Session 5

Lab exercise description

Recomplete 2D Matrix Multiplication Task

Exercise description:

1. Last week we wrote some functions to receive two matrices from the user (A, and B) and we calculated A*B
2. This week we do exactly the same task, however with Object Oriented Programming mindset
3. You need to look at the matrix.hpp header file and see what functionalities are provided and how to use them
4. Then you need to complete the main.cc template.

Sample output (expected behavior)

```
!./program

Enter the number of rows for Matrix A: 2
Enter the number of columns for Matrix A: 2
Enter values for the matrix:
Mat[0][0]: 1
Mat[0][1]: 2
Mat[1][0]: 3
Mat[1][1]: 4
Matrix A:
1 2
3 4
Enter the number of rows for Matrix B: 2
Enter the number of columns for Matrix B: 1
Enter values for the matrix:
Mat[0][0]: 3
Mat[1][0]: 7
Matrix B:
3
7
Result of Matrix Multiplication (C = A * B):
17
37


The deallocation of memory function is triggered! The matrix that is being deallocated is as follows:
17
37
The deallocation of memory function is triggered! The matrix that is being deallocated is as follows:
3
7
The deallocation of memory function is triggered! The matrix that is being deallocated is as follows:
1 2
3 4
```

Files that you are given:

1. Main.cc : This is the only file that you need to change. Use Matrix class in the header file to complete the main.cc
2. Matrix.hpp: This is a header file for the Matrix class which is implemented in matrix.cc file (note: You don't have the implementation of Matrix class, in other words, you don't have matric.cc file.
3. Matrix.o : binary file resulting from "g++ -c matrix.cc". Don't open or change this file. You need this file in linking step

How to run the code:

1. Upload matrix.hpp and matrix.o files on Colab (don't change these two). Upload your completed main.cc file too.
2. Run the following commands: