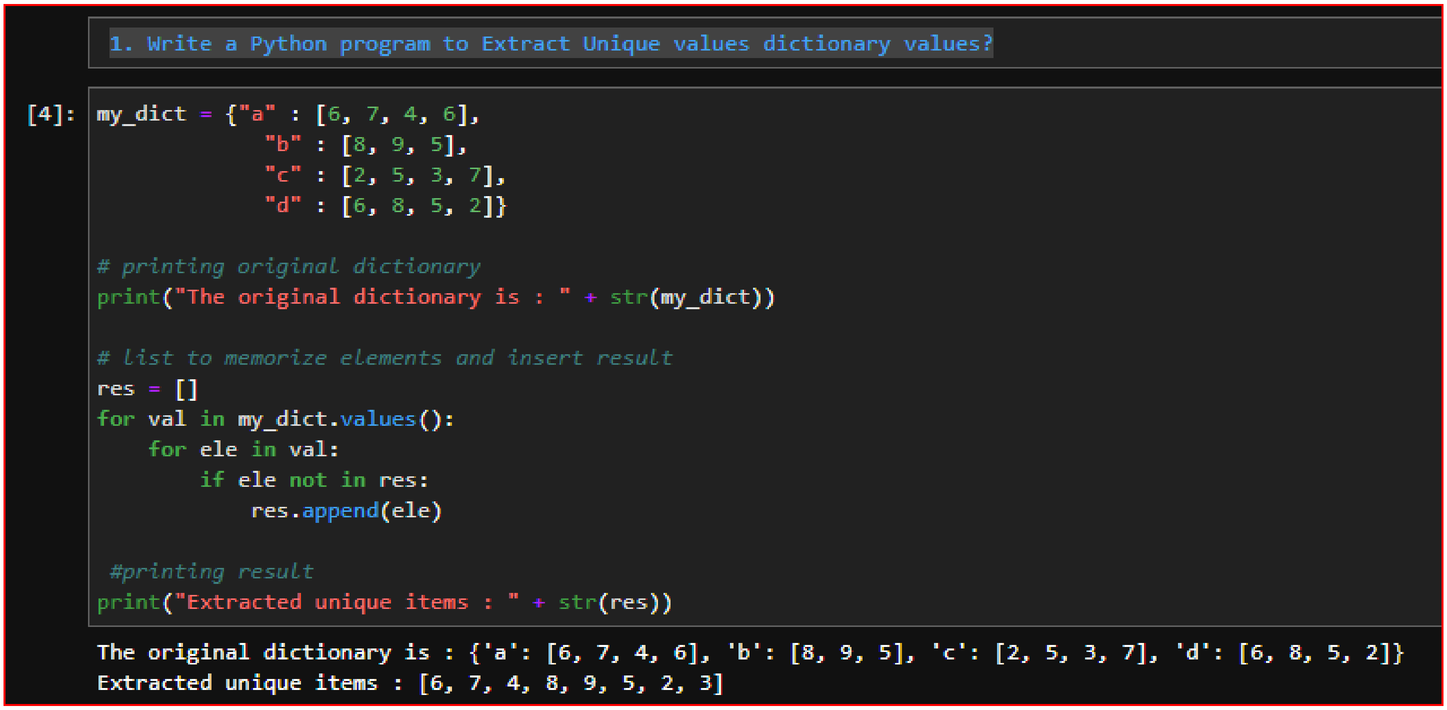
Python Basic Programming Assignment 12

1. Write a Python program to Extract Unique values dictionary values?

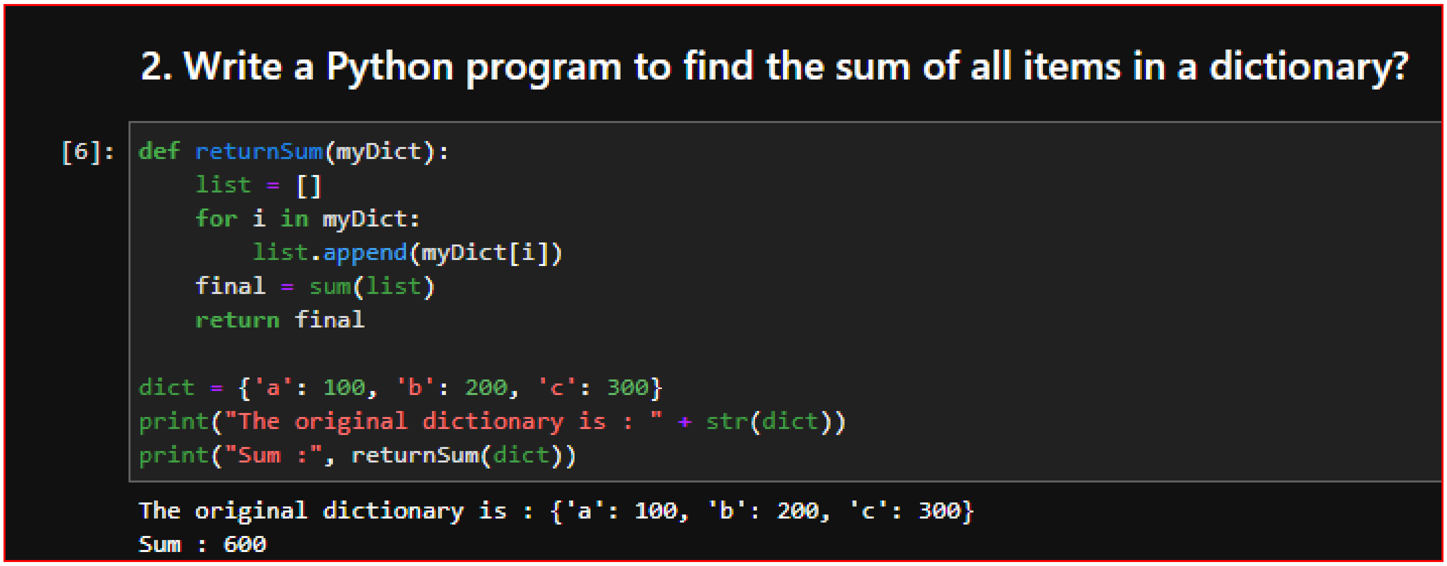


1. Write a Python program to Extract Unique values dictionary values?

[4]:
```
my_dict = {"a" : [6, 7, 4, 6],
             "b" : [8, 9, 5],
             "c" : [2, 5, 3, 7],
             "d" : [6, 8, 5, 2]}

# printing original dictionary
print("The original dictionary is : " + str(my_dict))

# list to memorize elements and insert result
res = []
for val in my_dict.values():
    for ele in val:
        if ele not in res:
            res.append(ele)

 #printing result
print("Extracted unique items : " + str(res))
```

```
The original dictionary is : {'a': [6, 7, 4, 6], 'b': [8, 9, 5], 'c': [2, 5, 3, 7], 'd': [6, 8, 5, 2]}
Extracted unique items : [6, 7, 4, 8, 9, 5, 2, 3]
```

