JavaScript is disabled on your browser.

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* Class
* [Use](http://docs.google.com/class-use/PhraseElement.html)
* [Tree](http://docs.google.com/package-tree.html)
* [Deprecated](http://docs.google.com/deprecated-list.html)
* [Index](http://docs.google.com/index-files/index-1.html)
* [Help](http://docs.google.com/help-doc.html)
* [Prev Class](http://docs.google.com/simplenlg/framework/PhraseCategory.html)
* [Next Class](http://docs.google.com/simplenlg/framework/StringElement.html)
* [Frames](http://docs.google.com/index.html?simplenlg/framework/PhraseElement.html)
* [No Frames](http://docs.google.com/PhraseElement.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* Nested |
* Field |
* [Constr](#id.3znysh7)|
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* Detail:
* Field |
* [Constr](#id.1t3h5sf)|
* [Method](#id.2s8eyo1)

simplenlg.framework

## Class PhraseElement

* java.lang.Object
  + [simplenlg.framework.NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)
    - simplenlg.framework.PhraseElement

Direct Known Subclasses: [AdjPhraseSpec](http://docs.google.com/simplenlg/phrasespec/AdjPhraseSpec.html), [AdvPhraseSpec](http://docs.google.com/simplenlg/phrasespec/AdvPhraseSpec.html), [NPPhraseSpec](http://docs.google.com/simplenlg/phrasespec/NPPhraseSpec.html), [PPPhraseSpec](http://docs.google.com/simplenlg/phrasespec/PPPhraseSpec.html), [SPhraseSpec](http://docs.google.com/simplenlg/phrasespec/SPhraseSpec.html), [VPPhraseSpec](http://docs.google.com/simplenlg/phrasespec/VPPhraseSpec.html)

* public class PhraseElement  
  extends [NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)  
  This class defines a phrase. It covers the expected phrase types: noun phrases, verb phrases, adjective phrases, adverb phrases and prepositional phrases as well as also covering clauses. Phrases can be constructed from scratch by setting the correct features of the phrase elements. However, it is strongly recommended that the PhraseFactory is used to construct phrases.Version: 4.0 Author: D. Westwater, University of Aberdeen.

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [**PhraseElement**](http://docs.google.com/simplenlg/framework/PhraseElement.html#PhraseElement(simplenlg.framework.PhraseCategory))([PhraseCategory](http://docs.google.com/simplenlg/framework/PhraseCategory.html) newCategory) Creates a new phrase of the given type. |

### Method SummaryMethods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + void | * + [**addComplement**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addComplement(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newComplement) Adds a new complement to the phrase element. |
| * + void | * + [**addComplement**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addComplement(java.lang.String))(java.lang.String newComplement) Adds a new complement to the phrase element. |
| * + void | * + [**addFrontModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addFrontModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newFrontModifier) Adds a new front modifier to the phrase element. |
| * + void | * + [**addFrontModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addFrontModifier(java.lang.String))(java.lang.String newFrontModifier) Adds a new front modifier to the phrase element. |
| * + void | * + [**addModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addModifier(java.lang.Object))(java.lang.Object modifier) Add a modifier to a phrase Use heuristics to decide where it goes |
| * + void | * + [**addPostModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addPostModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPostModifier) Adds a new post-modifier to the phrase element. |
| * + void | * + [**addPostModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addPostModifier(java.lang.String))(java.lang.String newPostModifier) Adds a new post-modifier to the phrase element. |
| * + void | * + [**addPreModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addPreModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPreModifier) Adds a new pre-modifier to the phrase element. |
| * + void | * + [**addPreModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#addPreModifier(java.lang.String))(java.lang.String newPreModifier) Adds a new pre-modifier to the phrase element. |
| * + void | * + [**clearComplements**](http://docs.google.com/simplenlg/framework/PhraseElement.html#clearComplements())() Removes all existing complements on the phrase. |
| * + java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> | * + [**getChildren**](http://docs.google.com/simplenlg/framework/PhraseElement.html#getChildren())() This method retrieves the child components of this phrase. |
| * + java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> | * + [**getFrontModifiers**](http://docs.google.com/simplenlg/framework/PhraseElement.html#getFrontModifiers())() Retrieves the current list of frony modifiers for the phrase. |
| * + [NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) | * + [**getHead**](http://docs.google.com/simplenlg/framework/PhraseElement.html#getHead())() Retrieves the current head of this phrase. |
| * + java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> | * + [**getPostModifiers**](http://docs.google.com/simplenlg/framework/PhraseElement.html#getPostModifiers())() Retrieves the current list of post modifiers for the phrase. |
| * + java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> | * + [**getPreModifiers**](http://docs.google.com/simplenlg/framework/PhraseElement.html#getPreModifiers())() Retrieves the current list of pre-modifiers for the phrase. |
| * + java.lang.String | * + [**printTree**](http://docs.google.com/simplenlg/framework/PhraseElement.html#printTree(java.lang.String))(java.lang.String indent) |
| * + void | * + [**setComplement**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setComplement(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newComplement) Sets a complement of the phrase element. |
| * + void | * + [**setComplement**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setComplement(java.lang.String))(java.lang.String newComplement) Sets the complement to the phrase element. |
| * + void | * + [**setDeterminer**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setDeterminer(java.lang.Object))(java.lang.Object newDeterminer) **Deprecated.**  *Use* [*NPPhraseSpec.setSpecifier(Object)*](http://docs.google.com/simplenlg/phrasespec/NPPhraseSpec.html#setSpecifier(java.lang.Object)) *directly* |
| * + void | * + [**setFrontModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setFrontModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newFrontModifier) Set the front modifier for this phrase. |
| * + void | * + [**setFrontModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setFrontModifier(java.lang.String))(java.lang.String newFrontModifier) Set the frontmodifier for this phrase. |
| * + void | * + [**setHead**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setHead(java.lang.Object))(java.lang.Object newHead) Sets the head, or main component, of this current phrase. |
| * + void | * + [**setPostModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setPostModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPostModifier) Set the postmodifier for this phrase. |
| * + void | * + [**setPostModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setPostModifier(java.lang.String))(java.lang.String newPostModifier) Set the postmodifier for this phrase. |
| * + void | * + [**setPreModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setPreModifier(simplenlg.framework.NLGElement))([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPreModifier) Set the premodifier for this phrase. |
| * + void | * + [**setPreModifier**](http://docs.google.com/simplenlg/framework/PhraseElement.html#setPreModifier(java.lang.String))(java.lang.String newPreModifier) Set the premodifier for this phrase. |

