**DataAnnotations in Code-First:**

EF Code-First provides a set of DataAnnotation attributes, which you can apply on your domain classes and properties. DataAnnotations attributes overrides default Code First conventions. [*System.ComponentModel.DataAnnotations*](http://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.aspx) includes attributes that impacts on nullability or size of the column. [*System.ComponentModel.DataAnnotations.Schema*](http://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.Schema%28v=vs.110%29.aspx) namespace includes attributes that impacts schema of the database.

**Note:** DataAnnotations only give you subset of configuration options. Fluent API provides full set of configuration options available in Code First.

**System.ComponentModel.DataAnnotations Attributes:**

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| [Key](http://www.entityframeworktutorial.net/code-first/key-dataannotations-attribute-in-code-first.aspx) | Mark property as EntityKey which will be mapped to PK of related table. |
| [Timestamp](http://www.entityframeworktutorial.net/code-first/TimeStamp-dataannotations-attribute-in-code-first.aspx) | Mark the property as a non-nullable timestamp column in the database. |
| [ConcurrencyCheck](http://www.entityframeworktutorial.net/code-first/concurrencycheck-dataannotations-attribute-in-code-first.aspx) | ConcurrencyCheck annotation allows you to flag one or more properties to be used for concurrency checking in the database when a user edits or deletes an entity. |
| [Required](http://www.entityframeworktutorial.net/code-first/required-attribute-dataannotations-in-code-first.aspx) | The Required annotation will force EF (and MVC) to ensure that property has data in it. |
| [MinLength](http://www.entityframeworktutorial.net/code-first/maxlength-minlength-dataannotations-attribute-in-code-first.aspx) | MinLength annotation validates property whether it has minimum length of array or string. |
| [MaxLength](http://www.entityframeworktutorial.net/code-first/maxlength-minlength-dataannotations-attribute-in-code-first.aspx) | MaxLength annotation maximum length of property which in turn sets the maximum length of column in the database |
| [StringLength](http://www.entityframeworktutorial.net/code-first/stringlength-dataannotations-attribute-in-code-first.aspx) | Specifies the minimum and maximum length of characters that are allowed in a data field. |

**System.ComponentModel.DataAnnotations.Schema Attributes:**

|  |  |
| --- | --- |
| **Attribute** | **Description** |
| [Table](http://www.entityframeworktutorial.net/code-first/table-dataannotations-attribute-in-code-first.aspx) | Specify name of the DB table which will be mapped with the class |
| [Column](http://www.entityframeworktutorial.net/code-first/column-dataannotations-attribute-in-code-first.aspx) | Specify column name and datatype which will be mapped with the property |
| [Index](http://www.entityframeworktutorial.net/EntityFramework6/index-attribute-in-code-first.aspx) | Create an Index for specified column. (EF 6.1 onwards only) |
| [ForeignKey](http://www.entityframeworktutorial.net/code-first/foreignkey-dataannotations-attribute-in-code-first.aspx) | Specify Foreign key property for Navigation property |
| [NotMapped](http://www.entityframeworktutorial.net/code-first/notmapped-dataannotations-attribute-in-code-first.aspx) | Specify that property will not be mapped with database |
| DatabaseGenerated | DatabaseGenerated attribute specifies that property will be mapped to Computed column of the database table. So the property will be read-only property. It can also be used to map the property to identity column (auto incremental column). |
| [InverseProperty](http://www.entityframeworktutorial.net/code-first/inverseproperty-dataannotations-attribute-in-code-first.aspx) | InverseProperty is useful when you have multiple relationships between two classes. |
| ComplexType | Mark the class as complex type in EF. |