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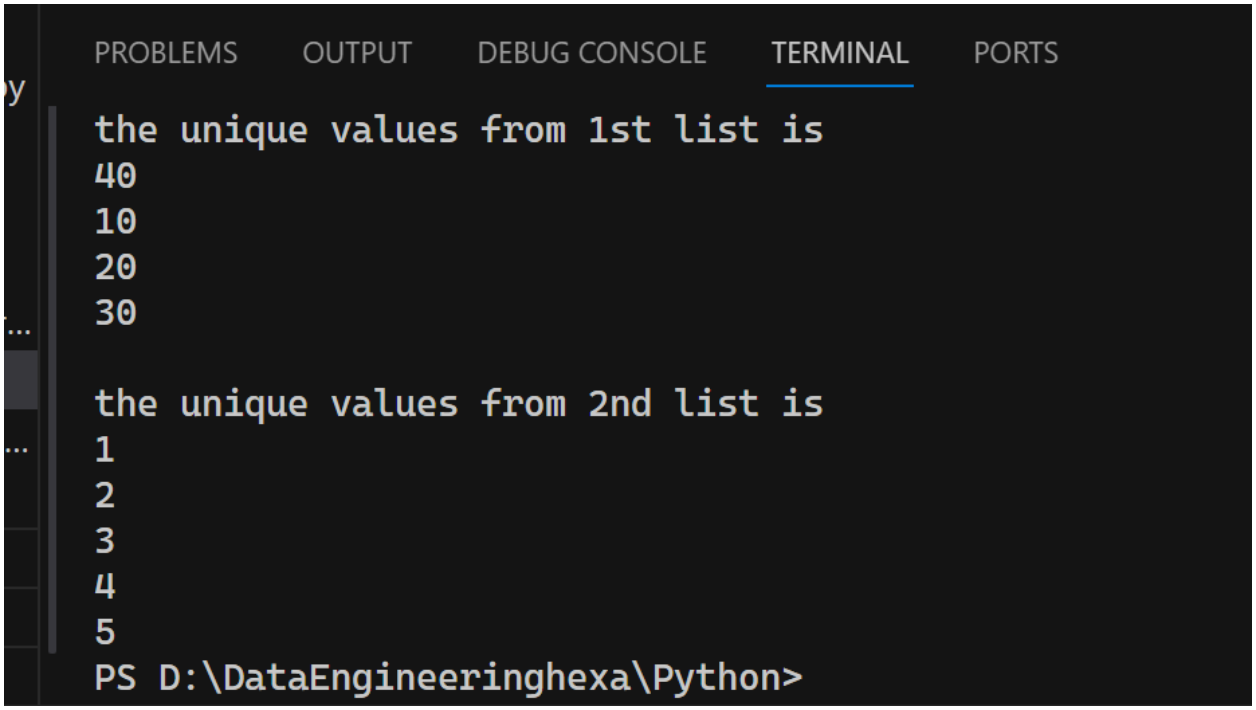
Batch-1
Day-9
31/1/2024
Data engineering

# Assignment-9

## Get Unique Values from a List Using Set Method

```
def unique(list1):
    # insert the list to the set
    list_set = set(list1)
    # convert the set to the list
    unique_list = (list(list_set))
    for x in unique_list:
        print(x)


# driver code
list1 = [10, 20, 10, 30, 40, 40]
print("the unique values from 1st list is")
unique(list1)


list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]
print("\nthe unique values from 2nd list is")
unique(list2)
```




## Get Unique Values From a List in Python Using reduce() function

```python
from functools import reduce

def unique(list1):

    # Print directly by using * symbol
    ans = reduce(lambda re, x: re+[x] if x not in re else re, list1, [])
    print(ans)


# driver code
list1 = [10, 20, 10, 30, 40, 40]
print("the unique values from 1st list is")
unique(list1)


list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]
print("\nthe unique values from 2nd list is")
unique(list2)
```

```
PS D:\DataEngineeringhexa\Python> python -u
the unique values from 1st list is
[10, 20, 30, 40]

the unique values from 2nd list is
[1, 2, 3, 4, 5]
PS D:\DataEngineeringhexa\Python>
```

