Task 3

GO_STP_5247

Question on Dictionary-

Q.1 Write a Python Program to sort (ascending and descending) a dictionary by value

```
[4] d1={'a':400, 'b':444, 'c':222}
    d2={}
    d3={}
    a=sorted(d1, key=d1.get, reverse=True)
    b=sorted(d1, key=d1.get, reverse=False)
    for i in a:
      d2[i]=d1[i]
    print("ascending order is:",d2)
    for y in b:
      d3[y]=d1[y]
    print("descending order is:",d3)
```

```
ascending order is: {'b': 444, 'a': 400, 'c': 222}
descending order is: {'c': 222, 'a': 400, 'b': 444}
```

Q.2 Write a Python Program to add a key to a dictionary.

Sample Dictionary : {0: 10, 1: 20}

Expected Result : {0: 10, 1: 20, 2: 30}

```
[6] d1={0: 40, 1: 50}
    d1[2]=60
```

```
[6] d1[2]=60
    print("result:",d1)
```

```
    result: {0: 40, 1: 50, 2: 60}
```

Q.3 Write a program asks for City name and Temperature and builds a dictionary using that Later on you can input City name and it will tell you the Temperature of that City.

```
[10] d={}
     n=int(input("Enter No. of records you want to insert:"))
     for i in range(0,n):
       city=input("Enter City:")
       temp=float(input("Enter Temperature: "))
       d[city]=temp
     x=input("Enter City name to get Temperature:")
     print(d[x])
```

```
    Enter No. of records you want to insert:3
    Enter City:Jaipur
    Enter Temperature: 30
    Enter City:Pune
    Enter Temperature: 28
    Enter City:Delhi
    Enter Temperature: 35
    Enter City name to get Temperature:Jaipur
    30.0
```

Q. 4 Write a Python program to convert list to list of dictionaries.

Sample lists: ["Black", "Red", "Maroon", "Yellow"], ["#000000", "#FF0000", "#800000", "#FFFF00"]

Expected Output: [{'color_name': 'Black', 'color_code': '#000000'}, {'color_name': 'Red', 'color_code': '#FF0000'}, {'color_name': 'Maroon',

Expected Output: [{'color_name': 'Black', 'color_code': '#000000'}, {'color_name': 'Red', 'color_code': '#FF0000'}, {'color_name': 'Maroon', 'color_code': '#800000'}, {'color_name': 'Yellow', 'color_code': '#FFFF00'}]

```
[13] color_name=["Black", "Red", "Maroon", "Yellow"]
     color_code=["#000000", "#FF0000", "#800000", "#FFFF00"]
     output=dict(zip(color_name,color_code))
     print(output)
```

```
     {'Black': '#000000', 'Red': '#FF0000', 'Maroon': '#800000', 'Yellow': '#FFFF00'}
```

** Q. 5 We have following information on Employees and their Salary (Salary is in lakhs),**

Employee ,Salary

John, 14

Smith, 13

Alice ,32

Daneil, 21

1.Using above create a dictionary of Employees and their Salary

```
[15] emp=["John", "Smith","Alice", "Daniel"]
     Sal=[14,13,32,21]
     d={}
     for i,j in (zip(emp, Sal)):
       d[i]=j
     print(d)
```

```
     {'John': 14, 'Smith': 13, 'Alice': 32, 'Daniel': 21}
```

2.Write a program that asks user for three type of inputs,

A)print: if user enter print then it should print all Employees with their Salary in this format,

```
John ==>14
Smith ==>13
Alice ==>32
Daneil ==>21
```

B)add: if user input adds then it should further ask for an Employee name to add. If Employee already exists in our dataset then it should print that it exists and do nothing. If it doesn't then it asks for Salary and add that new Employee/Salary in our dictionary and print it
C)remove: when user inputs remove it should ask for an Employee to remove. If an Employee exists in our dictionary then remove it and print a new dictionary using format shown above in (a). Else print that Employee doesn't exist!
D)query: on this again ask the user for which Employee he or she wants to query. When a user inputs that Employee it will print the Salary of that Employee.

```
[20] d={'John': 14, 'Smith': 13, 'Alice': 32, 'Daniel': 21}
     print(d)
     ip=input("Enter type of input:")
     if ip=="print":
       for i in d:
         print(i,"==>",d[i])
     elif ip=="add":
       n=input("Enter employee name to add:")
       if n in d:
         print(n,"Already exists in dictionary:")
       else:
         s=int(input("Enter salary for employee"))
```

```
    print(i,"==>",d[i])
elif ip=="add":
  n=input("Enter employee name to add:")
  if n in d:
    print(n,"Already exists in dictionary:")
  else:
    s=int(input("Enter salary for employee"))
    d[n]=s
  print(d)
elif ip=="remove" :
  a=input("Enter employee to remove:")
  if a in d:
    dic.pop(a)
  else:
    print("Employee doesn't exist!")
  print(d)
else:
  c=input("Enter which employee you want to query:")
  print(d[c])
```

```
{'John': 14, 'Smith': 13, 'Alice': 32, 'Daniel': 21}
Enter type of input:query
Enter which employee you want to query:Alice
32
```

Questions on Sets-

Q.1 What is the difference between a set and a frozenset? Create any set and try to use frozenset(setname).

```
[21] a=[1,1,2,4,4,6,5,8,7]
     s=set(a)
     print("Given set is:",s)
```

Questions on Sets-

Q.1 What is the difference between a set and a frozenset? Create any set and try to use frozenset(setname).

```
[21] a=[1,1,2,4,4,6,5,8,7]
     s=set(a)
     print("Given set is:",s)
     fs=frozenset(a)
     print("frozenset is:",fs)
```

```
Given set is: {1, 2, 4, 5, 6, 7, 8}
frozenset is: frozenset({1, 2, 4, 5, 6, 7, 8})
```

Q.2 Find the elements in a given set that are not in another set

```
set1 = {10,20,30,40,50}
set2 = {40,50,60,70,80}
```

Difference between set1 and set2 is {10,20,30}

```
[24] set1 = {10,20,30,40,50}
     set2 = {40,50,60,70,80}
     difference=set1-set2
     print("difference is:", difference)
```

```
difference is: {10, 20, 30}
```