

Algorithm Design
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Solution of Exercise C-12.8

Note that x is contained by $[a, b]$ if $a \leq x$ and $x \leq b$. That is, the point (a, b) is contained in the two-sided range of all points above and to the left of the point (x, x) . Thus, we can use a priority search tree to enumerate the interval (viewed as two-dimensional points) in time $O(\log n + k)$, by viewing the two-sided range as a simple case of a 3-sided range.