

Programming Project #4 – Matrix Class

1. Write a matrix class called Matrix that dynamically allocates memory for a matrix of user defined size. Your class should dynamically allocate an array of integers to store values.
2. Create appropriate constructors, a copy constructor, and a destructor for your class
3. Create the following methods for the following
 - print
 - transpose
4. Overload the following operators:
 - + (addition)
 - * (scalar multiplication)
 - << (stream injection)
5. Write a main method that creates two matrices, prints them, then adds them together & prints the result. Include code to demonstrate **all** your implemented methods. Your program should work without user input.
6. Create a makefile that generates a program called matrix. Your code should compile & be executed using the following commands:
 - make clean
 - make
 - ./matrix

Submission:

Your code should exhibit good object-oriented program design principles. Your code should be well-formatted and should make use of naming/commenting to make the code clear. Submit a tar or zip file with your code files and make file. **Do not include any .o or executable files.**

Grading Rubric:

1. Matrix class - 20 points
2. Constructors/destructor - 20 points
3. print method - 10 points
4. Overloaded operators - 20 points
5. Test code in main method - 20 points
6. Makefile - 10 points

Penalties:

1. Code that doesn't compile: 0 on the project
2. Makefile doesn't work - 15 points
3. Program crashes - 20 points
4. Code not submitted in tar file - 10 points
5. Extraneous files in submission - 10 points
6. Operations from #6 do not execute program - 15 points