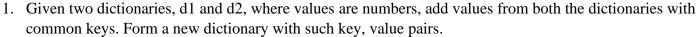
National Public School, Koramangala 2021-22 Computer Science Assignment -6

Dictionary Grade: 11

Write *menu driven* programs for the following:



```
For example, If d1 = \{\text{`a'}:10, \text{`b'}:20, \text{`c'}:30\} and d2 = \{\text{`b'}:20, \text{`c'}:30, \text{`d'}:40\}, Expected result is d3 = \{\text{`b'}:40, \text{`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 <u>frequency of occurrence of characters</u> 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.

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ereme 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
