

matrix.h

```
1  #ifndef MATRIX_H
2  #define MATRIX_H
3
4  #include <iostream>
5  #include <ctime>
6  #include <iomanip>
7
8  class Matrix {
9  public:
10     Matrix ();
11     Matrix (int row, int col);
12     Matrix (const Matrix& other);
13     ~Matrix () noexcept;
14 public:
15     void set_zero ();
16     void set_random (int row, int col);
17     void set_by_input ();
18     void display () const;
19     void erase () noexcept;
20     int get_row () const;
21     int get_col () const;
22     bool empty () const;
23     bool all_is_zero () const;
24 public:
25     Matrix operator+ (const Matrix& rhs);
26     const Matrix& operator= (const Matrix& rhs);
27     Matrix operator* (const Matrix& rhs);
28     void operator+= (const Matrix& rhs);
29     int& operator()(int i, int j);
30     const int& operator()(int i, int j) const;
31 private:
32     int **m_matrix{nullptr};
33     int m_row{};
34     int m_col{};
35     void _set_random ();
36     void _get_area ();
37 };
38
39 #endif // MATRIX_H
```