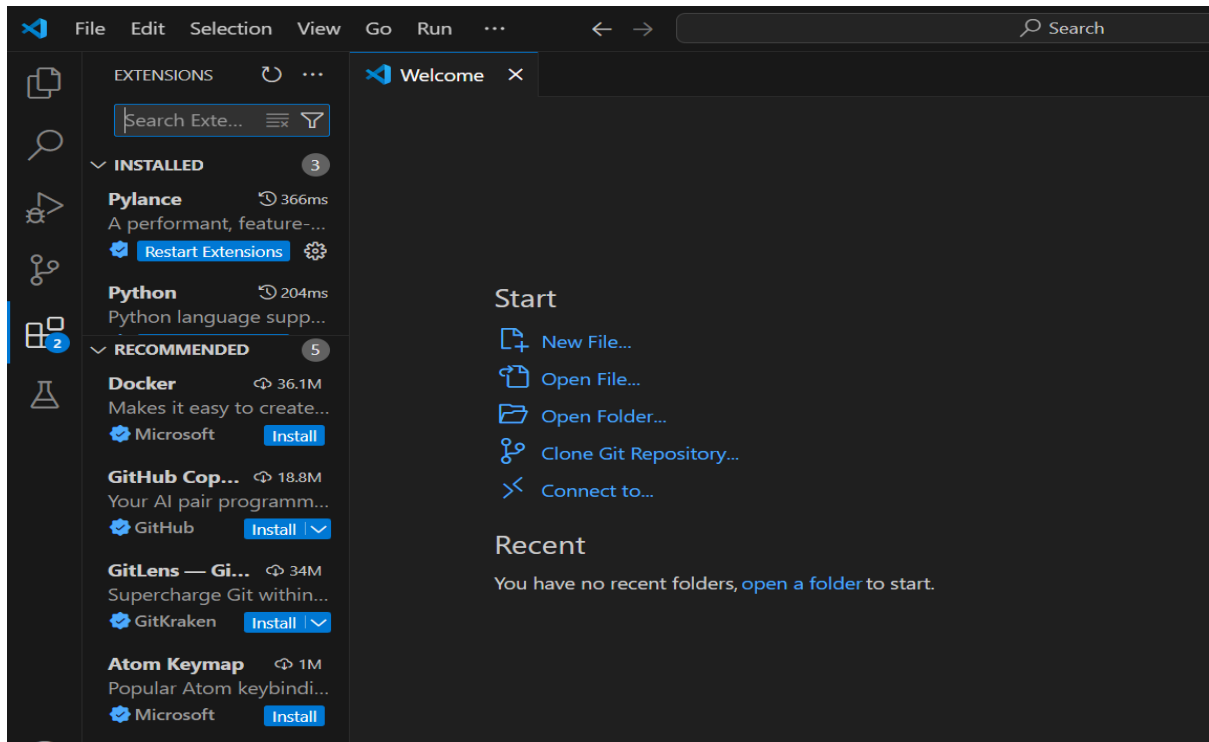


## 2. L2 - Install Visual Studio Code and Install Python and Terraform Extensions in VS Code

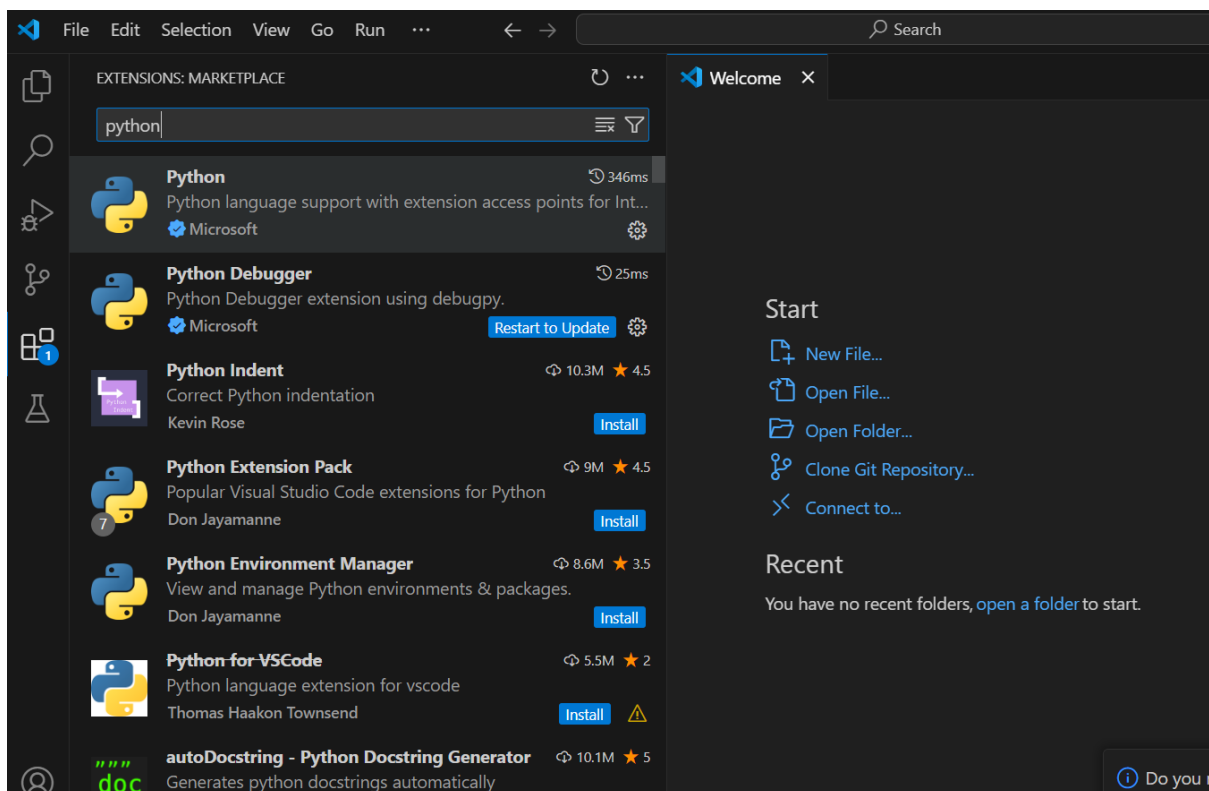
### Download visual studio code



