National Public School, Koramangala 2021-22
Computer Science Assignment -6
Dictionary
Grade: 11

Write ***menu driven*** programs for the following:

1. Given two dictionaries, d1 and d2, where values are numbers, add values from both the dictionaries with common keys. Form a new dictionary with such key, value pairs.
   For example, If d1= {'a':10, 'b':20,'c':30} and d2= {'b':20, 'c':30, 'd':40},
   Expected result is d3={'b':40,'c':60}

2. Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have marks above 75.
   Marks={<rollno>: [<name>, <marks>] ,……..}

3. Count and display the *frequency of occurrence of characters* of a word (taken as input from the user), as a dictionary. For example, if the input is "programming", expected output is:
   Frequency of chars of programming as a dictionary: {'p':1, 'r':2, 'o':1, 'g':2, 'a':1, 'm':2, 'i':1, 'n':1}.
   The user should be able to run this program as many times as he/she wishes.

4. Create a dictionary of a list of items in a shop as below:
   Shoplist = {<itemname>: [stock, price_per_unit] ,……..}
   a. Search for an item and if available, display item name, stock and price per unit
   b. Rename an item in the same dictionary
   c. Display the item with minimum and maximum price per unit

5. Create dictionary whose keys are strings and values are a list of numbers. Identify the key whose value has the MOST UNIQUE numbers.
   For example , if the dictionary is :
   test_dict = {"One" : [5, 7, 9, 4, 0], "Two" : [6, 7, 4, 3, 3], "Three" : [9, 9, 6, 5, 5]},
   Expected output is : One

6. Create a nested dictionary with employee codes and project details of the employees.

   The dictionary is to be designed as below:
   employees={<emp_code>: {<projid1>: [projname , duration in months], ……..},……..}

   Sample dictionary:
   Employees={101: {1:["Banking":10], 2:["Etrade":2]}, 102:{ 1:["Banking":5], 3:["Ecommerce":15]}}

   a. Display employee code with maximum project experience in months and years. (Sample Output : 102 - 1 year 8 months)
   b. Add additional project details for employees by providing employee code.
   c. Accept project id and display employee code and duration of that employee in that project in *tabular format*.
      (Sample Output for project id: 1
      Project Name : Banking

Emp Code	Duration in Months
101	10
102	5

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