

Data Structures – Lab

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Faisal Khan: faisal.khan@nu.edu.pk

Assignment 01

Marks: 40

Problem Statement

Let's say you have an array based list. As you know we have different methods which work on the array based list but we will be adding a new method to that class. The method's name will be **MostFrequentElementInSubArray**(int left, int right, int frequency). This method will take 3 parameters: **left index**, **right index** and **frequency** of element. Your main task will be to find those elements in the subarray (left index to right index) which occur 'frequency' times or more than 'frequency' times.

Constraints: (You should have a piece of code to check these constraints before moving ahead)

1. $0 \leq \text{left} \leq \text{right} < \text{arr.length}$ representing a subarray of arr
2. $2 * \text{frequency} \geq \text{right} - \text{left} + 1$

Example:

arr = [2,2,3,3,3,4,5,6]

We call `MostFrequentElementInSubArray(0, 3, 2)` and it will return the following elements (2,3).

Explanation: Because '2' occurs more than or equal to frequency times i.e 2 times. Same goes for '3' as it occurs more than 'frequency' times

NOTE: You have to use pointers only.