Binary Operator Overloading

1. You are developing a shopping cart system for an e-commerce website. Each cart holds items with their price and quantity. Implement a class Cart to represent the total price of two shopping carts using the + operator. Overload the + operator to add the total prices of two carts.
2. A logistics company wants to calculate the total distance traveled by a vehicle over two days. Create a class Distance that stores kilometers and meters. Overload the + operator to add two distances and ensure proper conversion between meters and kilometers.
3. A bank application manages customers' accounts. Each account has a balance. Create a class Account to represent a customer's balance. Overload the - operator to deduct the withdrawal amount from the account balance.
4. You are working on a physics simulation that requires operations on complex numbers. Create a class Complex to represent a complex number. Overload the + and - operators to add and subtract two complex numbers.
5. A data analysis tool needs to perform matrix addition. Create a class Matrix that represents a 2x2 matrix. Overload the + operator to add two matrices and return the resultant matrix.
6. In a payroll system, bonuses are added to employees' salaries. Create a class Employee that holds an employee's name and salary. Overload the + operator to add a bonus amount to an employee's salary.
7. A school project involves adding fractions. Create a class Fraction to represent a fraction (numerator and denominator). Overload the + operator to add two fractions and reduce the result to its simplest form.
8. In a multiplayer game, players can combine their points to form a team score. Create a class Player to store the player's name and points. Overload the + operator to add two players' points and return the team score.
9. A logistics company needs to compare the volumes of two boxes. Create a class Box that stores the dimensions of a box (length, width, and height). Overload the > operator to compare the volumes of two boxes.
10. An application requires combining two strings, such as first and last names. Create a class MyString to represent a string. Overload the + operator to concatenate two strings.