

Lecture 06 Ticket

COSC 311: Algorithms, Fall 2022

Name: _____

Suppose a is an array of numerical values of size n , and val is a numerical value. Write a method $split(a, val)$ with the following behavior:

1. $split$ only modifies a using the operation $swap(a, i, j)$ that swaps the values of a at indices i and j ,
2. after calling $split(a, val)$, there is an index k with $1 \leq k \leq n$ such that for all indices $i < k$, $a[i] \leq val$ and for all $j \geq k$, $a[j] > val$, and
3. $split$ returns the index k as in item 2.