Lab Goal : This lab was designed to teach you more about binary trees.

Lab Description : Write a program that uses nodes to store letters and letter counts. The data structure created for this program is similar to a Map. Each tree node will store a ThingCount and references to the left and right tree nodes that also store ThingCounts. Each ThingCount with its Object and count will occur at most once in the tree.

TreeNode – stores an Object and a reference to the next TreeNode

```
public class TreeNode implements Treeable
{
  private Comparable treeNodeValue;
  private TreeNode leftTreeNode;
  private TreeNode rightTreeNode;

  //default constructor

  public TreeNode(Comparable value){
    treeNodeValue = value;
    leftTreeNode = null;
    rightTreeNode = null;
  }

  public TreeNode(Comparable value, TreeNode left, TreeNode right){
    treeNodeValue = value;
    leftTreeNode = left;
    rightTreeNode = right;
  }

  public Comparable getValue(){
    return treeNodeValue;
  }

  public TreeNode getLeft(){
    return leftTreeNode;
  }

  public TreeNode getRight(){
    return rightTreeNode;
  }

  public void setValue(Comparable value){
    treeNodeValue = value;
  }

  public void setLeft(Treeable left){
    leftTreeNode = (TreeNode)left;
  }

  public void setRight(Treeable right){
    rightTreeNode = (TreeNode)right;
  }
}
```

Sample Data :

```
A A A A B V S E A S A A V S E A
1 2 3 11 22 32 1 22 13
abc ead xyz xyz abc ead 2342 z2y2z
```

Sample Output :

```
A - 8    B - 1    E - 2    S - 3    V - 2
1 - 2    2 - 1    3 - 1    11 - 1    13 - 1    22 - 2    32 - 1
2342 - 1    abc - 3    ead - 2    x2y2z - 1    xyz – 2
```