

Windowing Query

Segment Tree

- Inserting A Segment (2/3)

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InsertSegmentTree(v , s)

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

if ($\text{Int}(v) \subseteq s$) store s at v and return;

if ($\text{Int}(\text{lc}(v)) \cap s \neq \emptyset$) //recurse

InsertSegmentTree(lc(v), s);

if ($\text{Int}(\text{rc}(v)) \cap s \neq \emptyset$) //recurse

InsertSegmentTree(rc(v), s);

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

$\therefore O(\log n)$ time

