

## Vertex.java

```
1
2 import java.util.ArrayList;
3 import java.util.List;
4
5 /**
6  * Vertex class for Graphs (note: not commented).
7  * @author Sara Mathieson
8  * @version March 19, 2020
9  *
10 */
11 public class Vertex {
12
13     private String name; // names should be unique
14     private List<Vertex> edges;
15
16     public Vertex(String initName) {
17         name = initName;
18         edges = new ArrayList<Vertex>();
19     }
20
21     public String getName() {
22         return name;
23     }
24
25     public List<Vertex> getEdges() {
26         return edges;
27     }
28
29     public void addEdge(Vertex destination) {
30         edges.add(destination);
31     }
32
33     public boolean hasEdge(Vertex destination) {
34         // return true if there is an edge
35         // between this Vertex and destination
36         for (Vertex v : edges) { // worst-case: O(n)
37             if (v.equals(destination)) {
38                 return true;
39             }
39         }
40     }
41 }
```

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```
39         }
40     }
41     return false;
42 }
43
44 @Override
45 public boolean equals(Object other) {
46     if (!(other instanceof Vertex)) {
47         return false;
48     }
49
50     // only equal if names are equal
51     Vertex otherVertex = (Vertex) other;
52     return getName().equals(otherVertex.getName());
53 }
54
55
56 }
```