StringLength vs MaxLength attributes ASP.NET MVC with Entity Framework EF Code First

138

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What is the difference in behavior of `[MaxLength]` and `[StringLength]` attributes?

As far as I can tell (with the exception that `[MaxLength]` can validate the maximum length of an array) these are identical and somewhat redundant?

asp.net-mvc-3 ef-code-first entity-framework-4.1

edited Feb 19 '15 at 13:56

MikeTheLiar
3,565 8 36 60

asked Apr 19 '11 at 13:23

Nick Goloborodko
1,124 3 10 21

1 I'm not sure about ASP.NET MVC but for EF there should be no difference: stackoverflow.com/questions/5414611/… – Ladislav Mrnka Apr 19 '11 at 13:50

1 The stringLength doesnt affect the migrations col size when you change it. – Cas Bloem May 12 '16 at 15:04

@CasBloem StringLength does in fact get picked up by EntityFramework and will impact column lengths -- at least in version 6. – jakejgordon Mar 26 '18 at 1:42

8 Answers

192

MaxLength is used for the Entity Framework to decide how large to make a string value field when it creates the database.

From MSDN:

> Specifies the maximum length of array or string data allowed in a property

From MSDN:

> Specifies the minimum and maximum length of characters that are allowed in a data field.

edited Apr 19 '11 at 13:46

answered Apr 19 '11 at 13:41

Swaff

8,394 4 20 26

9 Also note that by default MVC 3 does not recognized `MaxLengthAttribute` , while EF does recognize `StringLengthAttribute` – marcind Apr 19 '11 at 18:09

15 So really there is no need for MaxLength since you can use StringLength in EF and it also infers the string field size. Why then did they even create MaxLength? – Matt Johnson Dec 1 '11 at 0:45

4 @MattJohnson - I seem to recall that the decision to create a new MaxLength attribute was for semantics because StringLength implies string data but MaxLength can apply to binary data as well. But it sure as hell is inconvenient. – Josh Jun 7 '12 at 12:23

1 @MartinSmith - I just tried using StringLength and it worked for me and I'm using EF6 RC1 so I don't think the comments there are correct – Colin Sep 18 '13 at 12:37

5 Why does `[MaxLength]` have an ErrorMessage then? – Zapnologica Aug 12 '16 at 9:20

37

Some quick but extremely useful additional information that I just learned from another post, but can't seem to find the documentation for (if anyone can share a link to it on MSDN that would be amazing):

The validation messages associated with these attributes will actually replace placeholders associated with the attributes. For example:

```
[MaxLength(100, "{0} can have a max of {1} characters")]
public string Address { get; set; }
```

Will output the following if it is over the character limit: **"Address can have a max of 100 characters"**

The placeholders I am aware of are:

- {0} = Property Name

Much thanks to bloudraak for initially pointing this out.

edited May 23 '17 at 12:26
Community ♦
1 1

answered Mar 25 '15 at 18:38
DamienMann
537 4 7

10

Following are the results when we use both `[MaxLength]` and `[StringLength]` attributes, in `EF code first` . If both are used, `[MaxLength]` wins the race. See the test result in `studentname` column in below class

```
public class Student
{
   public Student () {}

   [Key]
   [Column(Order=1)]
   public int StudentKey { get; set; }

   //[MaxLength(50),StringLength(60)]    //studentname column will be nvarchar(50)
   //[StringLength(60)]    //studentname column will be nvarchar(60)
   [MaxLength(50)] //studentname column will be nvarchar(50)
   public string StudentName { get; set; }

   [Timestamp]
   public byte[] RowVersion { get; set; }
}
```

answered Jan 6 '17 at 14:51
gmail user
1,704 4 26 39

6

All good answers...From the validation perspective, I also noticed that MaxLength gets validated at the server side only, while StringLength gets validated at client side too.

answered Nov 20 '14 at 22:55
Abhishek Deo

4

MaxLengthAttribute means Max. length of array or string data allowed

StringLengthAttribute means Min. and max. length of characters that are allowed in a data field

Visit http://joeylicc.wordpress.com/2013/06/20/asp-net-mvc-model-validation-using-data-annotations/

answered Jul 31 '14 at 8:13

Zonke-Bonke S'cekeleshe Msibi

65 7

3

One another point to note down is in **MaxLength** attribute you can only provide **max** required range not a **min** required range. While in **StringLength** you can provide **both**.

answered Jun 17 '13 at 13:41

Nilesh Moradiya

481 6 16

3 Yes, but this is presumably why there's also a MinLength attribute: msdn.microsoft.com/EN-US/library/gg696756(v=VS.110,d=hv.2).aspx – Ian Griffiths Jul 24 '14 at 6:30

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When using the attribute to restrict the maximum input length for text from a form on a webpage, the StringLength seems to generate the maxlength html attribute (at least in my test with MVC 5). The one to choose then depnds on how you want to alert the user that this is the maximum text length. With the stringlength attribute, the user will simply not be able to type beyond the allowed length. The maxlength attribute doesn't add this html attribute, instead it generates data validation attributes, meaning the user can type beyond the indicated length and that preventing longer input depends on the validation in javascript when he moves to the next field or clicks submit (or if javascript is disabled, server side validation). In this case the user can be notified of the restriction by an error message.

answered Nov 17 '17 at 9:03

Koen

39 4

0

```
modelBuilder.Entity<YourObject>().Property(e => e.YourColumn).HasMaxLength(4000);
```

Somehow, `[MaxLength]` didn't work for me.

answered Feb 7 at 12:33

Zerotoinfinity

2,271 22 105 181