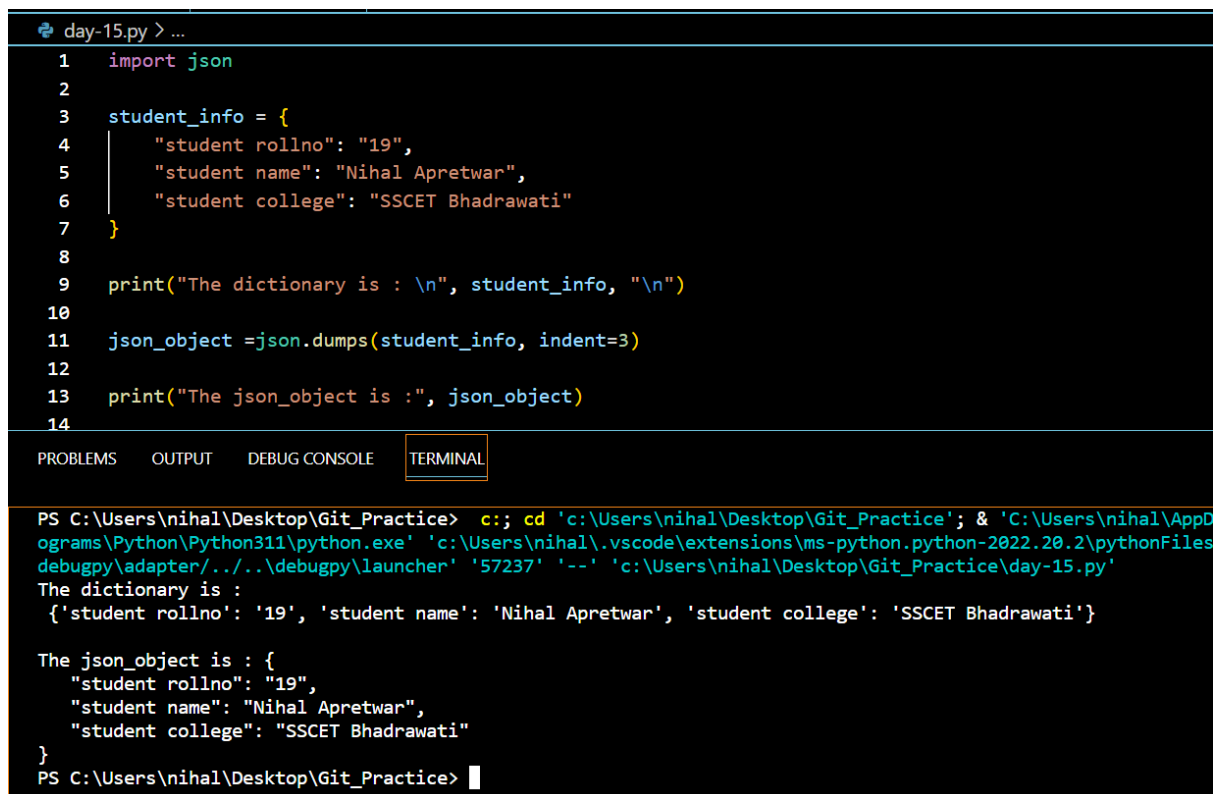# Day 15 Task: Python Libraries for DevOps :

Reading JSON and YAML in Python :

- As a DevOps Engineer you should be able to parse files, be it txt, json, yaml, etc.
- You should know what all libraries one should use in Pythonfor DevOps.
- Python has numerous libraries like os, sys, json, yaml etc that a DevOps Engineer uses in day to day tasks.

Tasks:

1. **Create a Dictionary in Python and write it to a json File.**

```python
import json

student_info = {
    "student rollno": "19",
    "student name": "Nihal Apretwar",
    "student college": "SSCET Bhadrawati"
}

print("The dictionary is : \n", student_info, "\n")

json_object =json.dumps(student_info, indent=3)

print("The json_object is :", json_object)
```

```
PS C:\Users\nihal\Desktop\Git_Practice>  c:; cd 'c:\Users\nihal\Desktop\Git_Practice'; & 'C:\Users\nihal\AppD
ograms\Python\Python311\python.exe' 'c:\Users\nihal\.vscode\extensions\ms-python.python-2022.20.2\pythonFiles
debugpy\adapter/../..\debugpy\launcher' '57237' '--' 'c:\Users\nihal\Desktop\Git_Practice\day-15.py'
The dictionary is :
 {'student rollno': '19', 'student name': 'Nihal Apretwar', 'student college': 'SSCET Bhadrawati'}

The json_object is : {
   "student rollno": "19",
   "student name": "Nihal Apretwar",
   "student college": "SSCET Bhadrawati"
}
PS C:\Users\nihal\Desktop\Git_Practice>
```

2. **Read a json file** `services.json` **kept in this folder and print the service names of every cloud service provider.**

```
☰ day-15.py > ...
  1   import json
  2   with open("services.json") as f:
  3   |
  4       data = json.load(f)
  5       print(("type: ",type(data)))
  6       print("asw:",data['services']['aws']['name'])
  7       print("azure:",data['services']['azure']['name'])
  8       print("gcp:",data['services']['gcp']['name'])
  9
 10
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\nihal\Desktop\Git_Practice>  c:; cd 'c:\Users\nihal\Desktop\Git_Practice'; & 'C:\Users\nihal\AppData\Lo
ograms\Python\Python311\python.exe' 'c:\Users\nihal\.vscode\extensions\ms-python.python-2022.20.2\pythonFiles\lib\p
debugpy\adapter/../..\debugpy\launcher' '52459' '--' 'c:\Users\nihal\Desktop\Git_Practice\day-15.py'
('type: ', <class 'dict'>)
asw: EC2
azure: VM
gcp: Compute Engine
PS C:\Users\nihal\Desktop\Git_Practice> █
```

3. **Read YAML file using python, file `services.yaml` and read the contents to convert yaml to json.**

To read a YAML file using python and convert it to json, you will need to install the

PyYAML library :

"Pip3 install pyyaml"

Then use the yaml and json modules to read the YAML file and convert it to json

```
4.  import yaml
    import json

    # read the YAML file
    with open("services.yaml", "r") as f:
        yaml_data = yaml.safe_load(f)

    # convert the YAML data to json
    json_data = json.dumps(yaml_data)

    # write the json data to file
    with open('services.json', 'w') as f:
        json.dump(json_data, f)
```

Thank you!