

### Lab Exercise 22.03.2021

1. Write a program to check whether Frievald's algorithm. Also state the time complexity of Frievald's algorithm and which type of Randomization algorithm it comes under?

Given three matrices A, B and C, find if C is a product of A and B.

Examples:

```
Input : A = 1 1 1
           1 1 1
           1 1 1
          B = 1 1 1
           1 1 1
           1 1 1
          C = 3 3 3
           3 1 2
           3 3 3
```

Output : No

2. Write a program to implement Recursive Randomized Binary Search Algorithm.

In Binary Search we had

$\text{middle} = (\text{start} + \text{end})/2$

In Randomized binary search we do following

Generate a random number t

Since range of number in which we want a random number is [start, end]

Hence we do,  $t = t \% (\text{end} - \text{start} + 1)$

Then,  $t = \text{start} + t$ ;

Hence t is a random number between start and end

Input: list of array and No. to be searched

Output: Position of number in the arrays