

```

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;


namespace statistics_project
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int Q = 0;

            int Q1 = 0, Q3 = 0;

            double median = 0f;

            int s = 0, old_counter = 0, new_counter = 0, mode = 0;

            double sum_for_div = 0f;

            Console.WriteLine(" how many numbers would you like to enter ?");

            int x = int.Parse(Console.ReadLine());

            int[] nums = new int[x];

            Console.WriteLine("Enter numbers ");

            for (int i = 0; i < x; i++)
            {
                nums[i] = int.Parse(Console.ReadLine());
            }

            {
                for (int i = 0; i < 1000; i++)
                {
                    for (int k = 0; k < x - 1; k++)
                    {
                        if (nums[k] > nums[k + 1])
                        {

```

```

s = nums[k];
nums[k] = nums[k + 1];
nums[k + 1] = s;
{
{
{

MEDIAN//
if (x % 2 == 0)
}
int first = nums[x / 2];
int second = nums[(x / 2) - 1];
int sum = nums[first] + nums[second];
median = sum / 2;
{
else
}
int g = x + 1;
int median_index = (g / 2) - 1;
median = nums[median_index];
{

```

```

Q1,Q3//
Console.WriteLine("if you would like more than one quarter please enter 1 ");
int choice = int.Parse(Console.ReadLine());
if (choice == 1)
}
for (int i = 0; i < 2; i++)
}
Console.WriteLine("please enter which quarter you would like either 1 or 3");
int EQ = int.Parse(Console.ReadLine());

```

```

Q = Quarter(x, EQ);
Q = Q - 1;
if (EQ == 1)
}
Q1 = nums[Q + 1];
{
else
}
Q3 = nums[Q];
{

{
{

MODE//
for (int i = 0; i < x - 1; i++)
}
for (int j = i + 1; j < x - 1; j++)
}
if (nums[i] == nums[j])
}
new_counter += 1;
{
{
if (new_counter > old_counter)
}
old_counter = new_counter;
mode = nums[i];
{
{
range//
int range = nums[x - 1] - nums[0];

```

```

MEAN//

int sum_for_mean = 0;
for (int i = 0; i < x; i++)
{
    sum_for_mean = sum_for_mean + nums[i];
}

double mean = sum_for_mean / x;

standard division //
for (int i = 0; i < x; i++)
{
    sum_for_div = sum_for_div + ((nums[i] - mean) * (nums[i] - mean));
}

double standard_division = sum_for_div / x;

p90//
int N_p90 = x/9;
int p90 = nums[N_p90];

summation of divisions //
double sub_d = 0;
double sum_d = 0;
for (int i = 0; i < x; i++)
{
    sub_d = nums[i] - mean;
    sum_d = sub_d + sum_d;
}

outliers //
double IQR = Q3-Q1;
double H_outliere = Q3 + 1.5 * (IQR);
double L_outliere = Q1 - 1.5 * (IQR);

output//

```

```
Console.WriteLine(" the mode is : {0} , the range is : {1} , the median is : {2} , the meam is :  
{3} , standard division is : {4} , the p90 is : {5} , sum of deviation is : {6} ", mode, range, median, mean,  
standard_division, p90, sum_d);
```

```
Console.WriteLine(" Q1 = {0} , Q2 = {1},IQR = {2} ", Q1, Q3,IQR);
```

```
if (nums[0] < L_outliere && nums[x - 1] > H_outliere)
```

```
{
```

```
Console.WriteLine("high outlier is {0} & lower outlier is {1} ", H_outliere, L_outliere);
```

```
{
```

```
else if (nums[0] < L_outliere)
```

```
}
```

```
Console.WriteLine("lower outlier is {0}", L_outliere);
```

```
{
```

```
else if (nums[x - 1] > H_outliere)
```

```
}
```

```
Console.WriteLine("high outlier is {0}", H_outliere);
```

```
{
```

```
else Console.WriteLine("no outliers found ");
```

```
Console.ReadKey();
```

```
{
```

```
static int Quarter(int x, int EQ)
```

```
}
```

```
int s = (EQ * (x + 1)) / 4;
```

```
if (EQ == 2)
```

```
s = s - 1;
```

```
return s;
```

```
{
```

```
{
```

```
{
```

