Windowing Query

Segment Tree

- Inserting A Segment (3/3)

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InsertSegmentTree(v , s)

❖ // Insert an interval s into a segment (sub)tree rooted at v

if (Int(v) ⊆ s) store s at v and return;

if (Int(lc(v)) ∩ s ≠ ∅) //recurse

InsertSegmentTree(lc(v), s);

if (Int(rc(v)) ∩ s ≠ ∅) //recurse

InsertSegmentTree(rc(v), s);

👁 At each level, ≤4 nodes are visited (2 stores + 2 recursions)

∴ $O(\log n)$ time