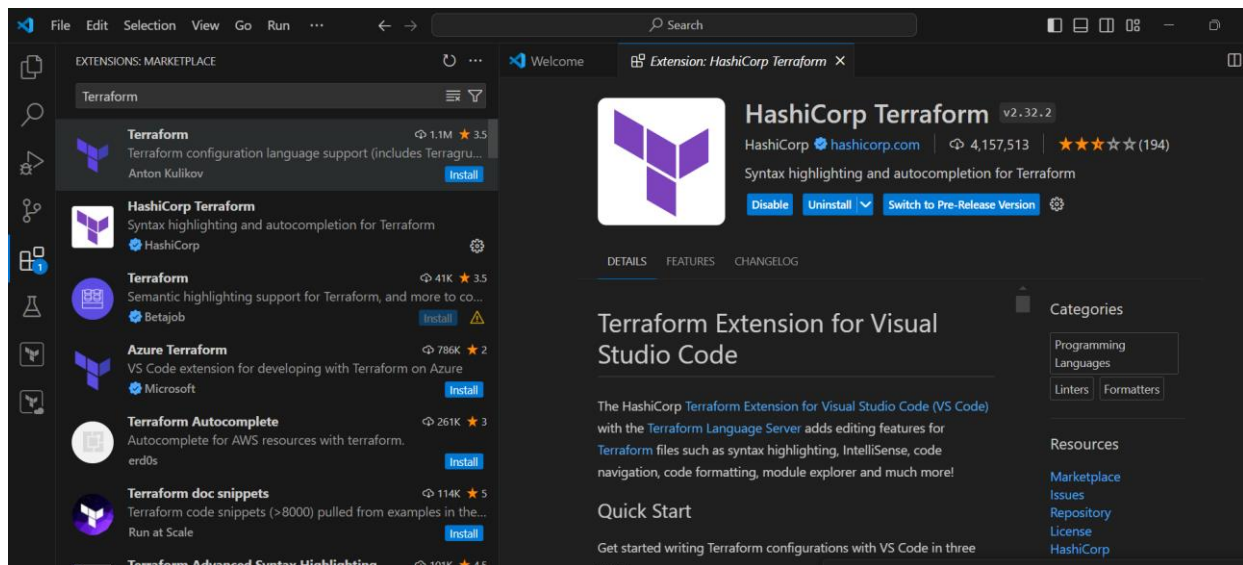
## Open Visual studio code



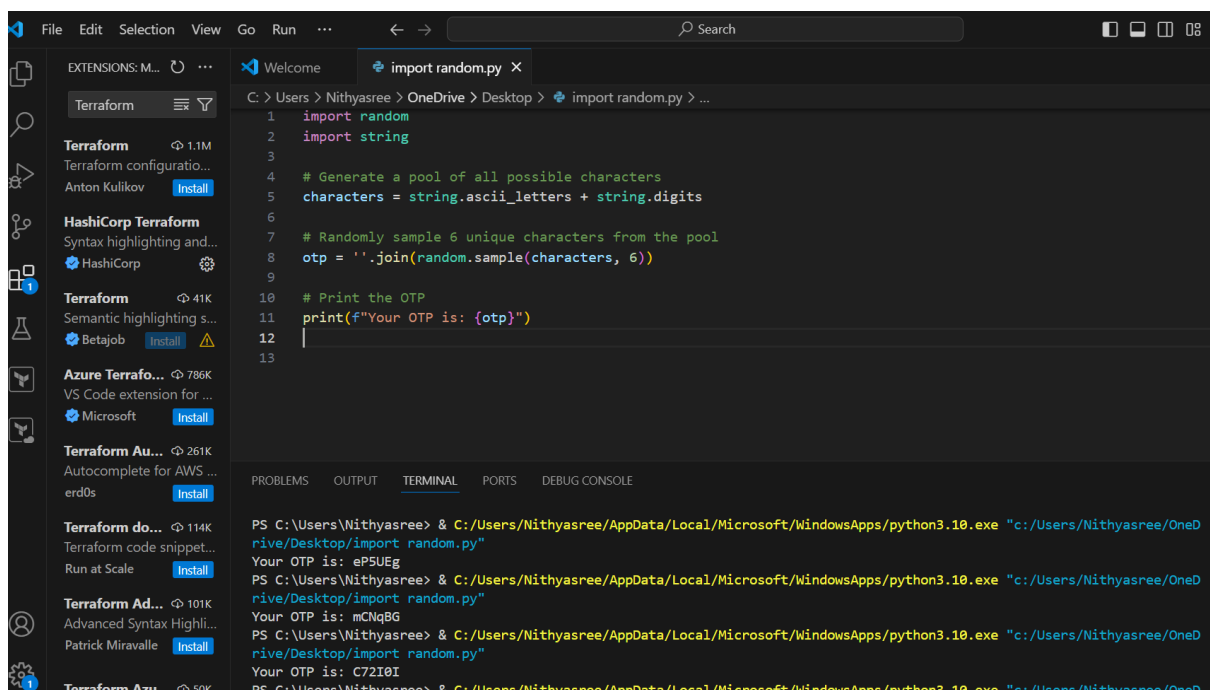
## Python is installed



## Terraform is installed

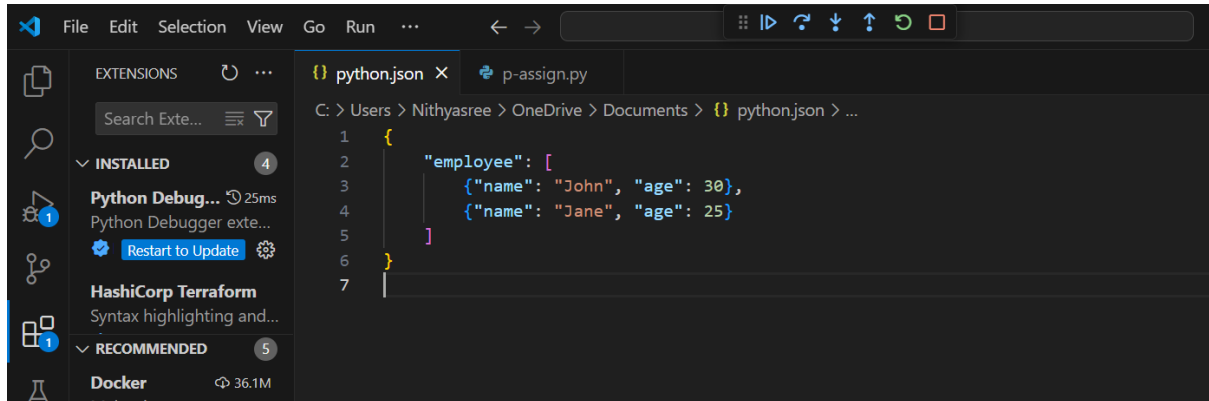


## 3. L3 - Create Python Console Application to randomly generate OTP kind of secure code



#### 4. L4 - Create Python Console Application to read the contents of .json file and print in the VS Code python console output

