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# Solution

## Simplest Solution

A possible solution is as follows:

﻿using System;
class TempStats
{
 public string Description { get; set; }
 private double[] temp;
 public double[] Temp
 {
 set
 {
 bool sortedSoFar = true;
 int index = 0;

 while (index + 1 < value.Length && sortedSoFar)
 {
 if (value[index] > value[index + 1]) sortedSoFar = false;
 index++;
 }
 if (!sortedSoFar)
 {
 throw new ArgumentException("Your data is not sorted.");
 }
 foreach (double i in value) {
 if (i < -128.6)
 {
 throw new ArgumentOutOfRangeException("That is colder than the coldest ever recorded on Earth!");
 // https://en.wikipedia.org/wiki/Lowest\_temperature\_recorded\_on\_Earth
 }
 else if (i > 134.1)
 {
 throw new ArgumentOutOfRangeException("That is hotter than the hottest ever recorded on Earth!");
 // https://en.wikipedia.org/wiki/Highest\_temperature\_recorded\_on\_Earth
 }
 }
 temp = value;
 }
 }

 public TempStats(double[] tempP, string desc)
 {
 Temp = tempP;
 Description = desc;
 }
 public double Average
 {
 get
 {
 double acc = 0;
 foreach (double i in temp)
 {
 acc += i;
 }
 return acc / temp.Length;
 }
 }

 public double Median {
 get
 {
 if(temp.Length %2 != 0)
 {
 return temp[(temp.Length-1) / 2];
 }
 else
 {
 return (temp[(temp.Length-1) / 2] + temp[temp.Length / 2]) / 2;
 }
 }
 }
}

You can [download it here](https:///princomp.github.io/code/projects/TempStats.zip)