15-210 Assignment 08
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Section C

November 21, 2012

1: Task 3.2

Instead of using iter, I would use scan. To make the function associative, I would use Table.merge instead of Table.insert. This is log squared span because merge is log span and scan is log span. The work increases to n squared: n for scan and n for merge.

2: Task 3.3

The data structure is $O(n)$ in space complexity, since the x-keyed bst has n nodes and at each iteration of iter, a constant number of nodes is added to the search tree. Because of persistence in functional programming, the whole tree doesn't have to be "copied" at each iteration of iter. $O(kn) = O(n)$.