```cpp
1  #include <iostream>
2  #include <string>
3  #include "ex01-library.h"
4
5
6  using namespace std;
7
8
9  int main(void) {
10     // Matrix representing a picture
11     unsigned int n = 4;
12     unsigned int m = 4;
13
14     int ** A = createMatrix(n , m);
15
16     // Setting all values to 0
17     initMatrix(A , n , m);
18
19     // Setting some values in the matrix
20     for (unsigned int i = 0 ; i < n ; i++)
21         for (unsigned int j = 0 ; j < m ; j++)
22             A[i][j] = i * n + j;
23
24     A[1][0] = 126;
25     A[1][1] = 127;
26     A[1][2] = 128;
27
28     printMatrix(A , n , m , "main matrix");
29
30     int ** B = duplicateMatrix(A , n , m);
31
32     printMatrix(B , n , m , "copy");
33
34     // I change B, and I print B and A
35     for (unsigned int j = 0 ; j < m ; j++)
36         B[0][j] = B[0][j] + 3;
37
38     printMatrix(B , n , m , "modified copy");
39     printMatrix(A , n , m , "main matrix");
40
41     //I deallocate B
42     deallocateMatrix(B , n);
43     int** C = makeBitonal(A , n , m , 127);
44
45     printMatrix(C , n , m , "bi-tonal copy");
46
47     deallocateMatrix(A , n);
48     deallocateMatrix(C , n);
49
50     return 0;
51 }
```