2. Write a Python program to find the sum of all items in a dictionary?

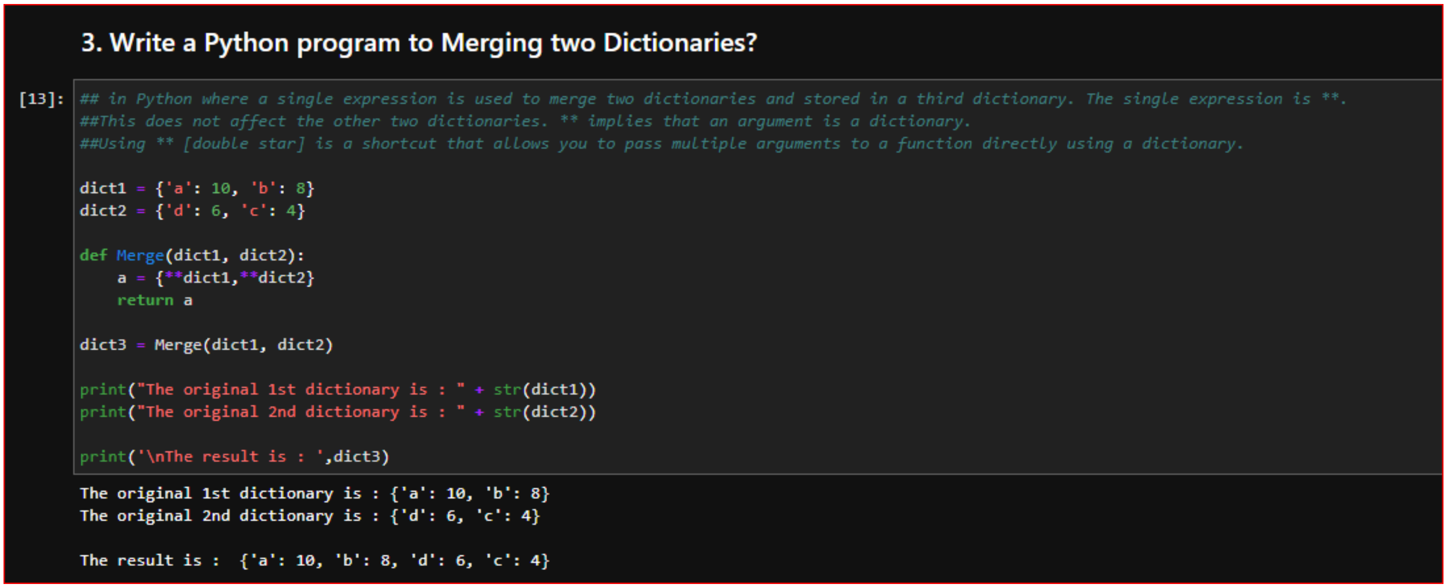


2. Write a Python program to find the sum of all items in a dictionary?

[6]:
```
def returnSum(myDict):
    list = []
    for i in myDict:
        list.append(myDict[i])
    final = sum(list)
    return final

dict = {'a': 100, 'b': 200, 'c': 300}
print("The original dictionary is : " + str(dict))
print("Sum :", returnSum(dict))
```

```
The original dictionary is : {'a': 100, 'b': 200, 'c': 300}
Sum : 600
```

