

Assignment #1

Course: *Data Science Tools and Techniques (AM624D)* – Professor: *Dr. Y.S. Dadwhal*
Due date: *Feb 25nd, 2023*

Question 1

Given an array A of N numbers (int), WAP which prints the multiplication of the elements of array A with the corresponding elements of the reverse of array A.
If A = [1,2,3], then reverse of A will be [3,2,1] and the result should be [3,4,3].

Input Format:

The first line of the input contains a number N The second line of the input contains N numbers separated by a space. (after the last elements, there is no space)

Output Format:

Print the resultant array of elements separated by a space. (no space after the last element)

Question 2

Given a list of numbers (integers), find second maximum and second minimum in this list.

Input Format:

The first line contains numbers separated by a space.

Output Format:

Print the second maximum and second minimum separated by a space

Question 3

Given a list A of numbers (integers), you have to print those numbers which are not multiples of 5.

Input Format:

The first line contains the numbers of list A separated by a space.

Output Format:

Print the numbers in a single line separated by a space which are not multiples of 5.

Example:

Input:

1 2 3 4 5 6 5

Output:

1 2 3 4 6

Explanation:

Here the elements of A are 1,2,3,4,5,6,5 and since 5 is the multiple of 5, after removing them the list becomes 1,2,3,4,6.

Question 4

You are given a number A which contains only digits 0's and 1's. Your task is to make all digits same by just flipping one digit (i.e. 0 to 1 or 1 to 0) only. If it is possible to make all the digits same by just flipping one digit then print 'YES' else print 'NO'.

Input Format:

The first line contains a number made up of 0's and 1's.

Output Format:

Print 'YES' or 'NO' accordingly without quotes.

Example:

Input:

101

Output:

YES

Explanation:

If you flip the middle digit from 0 to 1 then all the digits will become same. Hence output is YES.

Question 5

Given an integer number n , you have to print the factorial of this number.

Input Format:

A number n .

Output Format:

Print the factorial of n .

Example:

Input:

4

Output:

24

Question 6

Write a program, which will find all such numbers between m and n (both included) such that each digit of the number is an even number.

Input Format:

The first line contains value m and n separated by a comma.

Output Format:

The numbers obtained should be printed in a comma-separated sequence on a single line.

Constraints:

$1000 \leq m \leq 9000$

$1000 \leq n \leq 9000$