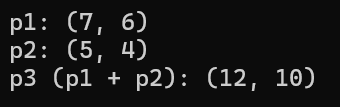
1. Write a C++ program that defines a ***Point*** class to represent a point in a two-dimensional space. ***Point*** class should include:

* A constructor that initializes the point with given x and y coordinates, with default values of 0.
* An overloaded “+” operator allows adding two ***Point*** objects. The result should be a new ***Point*** object whose coordinates are the sums of the respective coordinates of the two points.
* A function to display the coordinates of the point in the format (x,y).

In the main function,

Create two *Point* objects with specific coordinates, add them together using the overloaded “+” operator, and display the results.

**Sample Run:**



1. Write a C++ program that overloads the operator **“ + ”** as a member function to concatenate two strings.

Create a class called ***String***.

* Define a string array as a member of the String class. (char)
* Write a constructor that has one parameter. (array object)
* Use an implicit pointer to an object for copying the strings. (this pointer)
* Write a member function called print() to display the string after the concatenation.
* Overload + operator to concatenate the strings. Use the strcat() function to concatenate two strings and use the strcpy() function to copy the string to the string to be returned.

In your main function, create two objects with the variables given below,

String s1(str1);

String s2(str2);

char str1[] = "Overloading";

char str2[] = "MemberFunction";

After that, create the third object named s3.

Use the overloaded operator + to concatenate two strings that are already assigned to the s1 and s2 objects, then assign the concatenated string to the s3 object. In the end, output the concatenated string as seen on the sample run.

**Sample Run:**



1. Write a C++ program to create a class called ***Math***.

It has three integer member variables, num1, num2, and result.

This class has three member functions as follows;

* The function named add does the summation of num1 and num2 variables, then assigns the summation to the result variable.
* The function named subtract subtracts num1 from num2 and then assigns the subtraction result to the result variable.
* The function named multiply multiplies num1 and num2, then assigns the multiplication result to the result variable.

You need to overload the operator “ >> ” as a friend function to input a Math object. Also overload the operator “ << ” as a friend function to output a Math object.

In your main function, create an object, and assign the inputted integers to the data members of the object using an overloaded operator (>>). Then, call all the functions, and output the object using an overloaded operator (<<) as given in Sample Run below.

**Sample Run:**