3. Write a Python program to Merge two Dictionaries?

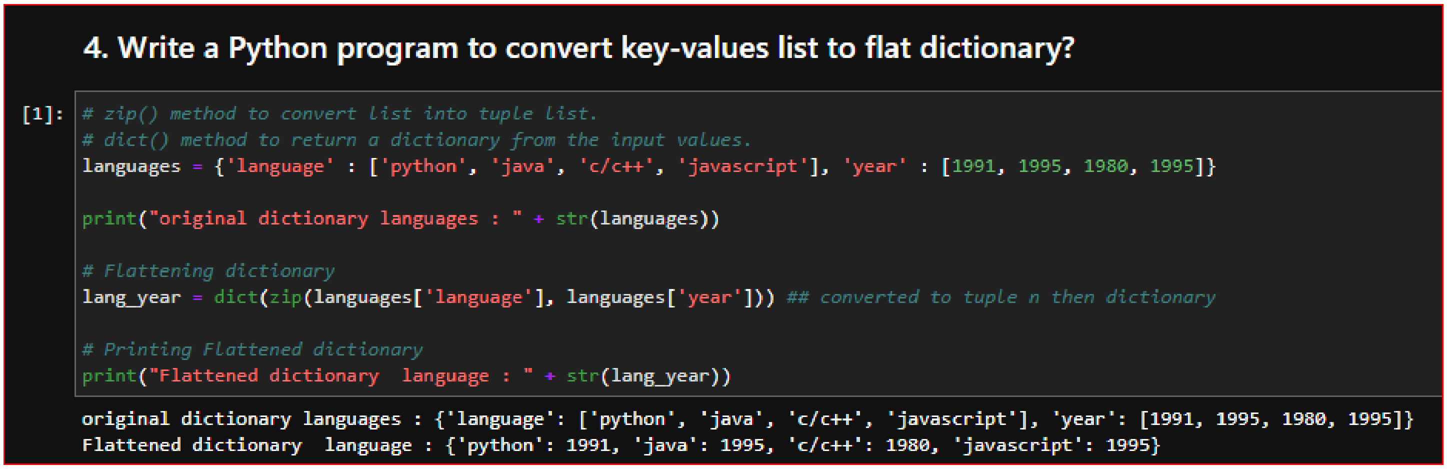


3. Write a Python program to Merging two Dictionaries?

```
[13]: ## in Python where a single expression is used to merge two dictionaries and stored in a third dictionary. The single expression is **.
##This does not affect the other two dictionaries. ** implies that an argument is a dictionary.
##Using ** [double star] is a shortcut that allows you to pass multiple arguments to a function directly using a dictionary.

dict1 = {'a': 10, 'b': 8}
dict2 = {'d': 6, 'c': 4}

def Merge(dict1, dict2):
    a = {**dict1,**dict2}
    return a

dict3 = Merge(dict1, dict2)

print("The original 1st dictionary is : " + str(dict1))
print("The original 2nd dictionary is : " + str(dict2))

print('\nThe result is : ',dict3)
```

```
The original 1st dictionary is : {'a': 10, 'b': 8}
The original 2nd dictionary is : {'d': 6, 'c': 4}

The result is :  {'a': 10, 'b': 8, 'd': 6, 'c': 4}
```

