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Lab 4

Python program to find the sum of all items in a dictionary

```
In [1]: mydict={  
        "a":5,  
        "g":8,  
        "f":7,  
        }  
        sum(mydict.values())
```

Out[1]: 20

Python program to find the size of a Dictionary

```
In [2]: mydict={  
        "brand":"maruti",  
        "model":"swift",  
        "year":2020,  
        }  
        len(mydict)
```

Out[2]: 3

Python program to Sort Dictionaries by Key or Value

```
In [6]: mydict={  
        "b":3,  
        "m":7,  
        "y":2,  
        "r":8  
        }  
        sorted_dict=dict(sorted(mydict.items()))  
        sorted_dict
```

Out[6]: {'b': 3, 'm': 7, 'r': 8, 'y': 2}

Sort list of dictionaries by values in Python – Using lambda function

```
In [12]: dict0={
    "brand": "maruti",
    "model": "swift",
    "year": 2020,
}
dict1={
    "brand": "suzuki",
    "model": "alto",
    "year": 1977,
}
dict2={
    "brand": "bmw",
    "model": "gtr",
    "year": 2023,
}
list=[dict0,dict1,dict2]

print(sorted(list, key=lambda i: i['year']))
```

[{'brand': 'suzuki', 'model': 'alto', 'year': 1977}, {'brand': 'maruti', 'model': 'swift', 'year': 2020}, {'brand': 'bmw', 'model': 'gtr', 'year': 2023}]

Program to Merge two Dictionaries

```
In [9]: dict1={
    "J": "maruti",
    "E": "swift",
    "N": 2020,
}
dict2={
    "I": "hundai",
    "T": "challenger",
    "H": 2021,
}
dict3=dict1|dict2
dict3
```

```
Out[9]: {'J': 'maruti',
'E': 'swift',
'N': 2020,
'I': 'hundai',
'T': 'challenger',
'H': 2021}
```

Program to Find all duplicate characters in string

```
In [14]: ▶ string = "Jenit Harnesha"
duplicates = []

for char in string:
    if string.count(char) > 1 and char not in duplicates:
        duplicates.append(char)

print("Duplicate characters in the string:", duplicates)
```

Duplicate characters in the string: ['e', 'n', 'a']

Program to Replace String by Kth Dictionary value

```
In [24]: ▶ test_list = ["KIIT", "is", "Best"]
print("The original list : " + str(test_list))
subs_dict = {
    "KIIT" : [5, 6, 7],
    "is" : [7, 4, 2],
}
K = 2
res = [subs_dict[x][K] if x in subs_dict else x for x in test_list]
print("The list after substitution : " + str(res))
```

The original list : ['KIIT', 'is', 'Best']

The list after substitution : [7, 2, 'Best']

Python | Remove all duplicates words from a given sentence

```
In [20]: ▶ string = "Jenit is great and Jenitsu is also good"
print(' '.join(dict.fromkeys(string.split())))
```

Jenit is great and Jenitsu also good

Program to Coun the frequencies in a list using dictionary in Python

```
In [28]: ▶ def CountFrequency(my_list):

    count = {}
    for i in my_list:
        count[i] = count.get(i, 0) + 1
    return count

if __name__ == "__main__":
    my_list = [1, 1, 1, 5, 5, 3, 1, 3, 3, 1, 4, 4, 4, 2, 2, 2, 2]
    print(CountFrequency(my_list))
```

{1: 5, 5: 2, 3: 3, 4: 3, 2: 4}

Program to create grade calculator in Python using dictionary

```
In [16]: ▶ mark1=87
          mark2=86
          mark3=74
          mark4=90
          total=mark1+mark2+mark3+mark4
          percentage=(total/400)*100
          print(percentage)
          if (percentage>=90):
              print("Grade A")
          elif (percentage<90 and percentage>=80):
              print("Grade B")
          else:
              print("Fail")
```

84.25
Grade B

In []: ▶