Python - Practice session – 3!

Illustrating List, Tuple, Dictionary usage along with comprehension, loops, methods of these data structures and zip

1. Store a random number as English marks to the 'list' of 4 names in our class as 'dictionary' using update() method.

o/p: eng_marks = {'Harsh': 99, 'Aadhi': 50, 'Karunesh': 15, 'Sam': 19}

2. Same as 1 and prepare a lang marks dictionary but use dictionary comprehension approach.

o/p : lang_marks = {'Harsh': 100, 'Aadhi': 50, 'Karunesh': 90, 'Sam': 50}

3. Use append() or extend() to store the dictionaries into a single list named as actual_marks.(You are creating a list of dictionaries , be cautious that not list of tuples!!)

o/p: actual_marks = [{'Harsh': 99, 'Aadhi': 50, 'Karunesh': 15, 'Sam': 19},
{'Harsh': 100, 'Aadhi': 50, 'Karunesh': 90, 'Sam': 5}]

4. Loop through the final actual_marks list and create a new list named totalMarks, in which add the values of two dictionaries (with same keys in our case) present in the list.

o/p: totalMarks = [120, 130, 135, 160] #total of two subject marks.

5. create a list of tuples named 'list_of_name_sub_tot' with values from list of names, list of subjects, list of totalMarks as individual tuples and have this tuple key for new dictionary dict_marks. (You are creating a list of tuples !!)

o/p : list_of_name_sub_tot =[('Harsh','Eng','lang', 'total'),('Aadhi','Eng','lang', 'total'),..]

6. Create an ultimate dictionary with keys from the list list_of_name_sub_tot and values from eng_marks, lang_marks dictionaries and from the list totalMarks.

final o/p

class_marks = {('Harsh','Eng','lang', 'total') : [99, 21, 120]

('Aadhi','Eng','lang', 'total') : [50, 80, 130]

...}

7. In this class_marks dictionary, we need to add feedback to each student in their value list. If the student's total marks are above 100, then "Good Student", below 100, then "Slow bloomer", if more than 120, then "Kutty Pattas".

final o/p

class_marks = {('Harsh','Eng','lang', 'total') : [99, 21, 120,"Kutty Pattas"]

('Aadhi','Eng','lang', 'total') : [20, 80, 100,"Good student"]

...}