4. Write a Python program to convert the key-values list to a flat dictionary?

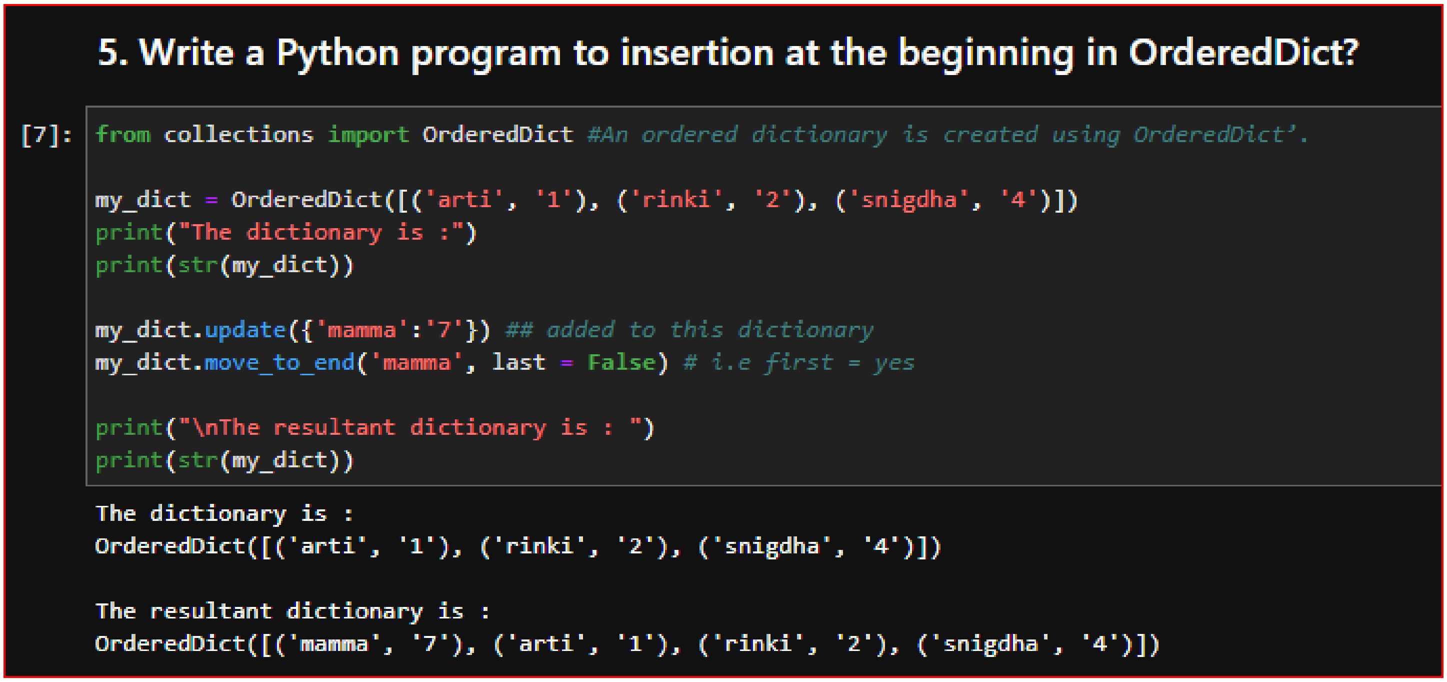


4. Write a Python program to convert key-values list to flat dictionary?

```
[1]: # zip() method to convert list into tuple list.
# dict() method to return a dictionary from the input values.
languages = {'language' : ['python', 'java', 'c/c++', 'javascript'], 'year' : [1991, 1995, 1980, 1995]}

print("original dictionary languages : " + str(languages))

# Flattening dictionary
lang_year = dict(zip(languages['language'], languages['year'])) ## converted to tuple n then dictionary

# Printing Flattened dictionary
print("Flattened dictionary  language : " + str(lang_year))
```

```
original dictionary languages : {'language': ['python', 'java', 'c/c++', 'javascript'], 'year': [1991, 1995, 1980, 1995]}
Flattened dictionary  language : {'python': 1991, 'java': 1995, 'c/c++': 1980, 'javascript': 1995}
```