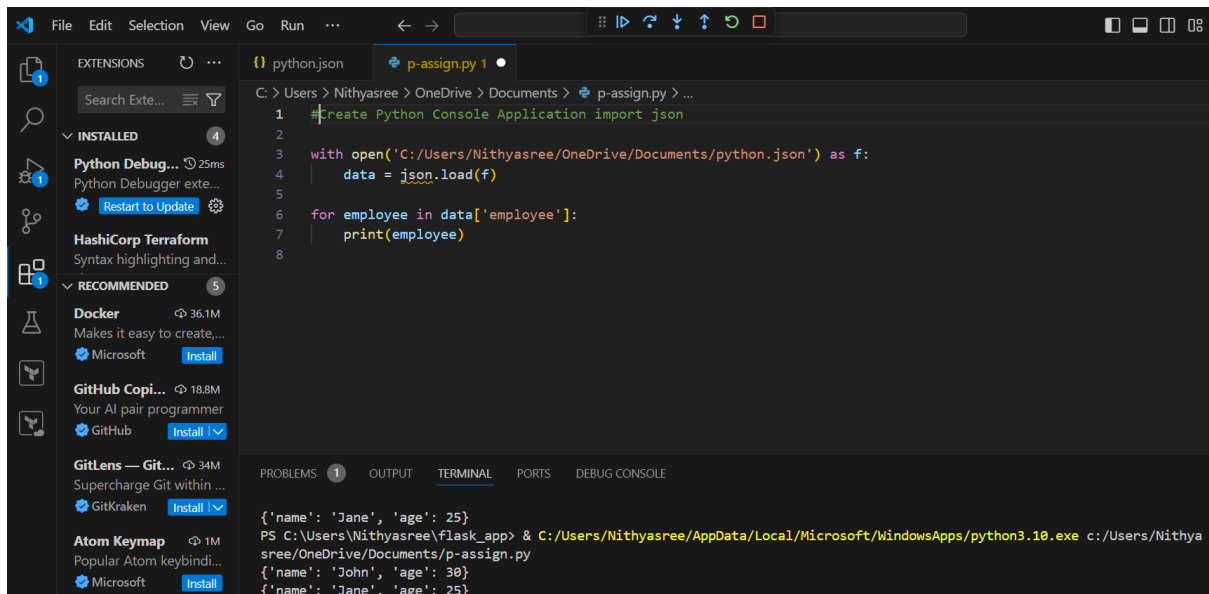
Firstly, need to create a Json file



The screenshot shows the VS Code interface with a file named `python.json` open. The file contains a JSON array of employee objects. The left sidebar shows the 'EXTENSIONS' view with several installed and recommended extensions like Python Debugger, HashiCorp Terraform, Docker, GitHub Copilot, and GitLens.

```
1 {
2   "employee": [
3     {"name": "John", "age": 30},
4     {"name": "Jane", "age": 25}
5   ]
6 }
7
```

Code for python console application to read contents.



The screenshot shows the VS Code interface with a Python script named `p-assign.py` open. The script uses the `json` module to load the contents of `python.json` and prints each employee object. The bottom panel shows the 'TERMINAL' view with the output of the script execution.

