

List - Assignment Programs

1. Create a list of 10 random integers and print the even numbers.
2. Write a program to reverse a list without using the reverse() method.
3. Generate a list of squares for numbers 1 to 20 using list comprehension.

Tuple - Assignment Programs

1. Create a tuple of 5 elements. Unpack and print each element separately.
2. Write a program to find the sum and average of elements in a tuple.
3. Create a tuple of characters and join them into a single string.

Set - Assignment Programs

1. Write a program to find common elements between two sets.
2. Remove duplicates from a list using a set.
3. Create two sets and perform union and intersection.

Dictionary - Assignment Programs

1. Create a dictionary of 3 students with subject marks. Calculate average marks.
2. Write a program to add, update, and delete a key-value pair from a dictionary.
3. Create a nested dictionary for employee records and display data of one employee.

Lambda Functions - Assignment Programs

1. Use lambda to check if a number is even or odd.
2. Sort a list of tuples based on the second element using lambda.
3. Create a lambda to return the square of a number and test with inputs.

Map/Reduce - Assignment Programs

1. Use map to convert a list of temperatures in Celsius to Fahrenheit.
2. Use filter to extract all prime numbers from a list.
3. Use reduce to calculate the product of all elements in a list.

OOP Basics - Assignment Programs

1. Create a class 'Book' with attributes title and author. Add a method to display them.
2. Write a program to create a 'BankAccount' class with deposit and withdraw methods.
3. Create a class 'Circle' with radius as attribute and methods to compute area and circumference.