TASK 1

A. Shopping List Manager

Background

Imagine you're preparing to go to the market to buy food for the week. Instead of writing on paper, you decide to organize your shopping using Python! This will help you keep track of what you want to buy and how much it costs.

Steps

1. Create a list of 5 items you plan to buy.
2. Create a dictionary where each item is the key, and its price (in Naira) is the value.
3. Print the first and last item from your shopping list.
4. Print the price of the most expensive item from the dictionary.
5. Add 2 more items to the shopping list.
6. Find the total cost of all the items.
7. Create a tuple with your 3 favorite items from the shopping list and print it.
8. Display the items in your shopping list in alphabetical order.

B. Student Information System

Background

You are helping your school build a very simple “Student Information System.” The school wants to store and display details about one student, including their subjects and hobbies. You will use Python to represent the data neatly.

Steps

1. Create variables to store:

a. Student’s name

b. Student’s age

c. Student’s GPA (float)

d. Whether the student passed (True or False)

2. Print a sentence that includes all of the student’s details.
3. Create a list of 5 subjects the student is taking. Print the 2nd and 4th subjects.
4. Create a tuple of the student’s hobbies. Print the last hobby.
5. Create a dictionary with the student’s details (keys: "name", "age", "gpa", "passed", "subjects"). Print the dictionary.
6. Suppose you have another list for the test scores of the students. The scores are; 78, 80, 92, 56, 85. Find the average test score.

C. **Restaurant Menu Organizer**

Background

You are helping a restaurant organize their menu using Python. The restaurant sells both food and drinks, and they want you to structure the data in a way that is easy to understand.

Steps

1. Create a list of 5 food items sold in the restaurant.
2. Create a tuple of 3 drink names.
3. Create a dictionary that links each food item to its price.
4. Print the 3rd food item from the list.
5. Print the 1st drink from the tuple.
6. Print the price of the least expensive item from the dictionary.
7. Add 2 more food items to the list.
8. Find the average food price.
9. Print the full menu dictionary.

Instructions

a. Use a Jupyter Notebook to solve these questions.
b. Ensure your codes are readable and simple. Use markdowns and comments where necessary.
c. Ensure your codes are free of errors.