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org.apache.commons.beanutils

## Class LazyDynaClass

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [org.apache.commons.beanutils.BasicDynaClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html)
    - org.apache.commons.beanutils.LazyDynaClass
* All Implemented Interfaces: [Serializable](https://docs.oracle.com/javase/7/docs/api/java/io/Serializable.html?is-external=true), [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html), [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html)  
    
  public class LazyDynaClass  
  extends [BasicDynaClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html)  
  implements [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html)  
  DynaClass which implements the MutableDynaClass interface.  
  A MutableDynaClass is a specialized extension to DynaClass that allows properties to be added or removed dynamically.  
  This implementation has one slightly unusual default behaviour - calling the getDynaProperty(name) method for a property which doesn't exist returns a DynaProperty rather than null. The reason for this is that BeanUtils calls this method to check if a property exists before trying to set the value. This would defeat the object of the LazyDynaBean which automatically adds missing properties when any of its set() methods are called. For this reason the isDynaProperty(name) method has been added to this implementation in order to determine if a property actually exists. If the more *normal* behaviour of returning null is required, then this can be achieved by calling the setReturnNull(true).  
  The add(name, type, readable, writable) method is not implemented and always throws an UnsupportedOperationException. I believe this attributes need to be added to the DynaProperty class in order to control read/write facilities.Version: $Id$ See Also: [LazyDynaBean](http://docs.google.com/org/apache/commons/beanutils/LazyDynaBean.html), [Serialized Form](http://docs.google.com/serialized-form.html#org.apache.commons.beanutils.LazyDynaClass)

### Field SummaryFields

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + protected boolean | * + [restricted](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#restricted) Controls whether changes to this DynaClass's properties are allowed. |
| * + protected boolean | * + [returnNull](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#returnNull) Controls whether the getDynaProperty() method returns null if a property doesn't exist - or creates a new one. |

### Fields inherited from class org.apache.commons.beanutils.[**BasicDynaClass**](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html)[constructor](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#constructor), [constructorTypes](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#constructorTypes), [constructorValues](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#constructorValues), [dynaBeanClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#dynaBeanClass), [name](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#name), [properties](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#properties), [propertiesMap](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#propertiesMap)

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [LazyDynaClass](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#LazyDynaClass--)() Construct a new LazyDynaClass with default parameters. |
| * + [LazyDynaClass](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#LazyDynaClass-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Construct a new LazyDynaClass with the specified name. |
| * + [LazyDynaClass](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#LazyDynaClass-java.lang.String-java.lang.Class-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> dynaBeanClass) Construct a new LazyDynaClass with the specified name and DynaBean class. |
| * + [LazyDynaClass](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#LazyDynaClass-java.lang.String-java.lang.Class-org.apache.commons.beanutils.DynaProperty:A-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> dynaBeanClass, [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] properties) Construct a new LazyDynaClass with the specified name, DynaBean class and properties. |
| * + [LazyDynaClass](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#LazyDynaClass-java.lang.String-org.apache.commons.beanutils.DynaProperty:A-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] properties) Construct a new LazyDynaClass with the specified name and properties. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + protected void | * + [add](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#add-org.apache.commons.beanutils.DynaProperty-)([DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) property) Add a new dynamic property. |
| * + void | * + [add](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#add-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Add a new dynamic property with no restrictions on data type, readability, or writeability. |
| * + void | * + [add](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#add-java.lang.String-java.lang.Class-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> type) Add a new dynamic property with the specified data type, but with no restrictions on readability or writeability. |
| * + void | * + [add](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#add-java.lang.String-java.lang.Class-boolean-boolean-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> type, boolean readable, boolean writeable) Add a new dynamic property with the specified data type, readability, and writeability. |
| * + [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) | * + [getDynaProperty](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#getDynaProperty-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return a property descriptor for the specified property. |
| * + boolean | * + [isDynaProperty](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#isDynaProperty-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Indicate whether a property actually exists. |
| * + boolean | * + [isRestricted](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#isRestricted--)() Is this DynaClass currently restricted. |
| * + boolean | * + [isReturnNull](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#isReturnNull--)() Should this DynaClass return a null from the getDynaProperty(name) method if the property doesn't exist. |
| * + void | * + [remove](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#remove-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Remove the specified dynamic property, and any associated data type, readability, and writeability, from this dynamic class. |
| * + void | * + [setRestricted](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#setRestricted-boolean-)(boolean restricted) Set whether this DynaClass is currently restricted. |
| * + void | * + [setReturnNull](http://docs.google.com/org/apache/commons/beanutils/LazyDynaClass.html#setReturnNull-boolean-)(boolean returnNull) Set whether this DynaClass should return a null from the getDynaProperty(name) method if the property doesn't exist. |

### Methods inherited from class org.apache.commons.beanutils.[**BasicDynaClass**](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html)[getDynaBeanClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#getDynaBeanClass--), [getDynaProperties](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#getDynaProperties--), [getName](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#getName--), [newInstance](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#newInstance--), [setDynaBeanClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#setDynaBeanClass-java.lang.Class-), [setProperties](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#setProperties-org.apache.commons.beanutils.DynaProperty:A-)

### Methods inherited from class java.lang.[**Object**](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[clone](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#clone--), [equals](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#equals-java.lang.Object-), [finalize](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#finalize--), [getClass](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#getClass--), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#hashCode--), [notify](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notify--), [notifyAll](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notifyAll--), [toString](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#toString--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-int-)

### Methods inherited from interface org.apache.commons.beanutils.[**DynaClass**](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html)[getDynaProperties](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getDynaProperties--), [getName](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getName--), [newInstance](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#newInstance--)

### Field Detail

#### restricted protected boolean restricted Controls whether changes to this DynaClass's properties are allowed.

#### returnNull protected boolean returnNull Controls whether the getDynaProperty() method returns null if a property doesn't exist - or creates a new one. Default is false.

