Building a Tree Set

Tree Sets are a simplified tree where the 'key' and 'value' are the same. A set only holds one copy of any possible entry and using a tree is a great way of quickly searching the data to see if an entry already exists.

For the basic assignment, build the following functionalities using the starter code provided:

- size – returns the size of the set (**5 points**)
- isEmpty – return true if the set is empty (**5 points**)
- add – Add an item to the set (returns true if added) (**15 points**)
- remove – removes an item from the set (returns true if removed) (**40 points**)
- clear – clears all values from the set (**10 points**)
- contains – returns true if the provided value is in the set (**15 points**)
- toVector – returns a C++ vector containing all of the items on the list least to greatest (**10 points**)

DSVisualizer provides a tool that you can see the tree in action. See the videos for more details on the code and how it works. You are not expected to write a balanced tree, and you are not required to reverse engineer or come up with your own algorithm. Use the book or any other resource to guide your code but make sure you build and test your code without any copy/paste!