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org.apache.commons.beanutils.expression

## Interface Resolver

* All Known Implementing Classes: [DefaultResolver](http://docs.google.com/org/apache/commons/beanutils/expression/DefaultResolver.html)  
    
  public interface Resolver
* Property Name Expression Resolver.  
  Methods such as PropertyUtilsBean's setNestedProperty() method use a Resolver to process a *property name* expression and resolve *nested*, *indexed* and *mapped* property names. The following code provides an example usage demonstrating all the methods:  
   // Iterate through a nested property expression  
   while (resolver.hasNested(name)) {  
    
   // isolate a single property from a nested expresion  
   String next = resolver.next(name);  
    
   // Process...  
   String property = resolver.getProperty(next);  
   if (resolver.isIndexed(next)) {  
    
   int index = resolver.getIndex(next);  
   bean = getIndexedProperty(bean, property, index);  
    
   } else if (resolver.isMapped(next)) {  
    
   String key = resolver.getKey(next);  
   bean = getMappedProperty(bean, property, key);  
    
   } else {  
    
   bean = getSimpleProperty(bean, property);  
    
   }  
    
   // remove the processed property from the expression  
   name = resolver.remove(name);  
   }  
   In order to create an implementation, it is important to understand how BeanUtils/PropertyUtils uses the resolver. The following are the main methods that use it:
  + [PropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html)
    - [PropertyUtilsBean.getIndexedProperty(Object, String)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#getIndexedProperty-java.lang.Object-java.lang.String-)
    - [PropertyUtilsBean.getMappedProperty(Object, String)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#getMappedProperty-java.lang.Object-java.lang.String-)
    - [PropertyUtilsBean.getNestedProperty(Object, String)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#getNestedProperty-java.lang.Object-java.lang.String-)
    - [PropertyUtilsBean.getPropertyDescriptor(Object, String)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#getPropertyDescriptor-java.lang.Object-java.lang.String-)
    - [PropertyUtilsBean.getSimpleProperty(Object, String)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#getSimpleProperty-java.lang.Object-java.lang.String-)
    - [PropertyUtilsBean.setIndexedProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#setIndexedProperty-java.lang.Object-java.lang.String-java.lang.Object-)
    - [PropertyUtilsBean.setMappedProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#setMappedProperty-java.lang.Object-java.lang.String-java.lang.Object-)
    - [PropertyUtilsBean.setNestedProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#setNestedProperty-java.lang.Object-java.lang.String-java.lang.Object-)
    - [PropertyUtilsBean.setSimpleProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#setSimpleProperty-java.lang.Object-java.lang.String-java.lang.Object-)
  + [BeanUtilsBean](http://docs.google.com/org/apache/commons/beanutils/BeanUtilsBean.html)
    - [BeanUtilsBean.copyProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/BeanUtilsBean.html#copyProperty-java.lang.Object-java.lang.String-java.lang.Object-)
    - [BeanUtilsBean.setProperty(Object, String, Object)](http://docs.google.com/org/apache/commons/beanutils/BeanUtilsBean.html#setProperty-java.lang.Object-java.lang.String-java.lang.Object-)
  + [LocaleBeanUtilsBean](http://docs.google.com/org/apache/commons/beanutils/locale/LocaleBeanUtilsBean.html)
    - [LocaleBeanUtilsBean.setProperty(Object, String, Object, String)](http://docs.google.com/org/apache/commons/beanutils/locale/LocaleBeanUtilsBean.html#setProperty-java.lang.Object-java.lang.String-java.lang.Object-java.lang.String-)

Since: 1.8.0 Version: $Id$ See Also: [PropertyUtilsBean.setResolver(Resolver)](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html#setResolver-org.apache.commons.beanutils.expression.Resolver-)

### Method SummaryAll Methods Instance Methods Abstract Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + int | * + [getIndex](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#getIndex-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the index value from the property expression or -1. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [getKey](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#getKey-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the map key from the property expression or null. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [getProperty](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#getProperty-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Return the property name from the property expression. |
| * + boolean | * + [hasNested](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#hasNested-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicates whether or not the expression contains nested property expressions or not. |
| * + boolean | * + [isIndexed](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#isIndexed-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicate whether the expression is for an indexed property or not. |
| * + boolean | * + [isMapped](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#isMapped-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicate whether the expression is for a mapped property or not. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [next](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#next-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the next property expression from the current expression. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [remove](http://docs.google.com/org/apache/commons/beanutils/expression/Resolver.html#remove-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Remove the last property expresson from the current expression. |

### Method Detail

#### getIndex int getIndex([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the index value from the property expression or -1.Parameters: expression - The property expression Returns: The index value or -1 if the property is not indexed Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - If the indexed property is illegally formed or has an invalid (non-numeric) value

#### getKey [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) getKey([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the map key from the property expression or null.Parameters: expression - The property expression Returns: The index value Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - If the mapped property is illegally formed

#### getProperty [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) getProperty([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Return the property name from the property expression.Parameters: expression - The property expression Returns: The property name

#### hasNested boolean hasNested([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicates whether or not the expression contains nested property expressions or not.Parameters: expression - The property expression Returns: The next property expression

#### isIndexed boolean isIndexed([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicate whether the expression is for an indexed property or not.Parameters: expression - The property expression Returns: true if the expresion is indexed, otherwise false

#### isMapped boolean isMapped([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Indicate whether the expression is for a mapped property or not.Parameters: expression - The property expression Returns: true if the expresion is mapped, otherwise false

#### next [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) next([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Extract the next property expression from the current expression.Parameters: expression - The property expression Returns: The next property expression

#### remove [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) remove([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) expression) Remove the last property expresson from the current expression.Parameters: expression - The property expression Returns: The new expression value, with first property expression removed - null if there are no more expressions

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