LAB Assignments:

Lab Assignment #2 Pass by Reference

Question #1

Write a C++ program using function (pass by reference) that calculates the values of x and y from the two linear equations.

```
ax + by = m

cx + dy = n

The solutions are given as

x = (md - bn)/(ad - cb)
```

y = (na - mc)/(ad - cb)

The function should take eight arguments and return nothing.

Lab Assignment #3 Classes and Object

Question #1

Do you remember a graph paper; plotting x-axis, y-axis and origin (0,0). A Point consists of two values; one is x-axis value and other one is y-axis value. Considering only a first quadrant and two such points, write a program that finds the distance between each other. Use classes and objects.

Lab Assignment #4 Classes and Object

Question #1

Define a class called "Rectangle" with following attributes: length and breadth of data type Integer.

Also include the following member functions:

void setSize(int length, int breadth); // this function should set the value of length and breadth of the Rectangle.

int getArea(); // this function should return the area of the rectangle.

int getPerimeter(); // this function should return the perimeter of the rectangle.

// formula to calculate: area = length * breadth.

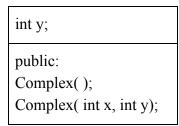
// formula to calculate: perimeter = 2 * (length + breadth).

Write a driven program as well.

Lab #5 Operator Overloading

Question #1

class Complex	
private: int x;	



- 1. Define a class called Complex.
- 2. Define member functions that overload the following operators:
 - ☐ Minus unary operator. Returns void
 - ☐ Scalar multiplication. (you may use friend function) and returns Complex
 - ☐ Plus binary operator (+). => Returns Complex
 - ☐ Minus binary operator. => Returns Complex
 - ☐ += Shorthand operator. => Returns void
 - == Equals to operator. => Returns TRUE or FALSE
 - ☐ Greater than operator. => Returns TRUE or FALSE
 - ☐ ! = Not equals to operator. => Returns TRUE or FALSE
 - ☐ Pre Increment operator. => Returns Complex
 - ☐ Post Increment operator. => Returns Complex
 - □ << Stream Insertion operator. (use friend function. Why?????) => Returns ostream&.

Write a main() function to implement the above overloaded operators.

Theory Assignments:

Assignment Set #2

- 1. What do you mean by Function Overloading? Illustrate with an example.
- 2. What do you mean by Inline Function? In what ways it is advantageous?

Assignment Set #3

- 1. Differentiate between constructors and destructors. Describe the different types of constructors with suitable examples.
- 2. What do you mean by operator overloading? Why is it important?
- 3. Illustrate the use of friend functions in overloading binary operators.

Deadline:: 13th May, 2019 Before Internal.

Note:: Assignments and labworks beyond deadline will not be acceptable.