

```
1 using System.Collections;
2 using System.Collections.Generic;
3 using UnityEngine;
4
5 /*
6 Graph is implemented using the adjacency list
7 data structure where each node keeps a list of
8 its neighboring node and weights. The graph data structure
9 allows functionality such as adding nodes and edges and also remove
10 nodes and edges
11 */
12 public class Graph
13 {
14     private List<Node> nodes;
15
16     public Graph() {
17         nodes = new List<Node>();
18     }
19
20
21
22     public void addVertex(string data) {
23         // create a new node
24         Node v = new Node(data);
25         // add it to the nodes storage
26         nodes.Add(v);
27     }
28
29     // getter for list of nodes of the graph
30     public List<Node> getVertices() {
31         return nodes;
32     }
33
34     /*
35     Update both source and destination's neighbor since this is
36     an undirected graph
37     */
38     public void addEdge(Node source, Node destination, int cost) {
39         source.addNeighbor(destination, cost);
40         destination.addNeighbor(source, cost);
41     }
42
43     /*
44     An auxiliary function that return a node with given data as its value
45     */
46     public Node getNodeByValue(string data) {
47         foreach(Node v in nodes) {
48             if(v.getData() == data) {
49                 return v;
50             }
51         }
52         return null;
53     }
54
55 }
56
```