**[Difference of values and indexes](https://practice.geeksforgeeks.org/problems/a-difference-of-values-and-indexes0302/1)**

Given an unsorted array **arr[ ]** of size **n**, you need to find the maximum difference of absolute values of elements and indexes, i.e., for **i <= j**, calculate maximum of **| arr[ i ] - arr[ j ] | + | i - j |.**

**Example 1:**

**Input :**

n = 3

arr[ ] = {1, 3, -1}

**Output:** 5

**Explanation:**

Maximum difference comes from indexes

1, 2 i.e | 3 - (-1) | + | 1 - 2 | = 5

**Example 2:**

**Input :**

n = 4

arr[ ] = {5, 9, 2, 6}

**Output:** 8

**Explanation:**

Maximum difference comes from indexes

1, 2 i.e | 9 - 2 | + | 1 - 2 | = 8

**Your Task:**  
This is a function problem. The input is already taken care of by the driver code. You only need to complete the function **maxDistance()** that takes an array **(arr)**, sizeOfArray **(n)**, and return the maximum difference as given in the question.  The driver code takes care of the printing.

**Expected Time Complexity:** O(n).  
**Expected Auxiliary Space:** O(1).

**Constraints:**  
1 <= n <= 5\*(10^5)  
-10^6 <= **arr[ i ]** <= 10^6