**Object Oriented Concepts and Programming**

**Assignment 2**

**Programming Activity**

**Date: 7 August, 2020**

**Time: 5:00 pm to 5:30 pm**

**Write a Program to find out maximum profit or maximum loss or both or none (No profit or No loss). Please complete the code given on page 3.**

**Assume that user is going to enter any positive numbers in an array. User can enter any size of array and he/she can enter any positive number in it. Your program should work for any input entered by user.**

**Input:** Take an array as input from user. Assume that each element in array represent price of a particular share.

For example: [1 2 3 4 5]

User has bought share at price 1 then it can sell it in future. Yellow color represents a buying price and red color represents possible selling price options.

Similarly, user can buy at different price. Consider the below example.

For example: [1 2 3 4 5]

Yellow color represents a buying price and red color represents possible selling price options.

User cannot sell at price 1 because it is the price of past. Here 2 is the current price of share. 3,4,5 are future prices of the share and 1 is the past price of the share. User can sell at a future price after buying any share.

For example: [1 2 3 4 5]

Here user has bought share at price 3 so he/she can sell at price of either 4 or 5. Here 3 is the current price of share. 4,5 are future prices of the share and 1,2 are the past prices of the share. User can sell at a future price after buying any share.

**Output: Print maximum profit or maximum loss or both or none (maximum profit and maximum loss both are zero)**

**Example 1:** input entered by a user is an array with elements [1 2 3 4 5]

**Then maximum profit is 4.**

[1 2 3 4 5]: If user buy at price 1 and sell at price 5 then maximum profit is 4.

**Example 2:** input entered by a user is an array with elements [5 1 2 4 3]

**Maximum profit is 3.**

**As shown below, user can buy at price 1 and sell at price 4.**

**[5 1 2 4 3]**

**Maximum loss is 4.**

**As shown below, user can buy at price 5 and sell at price 1.**

[5 1 2 4 3]

**How to enter size of array and array elements**

For example: First it will ask user to enter number of elements

**Enter no. of elements you want in array:** 5

Now, it will ask user to enter number of array elements.

**Enter all the elements:**

1

2

3

4

5

import java.util.Scanner;

public class MaxProfitLoss {

public static void main(String[] args) {

// take the string input from user

int n;

Scanner s = new Scanner(System.in);

System.out.print("Enter no. of elements you want in array:");

n = s.nextInt();

int a[] = new int[n];

System.out.println("Enter all the elements:");

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

{

a[i] = s.nextInt();

}

s.close();

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

{

System.out.print(a[i] + " ");

}

Write your code here

}

}