### Methods inherited from class simplenlg.framework.[**NLGElement**](http://docs.google.com/simplenlg/framework/NLGElement.html)[clearAllFeatures](http://docs.google.com/simplenlg/framework/NLGElement.html#clearAllFeatures()), [equals](http://docs.google.com/simplenlg/framework/NLGElement.html#equals(java.lang.Object)), [equals](http://docs.google.com/simplenlg/framework/NLGElement.html#equals(java.lang.String)), [getAllFeatureNames](http://docs.google.com/simplenlg/framework/NLGElement.html#getAllFeatureNames()), [getAllFeatures](http://docs.google.com/simplenlg/framework/NLGElement.html#getAllFeatures()), [getCategory](http://docs.google.com/simplenlg/framework/NLGElement.html#getCategory()), [getFactory](http://docs.google.com/simplenlg/framework/NLGElement.html#getFactory()), [getFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeature(java.lang.String)), [getFeatureAsBoolean](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsBoolean(java.lang.String)), [getFeatureAsDouble](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsDouble(java.lang.String)), [getFeatureAsElement](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsElement(java.lang.String)), [getFeatureAsElementList](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsElementList(java.lang.String)), [getFeatureAsFloat](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsFloat(java.lang.String)), [getFeatureAsInteger](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsInteger(java.lang.String)), [getFeatureAsList](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsList(java.lang.String)), [getFeatureAsLong](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsLong(java.lang.String)), [getFeatureAsString](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsString(java.lang.String)), [getFeatureAsStringList](http://docs.google.com/simplenlg/framework/NLGElement.html#getFeatureAsStringList(java.lang.String)), [getParent](http://docs.google.com/simplenlg/framework/NLGElement.html#getParent()), [getRealisation](http://docs.google.com/simplenlg/framework/NLGElement.html#getRealisation()), [getTense](http://docs.google.com/simplenlg/framework/NLGElement.html#getTense()), [hasFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#hasFeature(java.lang.String)), [isA](http://docs.google.com/simplenlg/framework/NLGElement.html#isA(simplenlg.framework.ElementCategory)), [isNegated](http://docs.google.com/simplenlg/framework/NLGElement.html#isNegated()), [isPlural](http://docs.google.com/simplenlg/framework/NLGElement.html#isPlural()), [removeFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#removeFeature(java.lang.String)), [setCategory](http://docs.google.com/simplenlg/framework/NLGElement.html#setCategory(simplenlg.framework.ElementCategory)), [setFactory](http://docs.google.com/simplenlg/framework/NLGElement.html#setFactory(simplenlg.framework.NLGFactory)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20boolean)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20double)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20float)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20int)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20long)), [setFeature](http://docs.google.com/simplenlg/framework/NLGElement.html#setFeature(java.lang.String,%20java.lang.Object)), [setNegated](http://docs.google.com/simplenlg/framework/NLGElement.html#setNegated(boolean)), [setParent](http://docs.google.com/simplenlg/framework/NLGElement.html#setParent(simplenlg.framework.NLGElement)), [setPlural](http://docs.google.com/simplenlg/framework/NLGElement.html#setPlural(boolean)), [setRealisation](http://docs.google.com/simplenlg/framework/NLGElement.html#setRealisation(java.lang.String)), [setTense](http://docs.google.com/simplenlg/framework/NLGElement.html#setTense(simplenlg.features.Tense)), [toString](http://docs.google.com/simplenlg/framework/NLGElement.html#toString())