5. Write a Python program to insert at the beginning in OrderedDict?

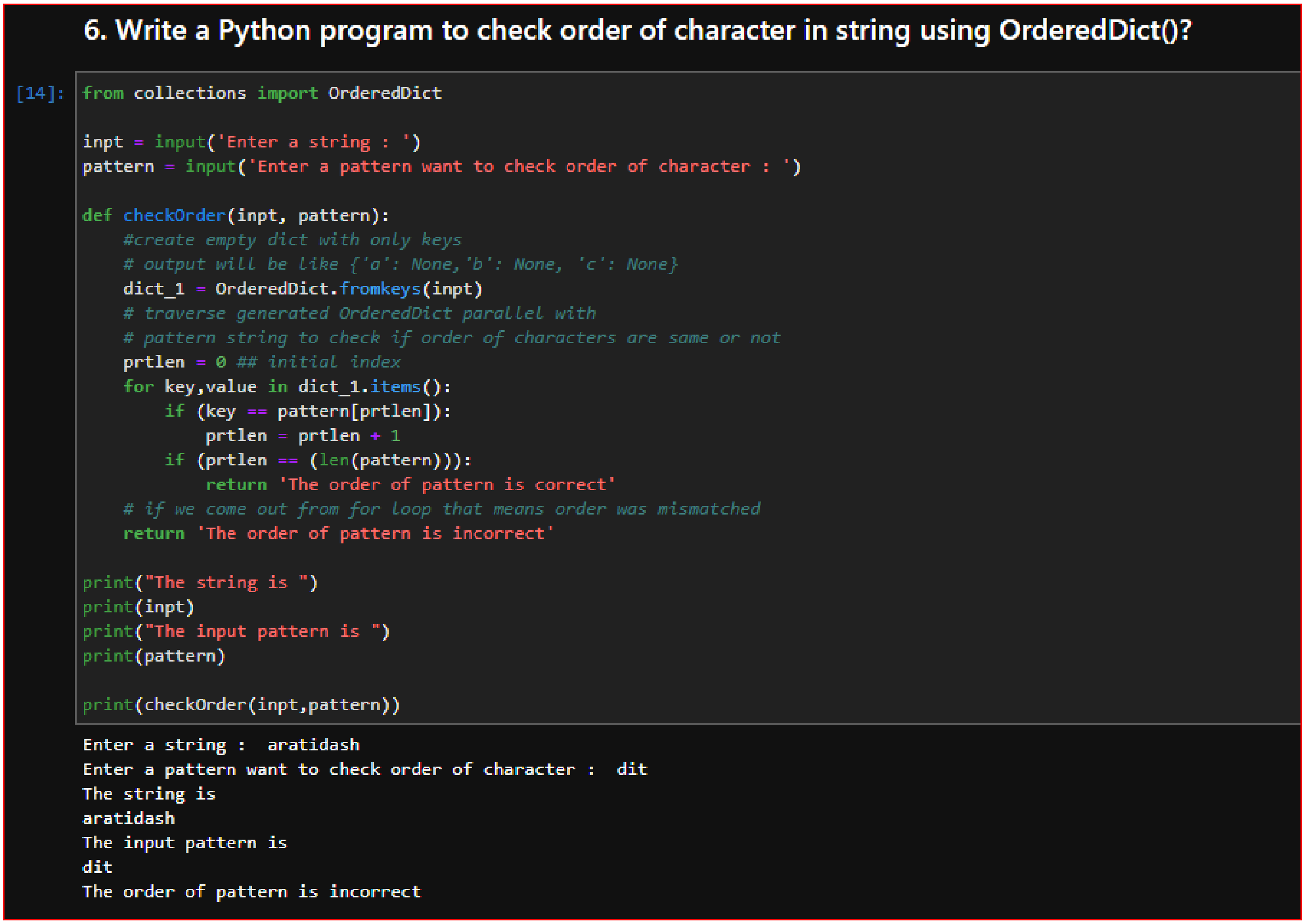


5. Write a Python program to insertion at the beginning in OrderedDict?

```
[7]: from collections import OrderedDict #An ordered dictionary is created using OrderedDict’.

     my_dict = OrderedDict([('arti', '1'), ('rinki', '2'), ('snigdha', '4')])
     print("The dictionary is :")
     print(str(my_dict))

     my_dict.update({'mamma':'7'}) ## added to this dictionary
     my_dict.move_to_end('mamma', last = False) # i.e first = yes

     print("\nThe resultant dictionary is : ")
     print(str(my_dict))
```

```
The dictionary is :
OrderedDict([('arti', '1'), ('rinki', '2'), ('snigdha', '4')])

The resultant dictionary is :
OrderedDict([('mamma', '7'), ('arti', '1'), ('rinki', '2'), ('snigdha', '4')])
```