### Constructor Detail

#### LazyDynaClass public LazyDynaClass() Construct a new LazyDynaClass with default parameters.

#### LazyDynaClass public LazyDynaClass([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Construct a new LazyDynaClass with the specified name.Parameters: name - Name of this DynaBean class

#### LazyDynaClass public LazyDynaClass([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> dynaBeanClass) Construct a new LazyDynaClass with the specified name and DynaBean class.Parameters: name - Name of this DynaBean class dynaBeanClass - The implementation class for new instances

#### LazyDynaClass public LazyDynaClass([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] properties) Construct a new LazyDynaClass with the specified name and properties.Parameters: name - Name of this DynaBean class properties - Property descriptors for the supported properties

#### LazyDynaClass public LazyDynaClass([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> dynaBeanClass, [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] properties) Construct a new LazyDynaClass with the specified name, DynaBean class and properties.Parameters: name - Name of this DynaBean class dynaBeanClass - The implementation class for new instances properties - Property descriptors for the supported properties

### Method Detail

#### isRestricted public boolean isRestricted() Is this DynaClass currently restricted. If restricted, no changes to the existing registration of property names, data types, readability, or writeability are allowed.Specified by: [isRestricted](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#isRestricted--) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Returns: true if this [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) cannot be changed otherwise false

#### setRestricted public void setRestricted(boolean restricted) Set whether this DynaClass is currently restricted. If restricted, no changes to the existing registration of property names, data types, readability, or writeability are allowed.Specified by: [setRestricted](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#setRestricted-boolean-) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Parameters: restricted - true if this [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) cannot be changed otherwise false

#### isReturnNull public boolean isReturnNull() Should this DynaClass return a null from the getDynaProperty(name) method if the property doesn't exist.Returns: true if a null [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) should be returned if the property doesn't exist, otherwise false if a new [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) should be created.

#### setReturnNull public void setReturnNull(boolean returnNull) Set whether this DynaClass should return a null from the getDynaProperty(name) method if the property doesn't exist.Parameters: returnNull - true if a null [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) should be returned if the property doesn't exist, otherwise false if a new [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) should be created.

#### add public void add([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Add a new dynamic property with no restrictions on data type, readability, or writeability.Specified by: [add](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#add-java.lang.String-) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Parameters: name - Name of the new dynamic property Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if name is null [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) - if this DynaClass is currently restricted, so no new properties can be added

#### add public void add([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> type) Add a new dynamic property with the specified data type, but with no restrictions on readability or writeability.Specified by: [add](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#add-java.lang.String-java.lang.Class-) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Parameters: name - Name of the new dynamic property type - Data type of the new dynamic property (null for no restrictions) Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if name is null [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) - if this DynaClass is currently restricted, so no new properties can be added

#### add public void add([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name, [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> type, boolean readable, boolean writeable) Add a new dynamic property with the specified data type, readability, and writeability. **N.B.**Support for readable/writeable properties has not been implemented and this method always throws a UnsupportedOperationException. I'm not sure the intention of the original authors for this method, but it seems to me that readable/writable should be attributes of the DynaProperty class (which they are not) and is the reason this method has not been implemented.Specified by: [add](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#add-java.lang.String-java.lang.Class-boolean-boolean-) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Parameters: name - Name of the new dynamic property type - Data type of the new dynamic property (null for no restrictions) readable - Set to true if this property value should be readable writeable - Set to true if this property value should be writeable Throws: [UnsupportedOperationException](https://docs.oracle.com/javase/7/docs/api/java/lang/UnsupportedOperationException.html?is-external=true) - anytime this method is called

#### add protected void add([DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) property) Add a new dynamic property.Parameters: property - Property the new dynamic property to add. Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if name is null [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) - if this DynaClass is currently restricted, so no new properties can be added

#### remove public void remove([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Remove the specified dynamic property, and any associated data type, readability, and writeability, from this dynamic class. **NOTE** - This does **NOT** cause any corresponding property values to be removed from DynaBean instances associated with this DynaClass.Specified by: [remove](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html#remove-java.lang.String-) in interface [MutableDynaClass](http://docs.google.com/org/apache/commons/beanutils/MutableDynaClass.html) Parameters: name - Name of the dynamic property to remove Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if name is null [IllegalStateException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalStateException.html?is-external=true) - if this DynaClass is currently restricted, so no properties can be removed

#### getDynaProperty public [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) getDynaProperty([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return a property descriptor for the specified property. If the property is not found and the returnNull indicator is true, this method always returns null. If the property is not found and the returnNull indicator is false a new property descriptor is created and returned (although its not actually added to the DynaClass's properties). This is the default beahviour. The reason for not returning a null property descriptor is that BeanUtils uses this method to check if a property exists before trying to set it - since these *Lazy* implementations automatically add any new properties when they are set, returning null from this method would defeat their purpose.Specified by: [getDynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getDynaProperty-java.lang.String-) in interface [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Overrides: [getDynaProperty](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html#getDynaProperty-java.lang.String-) in class [BasicDynaClass](http://docs.google.com/org/apache/commons/beanutils/BasicDynaClass.html) Parameters: name - Name of the dynamic property for which a descriptor is requested Returns: The dyna property for the specified name Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if no property name is specified

#### isDynaProperty public boolean isDynaProperty([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Indicate whether a property actually exists. **N.B.** Using getDynaProperty(name) == null doesn't work in this implementation because that method might return a DynaProperty if it doesn't exist (depending on the returnNull indicator).Parameters: name - The name of the property to check Returns: true if there is a property of the specified name, otherwise false Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if no property name is specified

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