### Methods inherited from class java.lang.ObjectgetClass, hashCode, notify, notifyAll, wait, wait, wait

### Constructor Detail

#### PhraseElement public PhraseElement([PhraseCategory](http://docs.google.com/simplenlg/framework/PhraseCategory.html) newCategory) Creates a new phrase of the given type.Parameters:newCategory - the PhraseCategory type for this phrase.

### Method Detail

#### getChildren public java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> getChildren()

* + - This method retrieves the child components of this phrase. The list returned will depend on the category of the element.
      * Clauses consist of cue phrases, front modifiers, pre-modifiers, subjects, verb phrases and complements.
      * Noun phrases consist of the specifier, pre-modifiers, the noun subjects, complements and post-modifiers.
      * Verb phrases consist of pre-modifiers, the verb group, complements and post-modifiers.
      * Canned text phrases have no children thus an empty list will be returned.
      * All the other phrases consist of pre-modifiers, the main phrase element, complements and post-modifiers.

**Specified by:** [getChildren](http://docs.google.com/simplenlg/framework/NLGElement.html#getChildren()) in class [NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) Returns:a List of NLGElements representing the child elements of this phrase.

#### setHead public void setHead(java.lang.Object newHead) Sets the head, or main component, of this current phrase. For example, the head for a verb phrase should be a verb while the head of a noun phrase should be a noun. Strings are converted to StringElements. If null is passed in as the new head then the head feature is removed.Parameters:newHead - the new value for the head of this phrase.

#### getHead public [NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) getHead() Retrieves the current head of this phrase.Returns:the NLGElement representing the head.

#### addComplement public void addComplement([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newComplement) Adds a new complement to the phrase element. Complements will be realised in the syntax after the head element of the phrase. Complements differ from post-modifiers in that complements are crucial to the understanding of a phrase whereas post-modifiers are optional. If the new complement being added is a *clause* or a CoordinatedPhraseElement then its clause status feature is set to ClauseStatus.SUBORDINATE and it's discourse function is set to DiscourseFunction.OBJECT by default unless an existing discourse function exists on the complement. Complements can have different functions. For example, the phrase *John gave Mary a flower* has two complements, one a direct object and one indirect. If a complement is not specified for its discourse function, then this is automatically set to DiscourseFunction.OBJECT.Parameters:newComplement - the new complement as an NLGElement.

#### setComplement public void setComplement([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newComplement) Sets a complement of the phrase element. If a complement already exists of the same DISCOURSE\_FUNCTION, it is removed. This replaces complements set earlier via [addComplement(NLGElement)](http://docs.google.com/simplenlg/framework/PhraseElement.html#addComplement(simplenlg.framework.NLGElement))Parameters:newComplement - the new complement as an NLGElement.

#### addComplement public void addComplement(java.lang.String newComplement) Adds a new complement to the phrase element. Complements will be realised in the syntax after the head element of the phrase. Complements differ from post-modifiers in that complements are crucial to the understanding of a phrase whereas post-modifiers are optional.Parameters:newComplement - the new complement as a String. It is used to create a StringElement.

#### setComplement public void setComplement(java.lang.String newComplement) Sets the complement to the phrase element. This replaces any complements set earlier.Parameters:newComplement - the new complement as a String. It is used to create a StringElement.

#### addPostModifier public void addPostModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPostModifier) Adds a new post-modifier to the phrase element. Post-modifiers will be realised in the syntax after the complements.Parameters:newPostModifier - the new post-modifier as an NLGElement.

#### addPostModifier public void addPostModifier(java.lang.String newPostModifier) Adds a new post-modifier to the phrase element. Post-modifiers will be realised in the syntax after the complements.Parameters:newPostModifier - the new post-modifier as a String. It is used to create a StringElement.

