## Google Online Challenge for Summer Internship 2021

• Difficulty Level :\nMedium

• Last Updated :\n01 Oct, 2020

The Google online challenge 2020 for summer internships 2021 was held on Sept 26. It was a 60-minute online test having 2 questions to code.

First Question: You are given an array A with N integers. you are required to answer Q queries of the following types.

Determine the count of distinct prime numbers which divides all the numbers in a given range L to R. NOTE:1 based Indexing.

1 <=N,Q<= 10^5;

1 <= A[i] <= 10^5;

1 <= L <= R <= N

## Input:\xc2\xa0

No of test cases\r\nArray size i.e N\r\nN array elements\r\nNo of Queries i.e Q\r\nQ queries

Output: Return count of distinct prime numbers which divides all the numbers in a given range for each query

Sample Input: \xc2\xa0

1\r\n6\r\n4 6 3 18 36 54\r\n3\r\n1 2\r\n3 6\r\n4 6

## Sample output:

 $1\r \ln r \ln 2$ 

I do not remember the second question exactly. But It was also based on arrays. Prepare for query-based array questions, MO\xe2\x80\x99s algorithm, Segment tree(if possible) standard questions like range sum queries, update range queries, etc.

## My Personal Notes\narrow\_drop\_up

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