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Python Assignment - 3

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```python
[1]: # Q1- Write a Python script to sort (ascending and descending) a dictionary by
     # value.
     my_dict = {
         'apple': 3,
         'banana': 2,
         'cherry': 5,
         'date': 4
     }

     accending_dict = dict(sorted(my_dict.items(), key = lambda item: item[1]))
     decending_dict = dict(sorted(my_dict.items(), key = lambda item: item[1],
                            reverse = True))

     print(accending_dict)
     print(decending_dict)

     # outut :
```

```
{'banana': 2, 'apple': 3, 'date': 4, 'cherry': 5}
{'cherry': 5, 'date': 4, 'apple': 3, 'banana': 2}
```

```python
[4]: '''
     Q2- 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}
     '''

     # method 1
     def merge_dict(*dicts):
         merged_dict = {}
         for i in dicts:
             merged_dict.update(i);
         return merged_dict
```

```python
dic1 = {1:10, 2:20}
dic2 = {3:30, 4:40}
dic3 = {5:50,6:60}

result = merge_dict(dic1, dic2, dic3)

print(result)

# method 2
merged_dict = {**dic1, **dic2 , **dic3}

print(merged_dict)
```

```
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
```

[12]:
```python
# Write a Python script to check whether a given key already exists in a
 ↪dictionary.

my_dict = {1: 10, 2: 20, 3: 30, 4: 40}
key1 = 3
key2 = 5

def isKeyExist(my_dict, key):
  for i in my_dict.keys():
    if i == key:
      print("Yes, exist")
      return
  print("does'n exist")

isKeyExist(my_dict, key1)
isKeyExist(my_dict, key2)

# method 2
def isKeyExist_in(my_dict, key):
  return key in my_dict.keys()

print(isKeyExist_in(my_dict, key1))
print(isKeyExist_in(my_dict, key2))

# output :
```

```
Yes, exist
does'n exist
True
```

```
False
```

[13]:
```python
'''
Q4 - 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}
'''

n = int(input("Enter the n : "))
my_dict = {i: i*i for i in range(1, n + 1)}
print(my_dict)

# output :
```

```
Enter the n : 5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

[14]:
```python
# Write a Python program to sum all the items in a dictionary.

my_dict = {1: 10, 2: 20, 3: 30, 4: 40}

def sumOfValues(my_dict):
  return sum(my_dict.values())

print(sumOfValues(my_dict))

# output :
```

```
100
```

[20]:
```python
# Write a Python program to multiply all the items in a dictionary.

def multiplyDictValues(my_dict):
    result = 1
    for value in my_dict.values():
        result *= value
    return result

my_dict = {1: 2, 2: 3, 3: 4, 4: 5}
total_product = multiplyDictValues(my_dict)
print(total_product)

# output :
```

[20]: 120

```python
[29]:  '''
       Write a Python program to map two lists into a dictionary. (Hint: create list1␣
        ↪named as key,
       then create another list named as value, containing values corresponding to␣
        ↪list 1 and then
       use zip)
       '''

       values = ['apple', 'banana', 'cherry']
       keys = [1, 2, 3]

       # method 1
       mapped_dict = dict(zip(keys, values))

       # method 2
       map_dixt = {i : j for i, j in zip(keys, values)}

       print(map_dixt)

       # output
```

```
{1: 'apple', 2: 'banana', 3: 'cherry'}
```

```python
[22]:  # Write a Python program to get the maximum and minimum values of a dictionary.

       my_dict = {1: 10, 2: 20, 3: 30, 4: 40}

       def max_min(my_dict):
         maxi = max(my_dict.values())
         mini = min(my_dict.values())
         return maxi, mini   # return typle

       print(max_min(my_dict))
       # output :
```

```
(40, 10)
```

```python
[24]:  # Write a Python program to remove duplicates from the dictionary.

       def removeDuplicates(my_dict):
         unique_dict = {}
         for key,value in my_dict.items():
           if value not in unique_dict.values():
             unique_dict[key] = value
         return unique_dict

       my_dict = {1: 'apple', 2: 'banana', 3: 'apple', 4: 'orange', 5: 'banana'}
```

```
result = removeDuplicates(my_dict)
result

# output :
```

[24]: {1: 'apple', 2: 'banana', 4: 'orange'}

[28]:
```python
# Write a Python program to check if multiple keys exist in a dictionary.

def isMultipleKeys(my_dict, key):
    n = 0
    for i in my_dict.keys():
      if i == key:
        n = n + 1
    return n == 1

my_dict = {1: 'apple', 2: 'banana', 3: 'cherry', 4: 'date'}

key = 2

isMultipleKeys(my_dict, key)

# output :
```

[28]: True