

<b>Problem Set 11</b>
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*Due: Thursday, May 6, 2021*

**Problem 11.1 [Link-Cut LCA].** Show how to answer **least common ancestor** queries  $\text{lca}(v, w)$  in  $O(\log n)$  time per operation in a link-cut tree.

**Hints:**

- You do not need to modify any data stored in the link-cut trees.
- Think about what happens when you do  $\text{access}(v)$  followed by  $\text{access}(w)$ .