## Get Unique Values From a List in Python Using Operator.countOf() method

```python
import operator as op
# function to get unique values


def unique(list1):

    # initialize a null list
    unique_list = []

    # traverse for all elements
    for x in list1:
        # check if exists in unique_list or not
        if op.countOf(unique_list, x) == 0:
            unique_list.append(x)
    # print list
    for x in unique_list:
        print(x)

# driver code
list1 = [10, 20, 10, 30, 40, 40]
print("the unique values from 1st list is")
unique(list1)

list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]
```

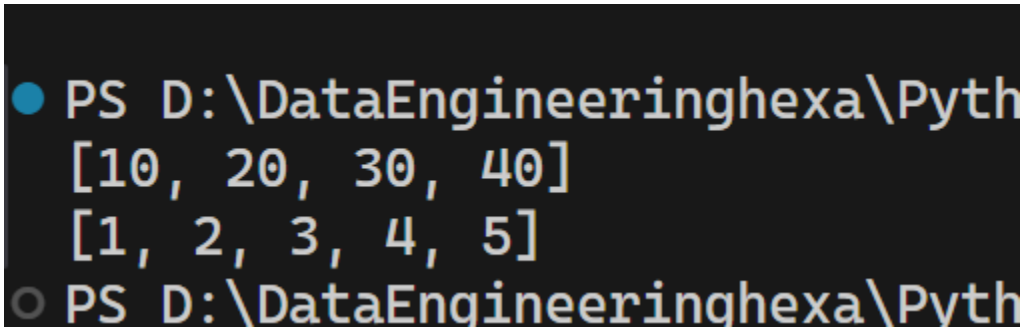
```
print("\nthe unique values from 2nd list is")
unique(list2)
```

```
the unique values from 1st list is
10
20
30
40

the unique values from 2nd list is
1
2
3
4
5
PS D:\DataEngineeringhexa\Python>
```

## Get Unique Values From a List Using dict.fromkeys()

```
# defining a list which consists duplicate values
list1 = [10, 20, 10, 30, 40, 40]

list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]

# storing the result of the fromkeys()
# operation and converting it into list
unique_list_1 = list(dict.fromkeys(list1))

unique_list_2 = list(dict.fromkeys(list2))
```

```
# Printing the final result
print(unique_list_1,unique_list_2,sep="\n")
```




## Get Unique Values From a List in Python Using collections.Counter()

```
from collections import Counter

# Function to get unique values


def unique(list1):

    # Print directly by using * symbol
    print(*Counter(list1))


# driver code
list1 = [10, 20, 10, 30, 40, 40]
print("the unique values from 1st list is")
unique(list1)


list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]
print("\nthe unique values from 2nd list is")
unique(list2)
```

```
PS D:\DataEngineeringhexa\Python> pytho
the unique values from 1st list is
10 20 30 40

the unique values from 2nd list is
1 2 3 4 5
PS D:\DataEngineeringhexa\Python>
```

## Get Unique Values From a List Using numpy.unique

```python
# using numpy.unique
import numpy as np

def unique(list1):
    x = np.array(list1)
    print(np.unique(x))


# driver code
list1 = [10, 20, 10, 30, 40, 40]
print("the unique values from 1st list is")
unique(list1)


list2 = [1, 2, 1, 1, 3, 4, 3, 3, 5]
print("\nthe unique values from 2nd list is")
unique(list2)
```

```
PS D:\DataEngineeringhexa\Python> python
the unique values from 1st list is
[10 20 30 40]

the unique values from 2nd list is
[1 2 3 4 5]
PS D:\DataEngineeringhexa\Python>
```

