AppGene Design - Annotations

# Introduction

The document is intended to describe annotations used in the project.

# Components

## System.ComponentModel.DataAnnotations.dll

### System.ComponentModel.DataAnnotations Namespace

<https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations%28v=vs.110%29.aspx>

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| --- | --- | --- |
| **Care** | **Class** | **Description** |
|  | [AssociatedMetadataTypeTypeDescriptionProvider](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.associatedmetadatatypetypedescriptionprovider%28v=vs.110%29.aspx) | Extends the metadata information for a class by adding attributes and property information that is defined in an associated class. |
|  | [AssociationAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.associationattribute%28v=vs.110%29.aspx) | Specifies that an entity member represents a data relationship, such as a foreign key relationship. |
|  | [BindableTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.bindabletypeattribute%28v=vs.110%29.aspx)? | Specifies whether a type is typically used for binding. |
|  | [CompareAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.compareattribute%28v=vs.110%29.aspx)? | Provides an attribute that compares two properties. |
|  | [ConcurrencyCheckAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.concurrencycheckattribute%28v=vs.110%29.aspx) | Specifies that a property participates in optimistic concurrency checks. |
|  | [CreditCardAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.creditcardattribute%28v=vs.110%29.aspx) | Specifies that a data field value is a credit card number. |
|  | [CustomValidationAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.customvalidationattribute%28v=vs.110%29.aspx) | Specifies a custom validation method that is used to validate a property or class instance. |
|  | [DataTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.datatypeattribute%28v=vs.110%29.aspx) | Specifies the name of an additional type to associate with a data field. |
| Y | [DisplayAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.displayattribute%28v=vs.110%29.aspx) | Provides a general-purpose attribute that lets you specify localizable strings for types and members of entity partial classes. |
| Y | [DisplayColumnAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.displaycolumnattribute%28v=vs.110%29.aspx) | Specifies the column that is displayed in the referred table as a foreign-key column. |
| Y | [DisplayFormatAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.displayformatattribute%28v=vs.110%29.aspx) | Specifies how data fields are displayed and formatted by ASP.NET Dynamic Data. |
| Y | [EditableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.editableattribute%28v=vs.110%29.aspx) | Indicates whether a data field is editable. |
|  | [EmailAddressAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.emailaddressattribute%28v=vs.110%29.aspx) | Validates an email address. |
| Y | [EnumDataTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.enumdatatypeattribute%28v=vs.110%29.aspx) | Enables a .NET Framework enumeration to be mapped to a data column. |
|  | [FileExtensionsAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.fileextensionsattribute%28v=vs.110%29.aspx) | Validates file name extensions. |
| ? | [FilterUIHintAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.filteruihintattribute%28v=vs.110%29.aspx) | Represents an attribute that is used to specify the filtering behavior for a column. |
|  | [KeyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.keyattribute%28v=vs.110%29.aspx) | Denotes one or more properties that uniquely identify an entity. |
| Y | [MaxLengthAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.maxlengthattribute%28v=vs.110%29.aspx) | Specifies the maximum length of array or string data allowed in a property. |
|  | [MetadataTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.metadatatypeattribute%28v=vs.110%29.aspx) | Specifies the metadata class to associate with a data model class. |
|  | [MinLengthAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.minlengthattribute%28v=vs.110%29.aspx) | Specifies the minimum length of array or string data allowed in a property. |
|  | [PhoneAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.phoneattribute%28v=vs.110%29.aspx) | Specifies that a data field value is a well-formed phone number using a regular expression for phone numbers. |
|  | [RangeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.rangeattribute%28v=vs.110%29.aspx) | Specifies the numeric range constraints for the value of a data field. |
|  | [RegularExpressionAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.regularexpressionattribute%28v=vs.110%29.aspx) | Specifies that a data field value in ASP.NET Dynamic Data must match the specified regular expression. |
|  | [RequiredAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.requiredattribute%28v=vs.110%29.aspx) | Specifies that a data field value is required. |
|  | [ScaffoldColumnAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.scaffoldcolumnattribute%28v=vs.110%29.aspx)? | Specifies whether a class or data column uses scaffolding. |
|  | [ScaffoldTableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.scaffoldtableattribute%28v=vs.110%29.aspx)? | Specifies whether a class or data table uses scaffolding. |
| Y | [StringLengthAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.stringlengthattribute%28v=vs.110%29.aspx) | Specifies the minimum and maximum length of characters that are allowed in a data field. |
| Y | [TimestampAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.timestampattribute%28v=vs.110%29.aspx) | Specifies the data type of the column as a row version. |
| ? | [UIHintAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.uihintattribute%28v=vs.110%29.aspx) | Specifies the template or user control that Dynamic Data uses to display a data field. |
|  | [UrlAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.urlattribute%28v=vs.110%29.aspx) | Provides URL validation. |
|  | [ValidationAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationattribute%28v=vs.110%29.aspx) | Serves as the base class for all validation attributes. |
|  | [ValidationContext](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationcontext%28v=vs.110%29.aspx) | Describes the context in which a validation check is performed. |
|  | [ValidationException](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationexception%28v=vs.110%29.aspx) | Represents the exception that occurs during validation of a data field when the [ValidationAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationattribute%28v=vs.110%29.aspx) class is used. |
|  | [ValidationResult](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationresult%28v=vs.110%29.aspx) | Represents a container for the results of a validation request. |
|  | [Validator](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validator%28v=vs.110%29.aspx) | Defines a helper class that can be used to validate objects, properties, and methods when it is included in their associated [ValidationAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.validationattribute%28v=vs.110%29.aspx) attributes. |

