

CSC 2111 Lab 17

Objectives:

1. Implement operator overloading.

Related math background:

- The equation of a line:

$ax+by=c$ is the standard equation for a line, where a and b cannot both be zero, and where a , b , and c are real numbers.

Question:

Download lab17.cpp from the blackboard. In this file, the definition of the class *lineType* has given which represents a line equation. In this lab, you are asked to complete the body for two operators overloading function as following:

- 1) **Overload the stream extraction operator >>**, for the input stream.

The user input should be in (a,b,c) format where Xcoef=a, Ycoef=b and ConstTerm=c variables for the line object. For example, the code `cin >> line;` should accept (2,3,4) as the line input format.

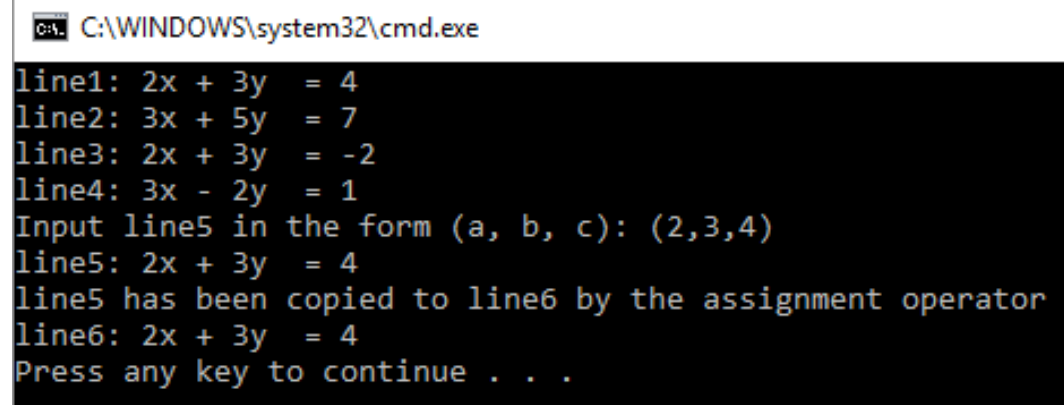
- 2) **Overload the assignment operator=**, to assign a line object into another line object.

It will copy all member variables from its right operand to its left operand.

For example, `line1=line2;` will copy all member variables from line2 to the line1 object.

Then, without changing the main function, execute your program to get the same output. Submit a single cpp file.

Output:



```
C:\WINDOWS\system32\cmd.exe
line1: 2x + 3y = 4
line2: 3x + 5y = 7
line3: 2x + 3y = -2
line4: 3x - 2y = 1
Input line5 in the form (a, b, c): (2,3,4)
line5: 2x + 3y = 4
line5 has been copied to line6 by the assignment operator
line6: 2x + 3y = 4
Press any key to continue . . .
```