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In Lab 7 I compared the runtime of the ceiling and higher methods in both TreeSets and in HashSets. The TreeSet massively outperformed the HashSet because of the nature of a Binary search tree. It means that searching for values is extremely quick vs the method that I created for the HashSet which was extremely slow. In the ceiling and higher methods that I created for the hashSet I started by creating an array that included all values of the HashSet. I then sorted the array using Array.sort(*Array*);. Then I iterated through the sorted array until I found the value that I was searching for and returned a value equal to or higher for the ceiling method and a value higher for the higher method. This meant that my time complexity was significantly higher as it was O(n)+O(nlogn)+O(n) vs the O(logn) and at worst O(n)\*height of the treeSet. This means it makes sense to use TreeSet when you have hierarchical data that can and needs to be searched.