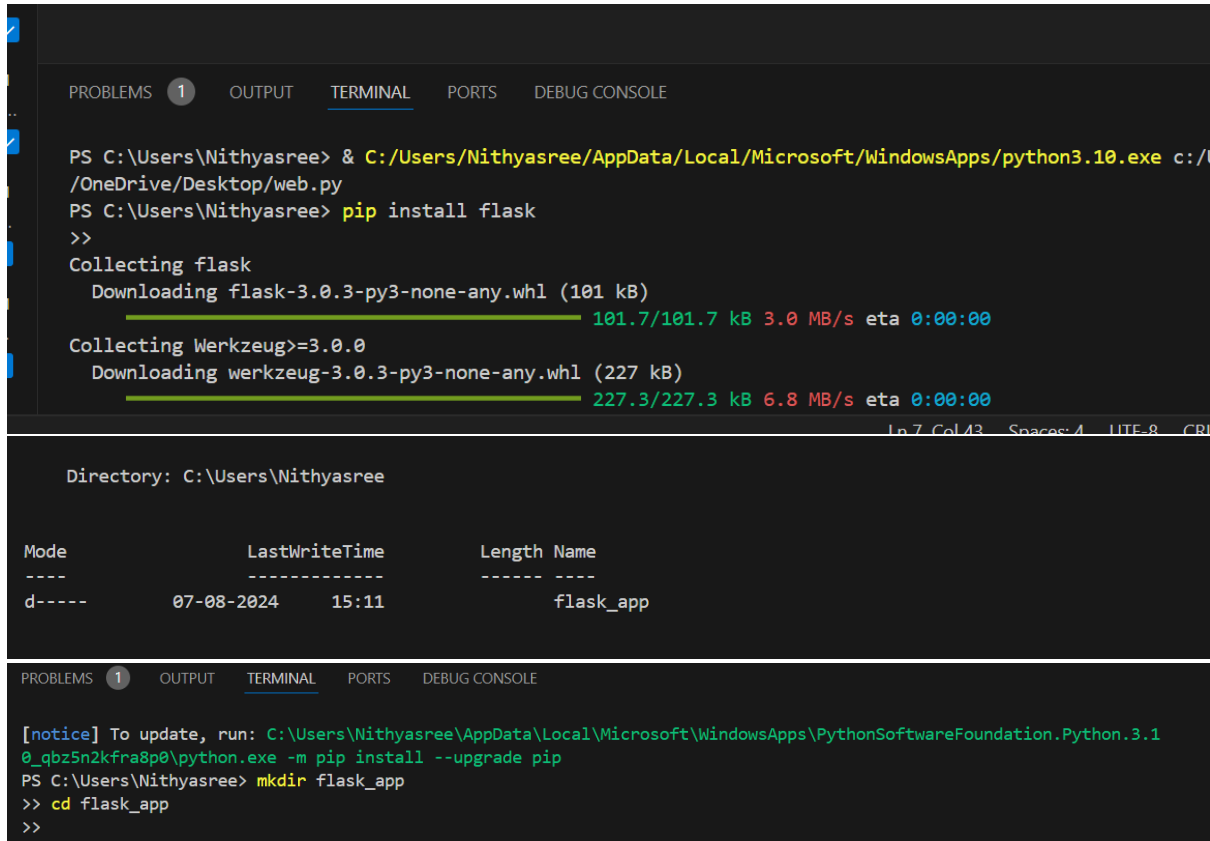
```
1 # Create Python Console Application import json
2
3
4 with open('C:/Users/Nithyasree/OneDrive/Documents/python.json') as f:
5     data = json.load(f)
6
7 for employee in data['employee']:
8     print(employee)
```

PROBLEMS 1 OUTPUT TERMINAL PORTS DEBUG CONSOLE

```
{'name': 'Jane', 'age': 25}
PS C:/Users/Nithyasree/flask_app> & C:/Users/Nithyasree/AppData/Local/Microsoft/WindowsApps/python3.10.exe c:/Users/Nithyasree/OneDrive/Documents/p-assign.py
{'name': 'John', 'age': 30}
{'name': 'Jane', 'age': 25}
```

