 Data Structures and Algorithm | Jan 2021​

# Assignment 6 | 23rd January 2021

**For any doubts regarding the assignment, ask questions in the** [**Dat**](https://community.letsupgrade.in/group/dsaes0121b2)​ [**a**](https://community.letsupgrade.in/group/dsaes0121b2)

[**Structures and Algorithms**](https://community.letsupgrade.in/group/dsaes0121b2) **Group**​ ​ **in the Community.**​

**Submit Assignments by** ​ **26**​ **th January 2021 11:59 PM**

## Assignment Submit Form: [https://forms.gle/bJBQwoRVk4P8SR4T](https://forms.gle/bJBQwoRVk4P8SR4T8)​ [8](https://forms.gle/bJBQwoRVk4P8SR4T8)

**Submit assignments in Appropriate Dropdowns.**

### Question 1

A Barua number is a number that consists of only zeroes and ones and has only one 1. Barua’s number will start with 1. Given numbers, find out the multiplication of the numbers. Note: The input may contain one decimal number and all other Barua numbers. (Assume that each number is the very large and the total number of values give is also very large)

**Input 1:** ​100 10 12 1000

**Output 1:**​ 12000000

**Input 2:** ​100 121 1000000000000000

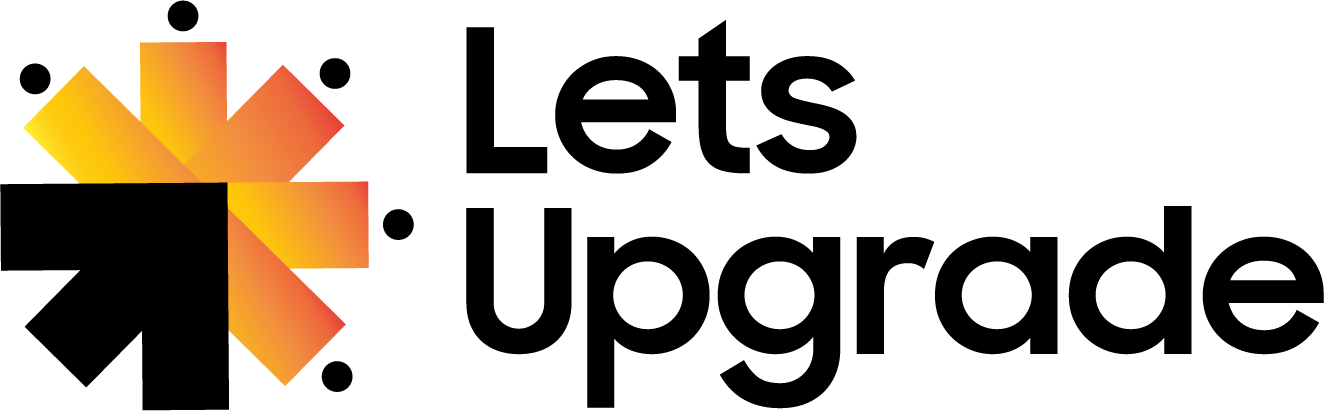
**Output 2:**​ 12100000000000000000

**Input 3:**​ 10 100 1000

**Output 3:**​ 1000000

### Question 2

Implement push, pop and find the minimum element in a stack in O(1) time complexity.

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## FAQs

**Q. When do I submit the Assignments and how?**

1. The assignments for the week should be submitted by 26th January 2021 i.e.Tuesday 11:59 PM IST.
2. You need to submit the answers in Document Format

**Q. Where do I get class links for the next session?**

1. All sessions will be Live on our Youtube Channel. Subscribe to LetsUpgrade​​[YouTube Channel](https://www.youtube.com/channel/UCWUDiLzQZr4VDHNyMsVYn-g)​[.](https://www.youtube.com/channel/UCWUDiLzQZr4VDHNyMsVYn-g)

You'll also get an email with the link to the live session.

1. It will be also updated in the Community Group in the pinned post.

**Q. I have some doubt, who do I ask?**

A. Post your Queries on the community, someone will help you out.

**Q. How can we know if my assignment is verified or not? And is it successfully submitted or not?**

A. You will receive a mail for your successful submission.

**ANSWER:**

**QUESTION 1:**

**# Python3 implementation of the approach**

**# function to count all permutations**

**def countPermutations(N, B):**

**# count of all permutations**

**x = B \*\* N**

**# count of permutations**

**# with leading zeros**

**y = B \*\* (N - 1)**

**# Return the permutations**

**# without leading zeros**

**print(x - y)**

**# Driver code**

**if \_\_name\_\_ == "\_\_main\_\_":**

**N, B = 6, 4**

**countPermutations(N, B)**

**# This code is contributed by Rituraj Jain**