import java.io.\*;

import java.util.\*;

import java.text.\*;

import java.math.\*;

import java.util.regex.\*;

class Difference {

private int[] elements;

public int maximumDifference;

//Add your code here

Difference(int[] asa)

{

elements=asa;

}

void computeDifference()

{

maximumDifference = -1;

for(int i=0;i<elements.length;i++)

{

for (int j = i+1; j < elements.length; j++)

{

int mainDiff = Math.abs(elements[i] - elements[j]);

maximumDifference = (maindiff> maximumDifference ? mainDiff : maximumDifference);

}

}

}

} // End of Difference class

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int[] a = new int[n];

for (int i = 0; i < n; i++) {

a[i] = sc.nextInt();

}

sc.close();

Difference difference = new Difference(a);

difference.computeDifference();

System.out.print(difference.maximumDifference);

}

}