

Assignment 1: Operator Overloading

Note: This is an individual assignment. You can help and share knowledge, but no working in groups!

What needs to be done

1. Create a class named “Matrix” which has the following :
 - a. A 2-dimensonal array (public or private) of size 3X3, say *myArray*. (You can name it whatever you want. I just named it *myArray* so that it easy to refer to it in the assignment).
 - b. Define a constructor which assigns random values to myArray
 - c. Public method (say toString) to print the myArray to the console as a matrix (each row in a single line and good spacing between columns)
 - d. Overload the following operators:
 - i. Multiplication (*) – when two or more objects of the Matrix class are multiplied, this method returns a Matrix object whose myArray holds the product of the myArray of the multiplied objects.
 - ii. Equal (==) – two matrix objects are equal if and only if the myArray of each Matrix object are the same. This method returns a Boolean value.
2. Provide a header file (*.h) for this class contains all its functions **(25 points)**
3. Provide an implementation (*.cpp)
 - a. Matrix constructor and print method – **(25 points)**
 - b. Each overloaded operator
 - i. Multiplication **(25 points)**
 - ii. Equal **(15 points)**
4. main (cpp) – **(25 points)**
5. Makefile – **(10 points)**

References

- A. How to do matrix multiplication: https://en.wikipedia.org/wiki/Matrix_multiplication
<https://www.intmath.com/matrices-determinants/matrix-multiplication-examples.php>

What to submit:

Submit all the files (*.cpp, *.h and makefile) on the reggieNet before the deadline.