# Siliguri Institute of Technology(MCA)-336

Python Programming (MCAN191)



### **Assignment – 8** (Operations on Dictionaries)

#### **Objective:**

- to introduce the concept of Python dictionary
- to make the students understand all the operations that can be performed on dictionary
- to make the students understand several use cases where dictionary will be helpful to use.

### **Programs:**

1. Write a Python script to concatenate the following dictionaries to create a new one. Sample Dictionary:  $dic1=\{1:10, 2:20\}$  $dic2={3:30, 4:40}$ dic3={5:50,6:60} Expected Result: {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

- 2. Write a Python script to check whether a given key already exists in a dictionary.
- 3. Write a Python script to concatenate the following dictionaries to create a new one.

```
Sample Dictionary:
dic1=\{1:10, 2:20,4:6\}
dic2={3:30, 4:40,5:2}
dic3=\{5:50.6:60\}
Expected Result: {1: 10, 2: 20, 3: 30, 4: 46, 5: 52, 6: 60}
```

- 4. Write a Python program to iterate over dictionaries using for loops.
- 5. Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x\*x).

```
Sample Dictionary (n = 5):
Expected Output: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

- 5. Write a Python script to merge two Python dictionaries.
- 6. Write a Python program to map two lists into a dictionary.
- 7. Write a Python program to get the maximum and minimum values of a dictionary.
- 8. Write a Python program to create a dictionary from a string.

Note: Track the count of the letters from the string.

Sample string: 'MCA1stsem'

Expected output: {'M':1,'C':2,'A':3,'1':4,'s':5,'t':6,'s':7,'e':8,'m':10}

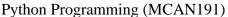
- 9. Write a Python program to print a dictionary in table format.
- 10. Write a Python program to get the top three items in terms of cost in a shop.

```
d1={'dress':23,'pant':45,'shoe':12,'bungle':55,'book':8}
output:
bungle 55
```

pant 45 dress 23

11. Write a Python program to match key values in two dictionaries. Sample dictionary: {'key1': 1, 'key2': 3, 'key3': 2}, {'key1': 1, 'key2': 2} Expected output: key1: 1 is present in both x and y

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12. Write a Python program to create a dictionary of keys x, y, and z where each key has as value a list from 11-20, 21-30, and 31-40 respectively. Access the fifth value of each key from the dictionary. {'x': [11, 12, 13, 14, 15, 16, 17, 18, 19], 'y': [21, 22, 23, 24, 25, 26, 27, 28, 29], 'z': [31, 32, 33, 34, 35, 36, 37, 38, 39]} 15 25 35 x has value [11, 12, 13, 14, 15, 16, 17, 18, 19] y has value [21, 22, 23, 24, 25, 26, 27, 28, 29] z has value [31, 32, 33, 34, 35, 36, 37, 38, 39] 13. Write a Python program to filter a dictionary based on values. Original Dictionary: {'Cierra Vega': 175, 'Alden Cantrell': 180, 'Kierra Gentry': 165, 'Pierre Cox': 190} Marks greater than 170: {'Cierra Vega': 175, 'Alden Cantrell': 180, 'Pierre Cox': 190}

14. Write a Python program to convert more than one list to a nested dictionary.

Original strings:

['S001', 'S002', 'S003', 'S004'] ['Adina Park', 'Leyton Marsh', 'Duncan Boyle', 'Saim Richards'] [85, 98, 89, 92] Nested dictionary:

 $\begin{tabular}{ll} $[\{'S001': \{'Adina\ Park': 85\}\}, \{'S002': \{'Leyton\ Marsh': 98\}\}, \{'S003': \{'Duncan\ Boyle': 89\}\}, \{'S004': \{'Saim\ Richards': 92\}\}] \end{tabular}$