

Python List Practice - Real World Assignments

Assignment 1: To-Do List Manager

Create a to-do list program. The user can choose from the following options repeatedly until they exit:

1. Add a task
2. View tasks
3. Remove a task by number
4. Exit

Sample Input/Output:

1. Add a task
2. View tasks
3. Remove a task
4. Exit

Enter choice: 1

Enter task: Buy milk

1. Add a task
2. View tasks
3. Remove a task
4. Exit

Enter choice: 2

To-Do List:

1. Buy milk

Enter choice: 3

Enter task number to remove: 1

Task removed.

Assignment 2: Class Topper Identifier

Input names and marks of students (same length). After all entries:

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1. Display all names with marks
2. Identify and print the student(s) with the highest marks

Sample Input:

Enter number of students: 4

Name of student 1: Anil

Marks: 78

Name of student 2: Sita

Marks: 89

Name of student 3: Ram

Marks: 89

Name of student 4: Gita

Marks: 65

Expected Output:

Anil: 78

Sita: 89

Ram: 89

Gita: 65

Topper(s): Sita, Ram with 89 marks

Assignment 3: Shopping Basket Billing

Ask the user to input the name and price of items they bought. Then:

1. Show list of items with prices
2. Print total bill
3. Apply 10% discount if total > 1000

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Sample Input:

Enter number of items: 3

Item 1 name: Rice

Price: 500

Item 2 name: Oil

Price: 600

Item 3 name: Salt

Price: 50

Expected Output:

Rice - 500

Oil - 600

Salt - 50

Total before discount: 1150

Discount applied: 115

Final bill: 1035

Assignment 4: Bus Seat Booking System

There are 10 bus seats. Write a program that:

1. Displays seat availability
2. Allows user to book seats by seat number
3. Prevents double booking

Sample Output:

Seats:

1. Available

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2. Available

...

10. Available

Enter seat number to book (1-10): 3

Seat 3 booked!

Enter seat number to book: 3

Seat already booked.

Assignment 5: Reverse and Compare

Write a program that:

1. Takes a list of n numbers as input
2. Creates a reversed version of the list
3. Checks if it is a palindrome

Sample Input:

Enter number of elements: 5

Enter element 1: 1

Enter element 2: 2

Enter element 3: 3

Enter element 4: 2

Enter element 5: 1

Expected Output:

Original list: [1, 2, 3, 2, 1]

Reversed list: [1, 2, 3, 2, 1]

The list is a palindrome!