

```

1  #include "MonteCarlo.h"
2  #include <random>
3  #include <limits>
4
5  /*****
6  Author: Jose Eduardo Morales
7  MonteCarlo.cpp
8  Date: march 22, 2023
9  *****/
10 MonteCarlo::MonteCarlo()
11 {
12     srand(time(0));
13 }
14
15 Graph MonteCarlo::randomGraph(int edges, float density, int maxDistance){
16     Graph graph(edges);
17     int row = 0;
18     for(int i = 0; i < edges; i++){
19         for (int j = 0; j < edges; j++){
20             if ((j > row) && (rand()%100 < density * 100)){
21                 graph.add(i, j, 1 + rand()%maxDistance);
22             }
23         }
24         row++;
25     }
26     return graph;
27 }
28

```