### System.ComponentModel.DataAnnotations.Schema Namespace

<https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema%28v=vs.110%29.aspx>

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| **Care** | **Class** | **Description** |
|  | [ColumnAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.columnattribute%28v=vs.110%29.aspx) | Represents the database column that a property is mapped to. |
|  | [ComplexTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.complextypeattribute%28v=vs.110%29.aspx) | Denotes that the class is a complex type. Complex types are non-scalar properties of entity types that enable scalar properties to be organized within entities. Complex types do not have keys and cannot be managed by the Entity Framework apart from the parent object. |
|  | [DatabaseGeneratedAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.databasegeneratedattribute%28v=vs.110%29.aspx) | Specifies how the database generates values for a property. |
|  | [ForeignKeyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.foreignkeyattribute%28v=vs.110%29.aspx) | Denotes a property used as a foreign key in a relationship. The annotation may be placed on the foreign key property and specify the associated navigation property name, or placed on a navigation property and specify the associated foreign key name. |
|  | [InversePropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.inversepropertyattribute%28v=vs.110%29.aspx) | Specifies the inverse of a navigation property that represents the other end of the same relationship. |
| Y | [NotMappedAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.notmappedattribute%28v=vs.110%29.aspx) | Denotes that a property or class should be excluded from database mapping.  AppGene: ignore the property if this attribute is applied. |
|  | [TableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.tableattribute%28v=vs.110%29.aspx) | Specifies the database table that a class is mapped to. |

## EntityFramework.dll

### System.ComponentModel.DataAnnotations.Schema Namespace

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| **Care** | **Class** | **Description** |
| Y | [IndexAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataannotations.schema.indexattribute%28v=vs.113%29.aspx) | Represents an attribute that is placed on a property to indicate that the database column to which the property is mapped has an index. |

