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Lab time: Friday 12pm

Lab questions

1. What is the algorithmic asymptotic complexity i.e. $O(?)$ of each of the operations that you have implemented.

a. Add element at end.

$O(n)$

b. Find a given element.

$O(n)$

c. Size of the list

$O(n)$

2. What would be the optimal algorithmic complexity for each of the operations you have answered in 1a, 1b and 1c.

1a. would be $O(1)$

1b. would be $O(n)$

1c. would be $O(n)$

3. What design decisions will you make to ensure you can get the most efficient algorithmic complexity for each of the operations that you analyzed for 1a, 1b and 1c?

Iterative loops need to be implemented without redundancy (for finding elements and returning size), and adding an element to the end should make use of the tail pointer to give it constant complexity.