#### setPostModifier public void setPostModifier(java.lang.String newPostModifier) Set the postmodifier for this phrase. This resets all previous postmodifiers to null and replaces them with the given string.Parameters:newPostModifier - the postmodifier

#### setPostModifier public void setPostModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPostModifier) Set the postmodifier for this phrase. This resets all previous postmodifiers to null and replaces them with the given string.Parameters:newPostModifier - the postmodifier

#### addFrontModifier public void addFrontModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newFrontModifier) Adds a new front modifier to the phrase element.Parameters:newFrontModifier - the new front modifier as an NLGElement.

#### addFrontModifier public void addFrontModifier(java.lang.String newFrontModifier) Adds a new front modifier to the phrase element.Parameters:newFrontModifier - the new front modifier as a String. It is used to create a StringElement.

#### setFrontModifier public void setFrontModifier(java.lang.String newFrontModifier) Set the frontmodifier for this phrase. This resets all previous front modifiers to null and replaces them with the given string.Parameters:newFrontModifier - the front modifier

#### setFrontModifier public void setFrontModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newFrontModifier) Set the front modifier for this phrase. This resets all previous front modifiers to null and replaces them with the given string.Parameters:newFrontModifier - the front modifier

#### addPreModifier public void addPreModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPreModifier) Adds a new pre-modifier to the phrase element.Parameters:newPreModifier - the new pre-modifier as an NLGElement.

#### addPreModifier public void addPreModifier(java.lang.String newPreModifier) Adds a new pre-modifier to the phrase element.Parameters:newPreModifier - the new pre-modifier as a String. It is used to create a StringElement.

#### setPreModifier public void setPreModifier(java.lang.String newPreModifier) Set the premodifier for this phrase. This resets all previous premodifiers to null and replaces them with the given string.Parameters:newPreModifier - the premodifier

#### setPreModifier public void setPreModifier([NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html) newPreModifier) Set the premodifier for this phrase. This resets all previous premodifiers to null and replaces them with the given string.Parameters:newPreModifier - the premodifier

#### addModifier public void addModifier(java.lang.Object modifier) Add a modifier to a phrase Use heuristics to decide where it goesParameters:modifier -

#### getPreModifiers public java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> getPreModifiers() Retrieves the current list of pre-modifiers for the phrase.Returns:a List of NLGElements.

#### getPostModifiers public java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> getPostModifiers() Retrieves the current list of post modifiers for the phrase.Returns:a List of NLGElements.

#### getFrontModifiers public java.util.List<[NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)> getFrontModifiers() Retrieves the current list of frony modifiers for the phrase.Returns:a List of NLGElements.

#### printTree public java.lang.String printTree(java.lang.String indent)**Overrides:** [printTree](http://docs.google.com/simplenlg/framework/NLGElement.html#printTree(java.lang.String)) in class [NLGElement](http://docs.google.com/simplenlg/framework/NLGElement.html)

#### clearComplements public void clearComplements() Removes all existing complements on the phrase.

#### setDeterminer @Deprecated public void setDeterminer(java.lang.Object newDeterminer) Deprecated. *Use* [*NPPhraseSpec.setSpecifier(Object)*](http://docs.google.com/simplenlg/phrasespec/NPPhraseSpec.html#setSpecifier(java.lang.Object)) *directly* Sets the determiner for the phrase. This only has real meaning on noun phrases and is added here for convenience. Determiners are some times referred to as specifiers.Parameters:newDeterminer - the new determiner for the phrase.

* [Overview](http://docs.google.com/overview-summary.html)
* [Package](http://docs.google.com/package-summary.html)
* Class
* [Use](http://docs.google.com/class-use/PhraseElement.html)
* [Tree](http://docs.google.com/package-tree.html)
* [Deprecated](http://docs.google.com/deprecated-list.html)
* [Index](http://docs.google.com/index-files/index-1.html)
* [Help](http://docs.google.com/help-doc.html)
* [Prev Class](http://docs.google.com/simplenlg/framework/PhraseCategory.html)
* [Next Class](http://docs.google.com/simplenlg/framework/StringElement.html)
* [Frames](http://docs.google.com/index.html?simplenlg/framework/PhraseElement.html)
* [No Frames](http://docs.google.com/PhraseElement.html)
* [All Classes](http://docs.google.com/allclasses-noframe.html)
* Summary:
* Nested |
* Field |
* [Constr](#id.3znysh7)|
* [Method](#id.2et92p0)
* Detail:
* Field |
* [Constr](#id.1t3h5sf)|
* [Method](#id.2s8eyo1)