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PYTHON

LAB 13: DICTIONARY

DEFINITION:

"A dictionary is a built-in data structure used to store collections of data in the form of key-value pairs. Each element in a dictionary consists of a key and its corresponding value. Dictionaries are mutable, unordered, and can contain elements of different data types."

QUESTIONS:

1.Write a Python program and calculate the mean of the below dictionary.
test_dict = {"A" : 6, "B" : 9, "C" : 5, "D" : 7, "E" : 4}
Output: 6.2

```
test_dict = {"A": 6, "B": 9, "C": 5, "D": 7, "E": 4} # initializing the dictionary with keys and values
sum_of_values = sum(test_dict.values()) # taking sum of the values in the dictionary by taking the dictionary value
mean = sum_of_values / len(test_dict) # calculating the mean for the sum of the values by adding and divide by number of items
print("Mean of the dictionary:", mean) # print the mean
```

Output:

Mean of the dictionary: 6.2

2.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}

```
# Create three dictionaries that is dic1, dic2, dic3
dic1 = {1: 10, 2: 20}
dic2 = {3: 30, 4: 40}
dic3 = {5: 50, 6: 60}
# Concatenate the dictionaries using the update() method
dic1.update(dic2)
dic1.update(dic3)
# Print the new dictionary
print(dic1)
```

Output:

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

3. Write a Python program to get the key, value, and item in a dictionary.

input:

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

```
dict_num = {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
#Get the keys of the dictionary
keys = dict_num.keys()
#Get the values of the dictionary
values = dict_num.values()
#Get the items of the dictionary
items = dict_num.items()
#Print the keys
print("Keys:", keys)
#Print the values
print("Values:", values)
#Print the items
print("Items:", items)
```

Output:

Keys: dict_keys([1, 2, 3, 4, 5, 6])
Values: dict_values([10, 20, 30, 40, 50, 60])
Items: dict_items([(1, 10), (2, 20), (3, 30), (4, 40), (5, 50), (6, 60)])

4. Write a Python program to get the key, value, and item in a dictionary.

Input:

input_dict = {1: 10, 2: 20, 3:None, 4: 40, 5: None, 6: 60}

```
input_dict = {1: 10, 2: 20, 3: None, 4: 40, 5: None, 6: 60}
# Get the keys
keys = input_dict.keys()
# Get the values
values = input_dict.values()
# Get the items
items = input_dict.items()
# Print the keys
print("Keys:", keys)
# Print the values
print("Values:", values)
# Print the items
print("Items:", items)
```

Output:

Keys: dict_keys([1, 2, 3, 4, 5, 6])
Values: dict_values([10, 20, None, 40, None, 60])
Items: dict_items([(1, 10), (2, 20), (3, None), (4, 40), (5, None), (6, 60)])