## 5. L5 - Create Python Web Application to using Flask Web Application Framework

### Install flask



```
PS C:\Users\Nithyasree> & C:/Users/Nithyasree/AppData/Local/Microsoft/WindowsApps/python3.10.exe c:/U
/OneDrive/Desktop/web.py
PS C:\Users\Nithyasree> pip install flask
>>
Collecting flask
  Downloading flask-3.0.3-py3-none-any.whl (101 kB)
    101.7/101.7 kB 3.0 MB/s eta 0:00:00
Collecting Werkzeug>=3.0.0
  Downloading werkzeug-3.0.3-py3-none-any.whl (227 kB)
    227.3/227.3 kB 6.8 MB/s eta 0:00:00

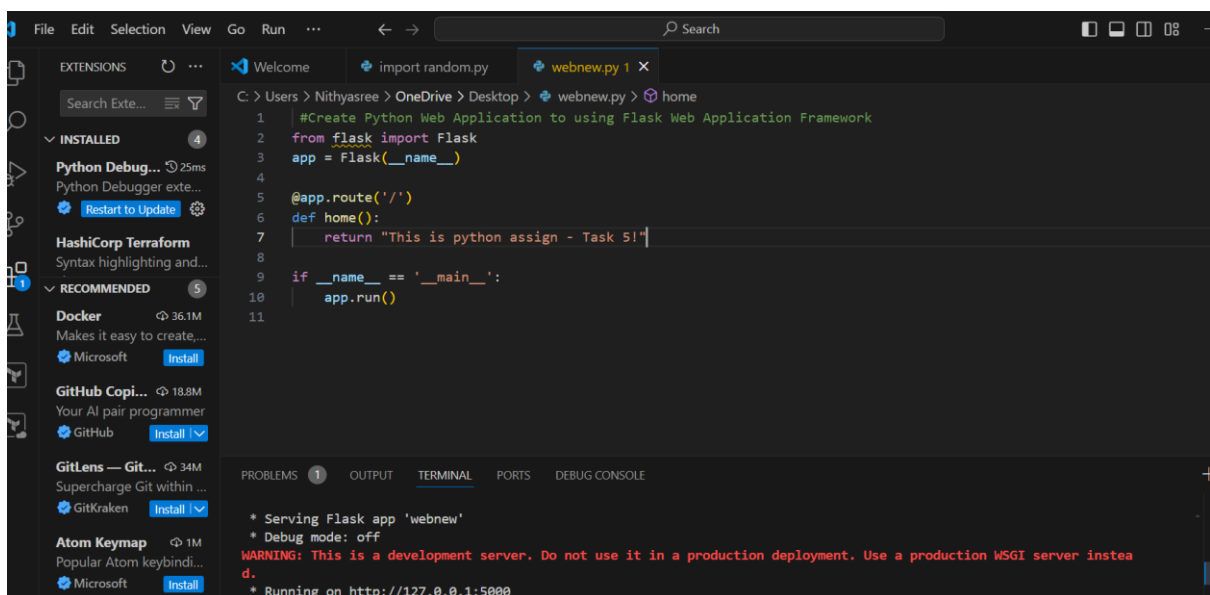
Directory: C:\Users\Nithyasree

Mode                LastWriteTime         Length Name
----                -
d-----          07-08-2024    15:11             flask_app
```

```
PROBLEMS 1 OUTPUT TERMINAL PORTS DEBUG CONSOLE

[notice] To update, run: C:\Users\Nithyasree\AppData\Local\Microsoft\WindowsApps\PythonSoftwareFoundation.Python.3.1
0_qbz5n2kfra8p0\python.exe -m pip install --upgrade pip
PS C:\Users\Nithyasree> mkdir flask_app
>> cd flask_app
>>
```

### Code for pythonwebapplication using flask



```
File Edit Selection View Go Run ... Search
EXTENSIONS 4 Python Debug... 25ms Python Debugger exte... Restart to Update
HashiCorp Terraform Syntax highlighting and...
RECOMMENDED 5 Docker 36.1M Makes it easy to create... Microsoft Install
GitHub Copi... 18.8M Your AI pair programmer GitHub Install
GitLens — Git... 34M Supercharge Git within ... GitKraken Install
Atom Keymap 1M Popular Atom keybindi... Microsoft Install

C:\Users\Nithyasree> OneDrive > Desktop > webnew.py > home
1 #Create Python Web Application to using Flask Web Application Framework
2 from flask import Flask
3 app = Flask(__name__)
4
5 @app.route('/')
6 def home():
7     return "This is python assign - Task 5!"
8
9 if __name__ == '__main__':
10     app.run()
11
```

```
PROBLEMS 1 OUTPUT TERMINAL PORTS DEBUG CONSOLE

* Serving Flask app 'webnew'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instea
d.
* Running on http://127.0.0.1:5000
```

Navigate to web browser(<http://127.0.0.1:5000>)

