CS 341 Assignment 1

MIPS - I

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:

$$x1 < x2 > x3 < x4 > x5 < \ldots xn$$
$$x1 > x2 < x3 > x4 < x5 > \ldots xn$$

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