**Week 2 Lab Exercise**

**Exercise 1**

Write a Python script to add a key to a dictionary.

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

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

**Exercise 2**

Write a Python script to concatenate following dictionaries to create a new one. Go to the editor

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}

**Exercise 3**

Write a Python script to check whether a given key already exists in a dictionary

**## Exercise 4**

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}

**## Exercise 5**

Write a Python program to multiply all the items in a dictionary

**## Exercise 6**

Write a Python program to map two lists into a dictionary

Sample:

keys = ['red', 'green', 'blue']

values = ['#FF0000','#008000', '#0000FF']

**## Exercise 7**

Write a Python program to combine two dictionary adding values for common keys. Go to the editor

d1 = {'a': 100, 'b': 200, 'c':300}

d2 = {'a': 300, 'b': 200, 'd':400}

Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})

**## Exercise 8**

Write a Python program to drop empty Items from a given Dictionary.

Original Dictionary:

{'c1': 'Red', 'c2': 'Green', 'c3': None}

New Dictionary after dropping empty items:

{'c1': 'Red', 'c2': 'Green'}

**## Exercise 9**

Write a Python program to convert given a dictionary to a list of tuples.

Sample Output:

Original Dictionary:

{'Red': 1, 'Green': 3, 'White': 5, 'Black': 2, 'Pink': 4}

Convert the said dictionary to a list of tuples:

[('Red', 1), ('Green', 3), ('White', 5), ('Black', 2), ('Pink', 4)]

**## Exercise 10**

Write a Python program to find the key of the maximum value in a dictionary.

Sample Output:

Original dictionary elements:

{'Theodore': 19, 'Roxanne': 22, 'Mathew': 21, 'Betty': 20}

Finds the key of the maximum and minimum value of the said dictionary:

('Roxanne', 'Theodore')