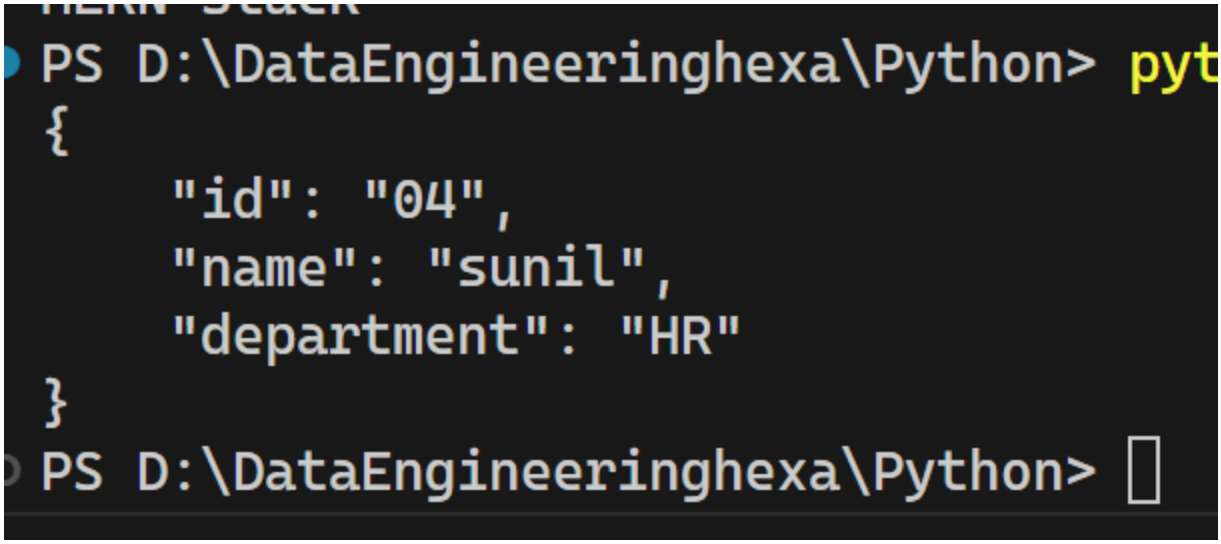
## Convert JSON String to Dictionary Python

```python
# Import JSON module
import json

# Define JSON string
jsonString = '{ "id": 121, "name": "Naveen", "course": "MERN Stack"}'

# Convert JSON String to Python
student_details = json.loads(jsonString)

# Print Dictionary
print(student_details)

# Print values using keys
print(student_details['name'])
print(student_details['course'])
```

```
PS D:\DataEngineeringhexa\Python> python -u "d:\DataEngineer
{'id': 121, 'name': 'Naveen', 'course': 'MERN Stack'}
Naveen
MERN Stack
PS D:\DataEngineeringhexa\Python>
```

## Convert Python Dict to JSON

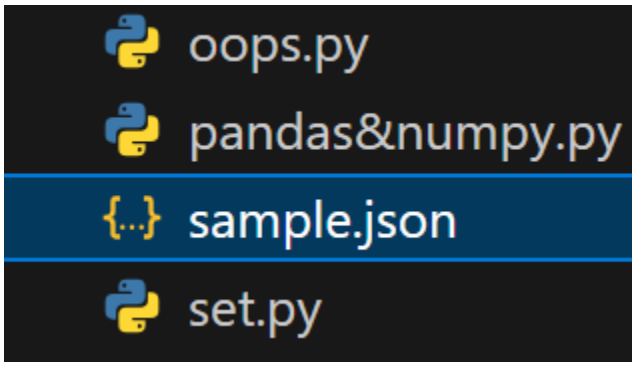
```
# Python program to convert

# Python to JSON

import json



# Data to be written

dictionary = {

  "id": "04",

  "name": "sunil",

  "department": "HR"

}



# Serializing json

json_object = json.dumps(dictionary, indent = 4)

print(json_object)
```




## Writing JSON to a file in Python

```
# Python program to write JSON

# to a file

import json



# Data to be written

dictionary ={

    "name" : "sathiyajith",

    "rollno" : 56,

    "cgpa" : 8.6,

    "phonenumber" : "9976770500"

}
```

```
with open("sample.json", "w") as outfile:

    json.dump(dictionary, outfile)
```




## Python Pretty Print JSON

```
# Python program to convert JSON to Python

import json


# JSON string

employee ='{"id":"09", "name": "Nitin", "department":"Finance"}'


# Convert string to Python dict

employee_dict = json.loads(employee)
```

```python
# Pretty Printing JSON string back

print(json.dumps(employee_dict, indent = 4, sort_keys= True))
```