

```

1  #ifndef GRAPH_H
2  #define GRAPH_H
3  /*****
4  Author: Jose Eduardo Morales
5  graph.h
6  Date: march 22, 2023
7  *****/
8  #include <list>
9
10 class Graph {
11
12     private:
13         int m_size;
14         int ** graph;
15         template <typename T>
16         void printGraph(T** graph, int rows, int cols) ;
17
18     public:
19         Graph ();
20         Graph (int size);
21         ~Graph();
22         void print();
23         int V();           //return the # of vertices in the Graph
24         int E();           //return the # of edges in the Graph
25         bool adjacent(int x, int y); //test if there is an edge from x to y
26         std::list<int> neighbors(int x); // list all nodes y from x
27         void add(int x, int y, int value); //add the edge from x to y
28         void remove(int x, int y); //removes edge from x to y
29         int getEdge(int x, int y);
30         float getDensity();
31         /*
32         int get_node_value(int x);
33         void set_node_value(int x, char a);
34         void set_edge_value(int x, int y, int value);*/
35
36 };
37 #endif

```