CS 341 Assignment 1

MIPS - I

Deadline: 15/08/21 11:59 pm

Problem:
Write a MIPS assembly program to find the length of the longest zigzag subsequence in a given array. A sequence of real numbers {x1, x2, .. xn} is alternating if either of the following conditions is satisfied:

- x1 < x2 > x3 < x4 > x5 < …. xn
- x1 > x2 < x3 > x4 < x5 > …. xn

Input:

- *n* - the size of the array.
- *arr* - an array of n integers.

The first line contains an integer *n* (the size of the array). The next *n* lines contain *n* integers, which form the array *arr*.

Input constraints:
1<=n<=50
The numbers in the array may or may not be distinct.

A sample run is shown below.

```
Enter the size of the array
5
Enter the elements of the array
1
5
3
2
4
4
```

The output by your program is in blue.

Submission Instructions:
Submit a single file named <roll_no>_A1.s. For example:

```
/
|---- 180020101_A1.s
```