Due Monday April 13, 11.55pm

In part of this project, you will modify your binary search tree ADT(from the text) to use the BRIDGES tree node elements.

Adapting ADT to BRIDGES. BRIDGES provides BSTElement an extension of TreeElement. TreeElement is the basic binary tree node, while BSTElement adds an ordered key to the TreeElement. You will use these elements in place of BSTNode so that trees built using BRIDGES can be visualized, in a manner similar to the earlier BRIDGES projects.

BSTNode and TreeElement have methods to access the left and right child, set/get key values and inherit all properties of elements. Similar to BST nodes, BSTElement has two generic parameters, a key value (which must be orderable) and E, a data parameter.

You will perform the following tasks:

1. **Adapt the BST ADT to use the BRIDGES elements**; do initial testing with the driver from part 1 and visualize the tree. Note that you should call the setDataStructure() method as follows:

   setDataStructure(bst.getRoot(), "tree")

   where the first parameter points to the root node of the binary search tree. The visualization function is as before.

2. You will be provided with an earthquake data records of various sizes. It will contain the magnitude of the earthquake, location, and date and time. Create an earthquake class to hold all these items in a convenient form. Your task will be to read the data fild and use the setLabel() method to display them on the tree nodes. The labels will be visible on mouseover.

   You will read in one of the smaller earthquake datasets and use the quake magnitude as the search key. Show the full records in the nodes by suitably formatting them so the record is legible.

Evaluation.

By interactive Demo.