

CPSC 1160: ASSIGNMENT 6[25 MARKS]

With the given MatrixDriver.cpp and the three matrix text files. Rewrite your assignment 5 so that it does not use vectors or 2d arrays but instead uses a linked list so that the MatrixDriver file will output the following. You must implement your matrix class using a following node structure, to construct a linked list that will store the matrix.

```
struct *node{
    int *arr; //a dynamic array which should by a row of the matrix
    node* next;
};
```

Your destructor must print DELETE, the copy constructor must print COPY and the overloaded assignment operator must print ASSIGNMENT. See the example on the next page. You can not hard code your answer. Note that your assignment, delete and copy statements may differ slightly based on implementation. You must includes the -fno-elide-constructors flag compiling your program.

You can not hard code your answer.

(M1)-----

```
| 13  4  2  1|
|  3 12  5  4|
|  4  8  6 11|
```

(M2)-----

```
| 13  4  2  1|
|  3 12  5  5|
|  4  8  6 11|
```

(M3)-----

```
| 13  4  2  1  3  2|
|  1  2 54  3  2  2|
| 11 32  2  6  5  4|
|  3  1  8  6 12 33|
```

(M1==M1)-----

TRUE

(M1==M2)-----

FALSE

(M4)-----

```
| 65 20 10  5|
| 15 60 25 20|
| 20 40 30 55|
```

COPY

DELETE

ASSIGNMENT

DELETE

(M5)-----

| | | | | | |
|--|----|----|----|----|--|
| | 26 | 8 | 4 | 2 | |
| | 6 | 24 | 10 | 9 | |
| | 8 | 16 | 12 | 22 | |

(M5-M2)-----

COPY

DELETE

| | | | | | |
|--|----|----|---|----|--|
| | 13 | 4 | 2 | 1 | |
| | 3 | 12 | 5 | 4 | |
| | 4 | 8 | 6 | 11 | |

DELETE

((M5-M2)*M3)-----

COPY

DELETE

COPY

DELETE

| | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|--|
| | 198 | 125 | 254 | 43 | 69 | 75 | |
| | 118 | 200 | 696 | 93 | 106 | 182 | |
| | 159 | 235 | 540 | 130 | 190 | 411 | |

DELETE

DELETE

(M1*M3)-----

COPY

DELETE

| | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|--|
| | 198 | 125 | 254 | 43 | 69 | 75 | |
| | 118 | 200 | 696 | 93 | 106 | 182 | |
| | 159 | 235 | 540 | 130 | 190 | 411 | |

DELETE

(M3*M1)-----

DELETE

Empty

DELETE

DELETE

DELETE

DELETE

DELETE
DELETE

Submissions

Make sure that your code is neat and is well commented

Submit to D2L a zip/archive file containing all the files that are need to compile (matrixTest.cpp, matrix.h) and run your program(the three matrix files).

If you do not zip your file or if you submit the .exe files, you will receive ZERO for this lab
(<http://www.wikihow.com/Zip-Files-Together>)