Python Libraries for DevOps

Day 15 : 90Days of DevOps Challenge

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TABLE OF CONTENTS

-> Reading JSON in Python

To read JSON files in Python, you can use the `json` module.

COPY

```
import json

# Open the JSON file
```

```
with open('data.json') as f:
    data = json.load(f)

# Access data in the JSON file
print(data['name'])
```

In this example, we open the file `"data.json"` using the `open()` function and read its contents using the `json.load()` function. The result is stored in the variable `data`, which is now a dictionary.

-> Reading YAML in Python

To read YAML files in Python, you can use the `PyYAML` module.

COPY

```
import yaml

# Open the YAML file
with open('data.yaml') as f:
    data = yaml.safe_load(f)

# Access data in the YAML file
print(data['name'])
```

In this example, we open the file `"data.yaml"` using the `open()` function and read its contents using the `yaml.safe_load()` function. The result is stored in the variable `data`, which is now a dictionary.

Note that we use `yaml.safe_load()` instead of `yaml.load()` to prevent arbitrary code execution when loading YAML files.

Task :

-> Create a Dictionary in Python and write it to a json File.

here's an example of how to create a dictionary in Python and write it to a JSON file:

```python
import json

# Create a dictionary
my_dict = {
    "name": "John",
    "age": 30,
    "city": "New York"
}

# Write dictionary to a JSON file
with open("my_dict.json", "w") as outfile:
    json.dump(my_dict, outfile)
```

In this example, we import the `json` module and create a dictionary called `my_dict` with three key-value pairs.

Then, we use the `open()` function to create a file object with the name "my_dict.json" and the write mode `"w"`. We then use the `json.dump()` function to write the dictionary to the file. The `dump()` function takes two arguments: the dictionary to be written, and the file object to write it to.

After running this code, you should have a new file called `my_dict.json` in your current working directory, containing the JSON representation of the dictionary.

-> Read a json file services.json kept in this folder and print the service names of every cloud service provider.

Assuming that the `services.json` file contains a dictionary of cloud service providers and their corresponding services, here's an example of how to read the file and print out the service names of each cloud service provider:

COPY

```
import json

# Open the JSON file
with open('services.json') as f:
    data = json.load(f)

# Loop through the dictionary and print out the service names for each p
```

```
for provider, services in data.items():
    print(provider, ":", ", ".join(services))
```

In this code, we open the file `"services.json"` using the `open()` function and read its contents using the `json.load()` function. The result is stored in the variable `data`, which is now a dictionary.

We then loop through the dictionary using the `items()` method and print out the provider name and a comma-separated list of its services using the `join()` method.

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

here's an example of how to read a YAML file in Python and convert it to JSON:

COPY

```
import yaml
import json

# Open the YAML file and read its contents
with open('services.yaml') as f:
    data = yaml.safe_load(f)

# Convert YAML to JSON
json_data = json.dumps(data)
```

```
# Print the JSON data
print(json_data)
```

In this example, we use the `PyYAML` module to read the YAML file `"services.yaml"` and load its contents into a Python object called `data`.

We then use the `json.dumps()` function to convert the `data` object to JSON format and store it in the variable `json_data`.

Finally, we print the `json_data` variable, which contains the JSON representation of the YAML file contents.

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