CURTIN UNIVERSITY (CRICOS number: 00301J)
Faculty of Engineering and Science
Department of Computing
Data Structures and Algorithms

Practical 9

Aims:

- To implement a Binary Tree.

Before the Practical:

- Read this practical sheet fully before starting.

Activity 1: Creating TreeNode

Use the lecture notes - this has already been written for you.

Activity 2: Create BinarySearchTree

Use the following template from the lecture notes.

```
public class BinarySearchTree
{
   private class TreeNode
   {
     ...          // From previous activity
   }

   private TreeNode m_root;

   public BinarySearchTree() {
      m_root = null;  // Start with an empty tree
   }
   public Object find(String key) { ... }
   public void insert(String key, Object value) { ... }
   public void delete(String key) { ... }

   public int height() { ... }
}
```

Use the pseudo code from the lectures to guide you here. find() has already been implemented for you. The methods must all use the recursive pseudo-code from the lecture slides.

As usual, when done, write a suitable test harness to test everything thoroughly. You can use the data from RandomNames7000.csv

Submission Deliverable:

Your completed `BinarySearchTree.java` class is due at the beginning of your next tutorial.

SUBMIT ELECTRONICALLY VIA BLACKBOARD, under the *Assessments* section.