

## UndirectedEdge.java

```
1 //
  *****
  *****
2 //
3 // File:    UndirectedEdge.java
4 // Package: ---
5 // Unit:    Class UndirectedEdge
6 //
7 //
  *****
  *****
8
9 /**
10 * Class UndirectedEdge represents an edge in a graph that connects
  two
11 * vertices. It's important to note that the edge does not have a
  direction nor
12 * weight.
13 *
14 * @author Jimi Ford
15 * @version 2-15-2015
16 */
17 public class UndirectedEdge {
18
19     // private data members
20     private Cricket a, b;
21
22     // future projects may rely on a unique identifier for an edge
23     private final int id;
24
25     /**
26      * Construct an undirected edge
27      * @param id a unique identifier to distinguish between other
  edges
28      * @param a one vertex in the graph
29      * @param b another vertex in the graph not equal to <I>a</I>
30      */
31     public UndirectedEdge(int id, Cricket a, Cricket b) {
32         this.id = id;
33         // enforce that a.n is always less than b.n
34         if(a.n < b.n) {
```

## UndirectedEdge.java

```
35         this.a = a;
36         this.b = b;
37     } else if(b.n < a.n) {
38         this.a = b;
39         this.b = a;
40     } else {
41 //         System.out.println(a.n + ", " + b.n + ", " + (a==b));
42         throw new IllegalArgumentException("Cannot have self
loop");
43     }
44     this.a.addEdge(this);
45     this.b.addEdge(this);
46 }
47
48 /**
49  * Get the <I>other</I> vertex given a certain vertex connected
to
50  * this edge
51  *
52  * @param current the current vertex
53  * @return the other vertex connected to this edge
54  */
55 public Cricket other(Cricket current) {
56     if(current == null) return null;
57     return current.n == a.n ? b : a;
58 }
59 }
```