**Verification**

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| Line: | Input Line | [Medium Difficulty](http://fstcat-csharp-exercises.azurewebsites.net/Exercises/IconGlossary.html#DIFF) [Input](http://fstcat-csharp-exercises.azurewebsites.net/Exercises/IconGlossary.html#IN) [Learning Outcome One](http://fstcat-csharp-exercises.azurewebsites.net/Exercises/IconGlossary.html#LO) [Exercise](http://fstcat-csharp-exercises.azurewebsites.net/Exercises/IconGlossary.html#EX) | |
| Type: | Exercise |
| You should have completed: | [**Bad Data**](http://fstcat-csharp-exercises.azurewebsites.net/Exercises/BadData.html) | This topic leads to: | This is the end of the line. |

**Summary**

When asking the user for input, not only is it important to get the right type of data (a number, string, or single letter), but also that that data be *valid* for the use to which we are about to put it. For example, we wish to calculate the square root of a number provided by the user.

**Task**

1. Create a console application to calculate the square root of a number provided by the user. Hint: The *Math* library contains a function to calculate a square root.
2. Run the program and enter -1  
   Note that the result is 'Not a number' or NaN
3. Now modify the program so that the value the user entered is checked to see if it is valid (i.e. 0 or greater) before attempting the calculation. If the value is not valid, the program must ask the user again until they do enter a valid number.
4. Run the program and enter -1 to check this validation takes place

**Questions**

1. How would you check that the number entered was in a certain range, say 100-1000?
2. If the number was out of this range, how could you set it to the nearest valid number? Would it be wise to do so?
3. How would you check that a string entered was the correct length, such as a 7 character SID?