## System.dll

### System.ComponentModel Namespace

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| **Care** | **Class** | **Description** |
|  | [AmbientValueAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.ambientvalueattribute%28v=vs.110%29.aspx) | Specifies the value to pass to a property to cause the property to get its value from another source. This is known as ambience. This class cannot be inherited. |
|  | [AttributeProviderAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.attributeproviderattribute%28v=vs.110%29.aspx) | Enables attribute redirection. This class cannot be inherited. |
|  | [BindableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.bindableattribute%28v=vs.110%29.aspx) | Specifies whether a member is typically used for binding. This class cannot be inherited. |
| Y | [BrowsableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.browsableattribute%28v=vs.110%29.aspx) | Specifies whether a property or event should be displayed in a Properties window. |
| Y | [CategoryAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.categoryattribute%28v=vs.110%29.aspx) | Specifies the name of the category in which to group the property or event when displayed in a [PropertyGrid](https://msdn.microsoft.com/en-us/library/system.windows.forms.propertygrid%28v=vs.110%29.aspx) control set to Categorized mode. |
|  | [ComplexBindingPropertiesAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.complexbindingpropertiesattribute%28v=vs.110%29.aspx) | Specifies the data source and data member properties for a component that supports complex data binding. This class cannot be inherited. |
|  | [DataObjectAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataobjectattribute%28v=vs.110%29.aspx) | Identifies a type as an object suitable for binding to an [ObjectDataSource](https://msdn.microsoft.com/en-us/library/system.web.ui.webcontrols.objectdatasource%28v=vs.110%29.aspx) object. This class cannot be inherited. |
|  | [DataObjectFieldAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataobjectfieldattribute%28v=vs.110%29.aspx) | Provides metadata for a property representing a data field. This class cannot be inherited. |
|  | [DataObjectMethodAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.dataobjectmethodattribute%28v=vs.110%29.aspx) | Identifies a data operation method exposed by a type, what type of operation the method performs, and whether the method is the default data method. This class cannot be inherited. |
|  | [DefaultBindingPropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.defaultbindingpropertyattribute%28v=vs.110%29.aspx) | Specifies the default binding property for a component. This class cannot be inherited. |
|  | [DefaultEventAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.defaulteventattribute%28v=vs.110%29.aspx) | Specifies the default event for a component. |
|  | [DefaultPropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.defaultpropertyattribute%28v=vs.110%29.aspx) | Specifies the default property for a component. |
| Y | [DefaultValueAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.defaultvalueattribute%28v=vs.110%29.aspx) | Specifies the default value for a property. |
|  | [DescriptionAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.descriptionattribute%28v=vs.110%29.aspx) | Specifies a description for a property or event. |
|  | [DesignerAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designerattribute%28v=vs.110%29.aspx) | Specifies the class used to implement design-time services for a component. |
|  | [DesignerCategoryAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designercategoryattribute%28v=vs.110%29.aspx) | Specifies that the designer for a class belongs to a certain category. |
|  | [DesignerSerializationVisibilityAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designerserializationvisibilityattribute%28v=vs.110%29.aspx) | Specifies the type of persistence to use when serializing a property on a component at design time. |
|  | [DesignOnlyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designonlyattribute%28v=vs.110%29.aspx) | Specifies whether a property can only be set at design time. |
|  | [DesignTimeVisibleAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designtimevisibleattribute%28v=vs.110%29.aspx) | [DesignTimeVisibleAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.designtimevisibleattribute%28v=vs.110%29.aspx) marks a component's visibility. If [Yes](https://msdn.microsoft.com/en-us/library/system.componentmodel.designtimevisibleattribute.yes%28v=vs.110%29.aspx) is present, a visual designer can show this component on a designer. |
|  | [DisplayNameAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.displaynameattribute%28v=vs.110%29.aspx) | Specifies the display name for a property, event, or public void method which takes no arguments. |
|  | [EditorAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.editorattribute%28v=vs.110%29.aspx) | Specifies the editor to use to change a property. This class cannot be inherited. |
|  | [EditorBrowsableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.editorbrowsableattribute%28v=vs.110%29.aspx) | Specifies that a property or method is viewable in an editor. This class cannot be inherited. |
|  | [ExtenderProvidedPropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.extenderprovidedpropertyattribute%28v=vs.110%29.aspx) | Specifies a property that is offered by an extender provider. This class cannot be inherited. |
|  | [ImmutableObjectAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.immutableobjectattribute%28v=vs.110%29.aspx) | Specifies that an object has no subproperties capable of being edited. This class cannot be inherited. |
