

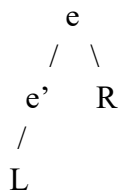
CS314H CSB Lecture 22: Splay Tree

1. Select one.
 - Any BST can become a splay tree once we start splaying operations.
 - We need to first convert a BST to a splay tree and then apply splaying.
2. (True/False)
Splay operation always compresses the tree, i.e., shortens the height of the tree.
3. What will likely to happen in terms of the tree height?
 - Accessing a shallow node
 - Accessing a middle node
 - Accessing a deep node
4. We can perform `insert(e)` in two ways. Let's assume `e` is not in the tree.

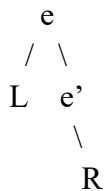
1) Splay `e'` (where the last element accessed trying to find `e`).

Let `L` and `R` be the left and right child of `e'` respectively.

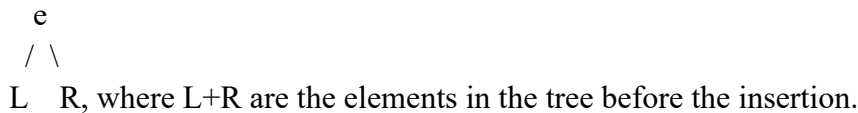
If $e' < e$, the new tree would be



If $e' > e$, the new tree would be



2) First insert `e` directly into the tree (regular BST way) and splay around `e`.



(True/False) The resulting trees using method 1) and 2) always have the same shape.

5. Which approach is better when we can perform splaying in a top-down manner?