

Python Practice Problems on List,Tuple, Set and Dictionary

Time: 45 minutes

AI Lab

CSE-3636

Problem 1 (List – Shopping Cart □)

You are building a simple shopping cart system.

- Create a list of 5 items: "apple", "banana", "milk", "bread", "egg".
- Ask the user to enter an item to buy.
- Check if the item is in the cart:
 - If yes → print "Item available"
 - If no → print "Sorry, not available"

Sample	Output	1:
Enter an item:		milk
Item		available

Sample	Output	2:
Enter an item:		chocolate
Sorry, not available		

Problem 2 (Tuple – Exam Scores □)

You are given a tuple of exam scores: (85, 90, 78, 92, 88, 76).

- Find and print the highest and lowest score.
- Print the average score.

Sample	Output:
Highest	Score: 92
Lowest	Score: 76
Average Score: 84.83	

Problem 3 (Set – Unique Visitors □)

A website records visitors with user IDs: [101, 102, 103, 101, 104, 102, 105, 106, 105]

- Convert the list into a set to find unique visitors.
- Print the total number of unique visitors.

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Sample Output:
Unique Visitors: {101, 102, 103, 104, 105, 106}
Total Unique Visitors: 6

Problem 4 (Dictionary – Student Marks □)

Create a dictionary of 3 students and their marks: {"Alice": 85, "Bob": 78, "Charlie": 92}
- Print the student with the highest mark.
- Allow the user to input a student's name and print their marks.

Sample Output 1:
Top Student: Charlie with 92 marks
Enter a student name: Alice
Alice scored 85

Sample Output 2:
Top Student: Charlie with 92 marks
Enter a student name: David
Student not found

Problem 5 (Dictionary – Favorite Fruits □□□)

Create a dictionary where student names are keys and their favorite fruits are values.
Example: {"Alice": "Apple", "Bob": "Banana", "Charlie": "Grapes"}

Tasks:

1. Print all students and their favorite fruits.
2. Add a new student and their favorite fruit.
3. Ask the user to enter a student's name and show their favorite fruit.

Sample Output:
Alice likes Apple
Bob likes Banana
Charlie likes Grapes

New student added: David likes Mango

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Enter a student name: Alice
Alice likes Apple