|  | [InheritanceAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.inheritanceattribute%28v=vs.110%29.aspx) | Indicates whether the component associated with this attribute has been inherited from a base class. This class cannot be inherited. |
|  | [InitializationEventAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.initializationeventattribute%28v=vs.110%29.aspx) | Specifies which event is raised on initialization. This class cannot be inherited. |
|  | [InstallerTypeAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.installertypeattribute%28v=vs.110%29.aspx) | Specifies the installer for a type that installs components. |
|  | [LicenseProviderAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.licenseproviderattribute%28v=vs.110%29.aspx) | Specifies the [LicenseProvider](https://msdn.microsoft.com/en-us/library/system.componentmodel.licenseprovider%28v=vs.110%29.aspx) to use with a class. This class cannot be inherited. |
|  | [ListBindableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.listbindableattribute%28v=vs.110%29.aspx) | Specifies that a list can be used as a data source. A visual designer should use this attribute to determine whether to display a particular list in a data-binding picker. This class cannot be inherited. |
| ? | [LocalizableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.localizableattribute%28v=vs.110%29.aspx) | Specifies whether a property should be localized. This class cannot be inherited. |
|  | [LookupBindingPropertiesAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.lookupbindingpropertiesattribute%28v=vs.110%29.aspx) | Specifies the properties that support lookup-based binding. This class cannot be inherited. |
|  | [MergablePropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.mergablepropertyattribute%28v=vs.110%29.aspx) | Specifies that this property can be combined with properties belonging to other objects in a Properties window. |
|  | [NotifyParentPropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.notifyparentpropertyattribute%28v=vs.110%29.aspx) | Indicates that the parent property is notified when the value of the property that this attribute is applied to is modified. This class cannot be inherited. |
| ? | [ParenthesizePropertyNameAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.parenthesizepropertynameattribute%28v=vs.110%29.aspx) | Indicates whether the name of the associated property is displayed with parentheses in the Properties window. This class cannot be inherited. |
| Y | [PasswordPropertyTextAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.passwordpropertytextattribute%28v=vs.110%29.aspx) | Indicates that an object's text representation is obscured by characters such as asterisks. This class cannot be inherited. |
|  | [PropertyFilterAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.propertyfilterattribute%28v=vs.110%29.aspx) | Specifies which properties should be reported by type descriptors, specifically the [GetProperties](https://msdn.microsoft.com/en-us/library/ybh0y4fd%28v=vs.110%29.aspx) method. |
|  | [PropertyTabAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.propertytabattribute%28v=vs.110%29.aspx) | Identifies the property tab or tabs to display for the specified class or classes. |
|  | [ProvidePropertyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.providepropertyattribute%28v=vs.110%29.aspx) | Specifies the name of the property that an implementer of [IExtenderProvider](https://msdn.microsoft.com/en-us/library/system.componentmodel.iextenderprovider%28v=vs.110%29.aspx) offers to other components. This class cannot be inherited |
|  | [ReadOnlyAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.readonlyattribute%28v=vs.110%29.aspx) | Specifies whether the property this attribute is bound to is read-only or read/write. This class cannot be inherited |
|  | [RecommendedAsConfigurableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.recommendedasconfigurableattribute%28v=vs.110%29.aspx) | **Obsolete.**Specifies that the property can be used as an application setting. |
|  | [RefreshPropertiesAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.refreshpropertiesattribute%28v=vs.110%29.aspx) | Indicates that the property grid should refresh when the associated property value changes. This class cannot be inherited. |
|  | [RunInstallerAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.runinstallerattribute%28v=vs.110%29.aspx) | Specifies whether the Visual Studio Custom Action Installer or the [Installutil.exe (Installer Tool)](https://msdn.microsoft.com/en-us/library/50614e95%28v=vs.110%29.aspx) should be invoked when the assembly is installed. |
|  | [SettingsBindableAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.settingsbindableattribute%28v=vs.110%29.aspx) | Specifies when a component property can be bound to an application setting. |
|  | [ToolboxItemAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.toolboxitemattribute%28v=vs.110%29.aspx) | Represents an attribute of a toolbox item. |
|  | [ToolboxItemFilterAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.toolboxitemfilterattribute%28v=vs.110%29.aspx) | Specifies the filter string and filter type to use for a toolbox item. |
| Y | [TypeConverterAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.typeconverterattribute%28v=vs.110%29.aspx) | Specifies what type to use as a converter for the object this attribute is bound to. |
|  | [TypeDescriptionProviderAttribute](https://msdn.microsoft.com/en-us/library/system.componentmodel.typedescriptionproviderattribute%28v=vs.110%29.aspx) | Specifies the custom type description provider for a class. This class cannot be inherited. |

# AppGene

## AppGene.Model.DataAnnotations

# References

<https://msdn.microsoft.com/en-us/data/jj591583>