

```

1 package proj5;
2
3 /**
4  * A generic BSTNode in a BST with instance variable
5  * key
6  * as the value of the node and left, right link of
7  * that node
8  * @param <T> the item type
9  * author: Son Nguyen (Kyrie)
10 * version: 6/3/2020
11 */
12 public class BSTNode<T> {
13     // instance variable
14     public Object key;
15     public BSTNode<T> llink;
16     public BSTNode<T> rlink;
17
18     /**
19      * non-default constructor
20      * @param data the data stored in this node
21      */
22     public BSTNode(T data){
23         key=data; // autoboxing!
24         llink=null;
25         rlink=null;
26     }
27
28     /**
29      * @return string representation of this node
30      */
31     public String toString() {
32         return key.toString();
33     }
34
35     /**
36      * a leaf is a node with no children
37      * @return true if this node is a leaf, false
38      * otherwise
39      */
40     public boolean isLeaf() {
41         return this.llink == null && this.rlink ==

```

```
41
42     /**
43      * @return true if this node has only right
      branch, false otherwise
44      */
45     public boolean hasRightChildOnly() {
46         return this.llink == null && this.rlink !=
null;
47     }
48
49     /**
50      * @return true if this node has only left branch
      , false otherwise
51      */
52     public boolean hasLeftChildOnly() {
53         return this.llink != null && this.rlink ==
null;
54     }
55 }
56
```