6. Write a Python program to check the order of characters in strings using OrderedDict ()?

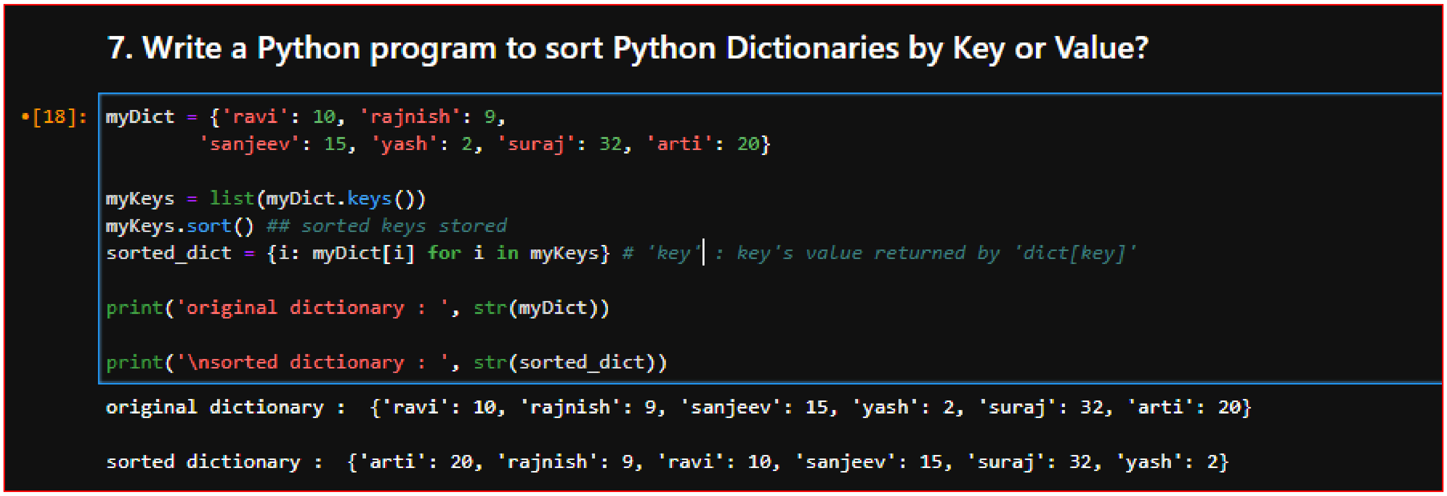


6. Write a Python program to check order of character in string using OrderedDict()?

```
[14]: from collections import OrderedDict

      inpt = input('Enter a string : ')
      pattern = input('Enter a pattern want to check order of character : ')

      def checkOrder(inpt, pattern):
          #create empty dict with only keys
          # output will be like {'a': None,'b': None, 'c': None}
          dict_1 = OrderedDict.fromkeys(inpt)
          # traverse generated OrderedDict parallel with
          # pattern string to check if order of characters are same or not
          prtlen = 0 ## initial index
          for key,value in dict_1.items():
              if (key == pattern[prtlen]):
                  prtlen = prtlen + 1
              if (prtlen == (len(pattern))):
                  return 'The order of pattern is correct'
          # if we come out from for loop that means order was mismatched
          return 'The order of pattern is incorrect'

      print("The string is ")
      print(inpt)
      print("The input pattern is ")
      print(pattern)

      print(checkOrder(inpt,pattern))
```

```
Enter a string :  aratidash
Enter a pattern want to check order of character :  dit
The string is
aratidash
The input pattern is
dit
The order of pattern is incorrect
```

7. Write a Python program to sort Python Dictionaries by Key or Value?



7. Write a Python program to sort Python Dictionaries by Key or Value?

```
[18]: myDict = {'ravi': 10, 'rajnish': 9,
              'sanjeev': 15, 'yash': 2, 'suraj': 32, 'arti': 20}

      myKeys = list(myDict.keys())
      myKeys.sort() ## sorted keys stored
      sorted_dict = {i: myDict[i] for i in myKeys} # 'key' : key's value returned by 'dict[key]'

      print('original dictionary : ', str(myDict))

      print('\nsorted dictionary : ', str(sorted_dict))
```

```
original dictionary :  {'ravi': 10, 'rajnish': 9, 'sanjeev': 15, 'yash': 2, 'suraj': 32, 'arti': 20}

sorted dictionary :  {'arti': 20, 'rajnish': 9, 'ravi': 10, 'sanjeev': 15, 'suraj': 32, 'yash': 2}
```