Remove Duplicate Code From Constructors Refactoring

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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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3.1 File List

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Chapter 4

Namespace Documentation

4.1 Package edu

Packages

• package illinois

4.2 Package edu.illinois

Packages

• package canistelCassabanana

4.3 Package edu.illinois.canistelCassabanana

Packages

- package utility
- package visitors

Classes

- class Activator
- class RemoveDuplicateCodeInConstructorsAction
- class RemoveDuplicateCodeInConstructorsConstants
- class RemoveDuplicateCodeInConstructorsDescriptor
- class RemoveDuplicateCodeInConstructorsInputPage
- class RemoveDuplicateCodeInConstructorsRefactoring
- class RemoveDuplicateCodeInConstructorsWizard

4.4 Package edu.illinois.canistelCassabanana.utility

Classes

• class Utility

4.5 Package edu.illinois.canistelCassabanana.visitors

Classes

- class AssignmentExpressionVisitor
- class ConstructorDeclarationVisitor
- class ConstructorInvocationVisitor
- class FieldVariableVisitor
- class TypeDeclarationVisitor

Chapter 5

Class Documentation

5.1 edu.illinois.canistelCassabanana.Activator Class Reference

Inherits org::eclipse::ui::plugin::AbstractUIPlugin.

Public Member Functions

- Activator ()
- void start (BundleContext context) throws Exception
- void stop (BundleContext context) throws Exception

Static Public Member Functions

• static Activator getDefault ()

Static Public Attributes

• static final String PLUGIN_ID = "edu.illinois.canistelCassabanana"

Static Private Attributes

• static Activator plugin

5.1.1 Detailed Description

The activator class controls the plug-in life cycle Definition at line 9 of file Activator.java.

5.1.2 Constructor & Destructor Documentation

5.1.2.1 edu.illinois.canistelCassabanana.Activator.Activator ()

The constructor

Definition at line 20 of file Activator.java.

5.1.3 Member Function Documentation

Returns the shared instance

Returns

the shared instance

Definition at line 46 of file Activator.java.

5.1.3.2 void edu.illinois.canistelCassabanana.Activator.start (BundleContext context) throws Exception

Definition at line 27 of file Activator.java.

5.1.3.3 void edu.illinois.canistelCassabanana.Activator.stop (BundleContext) throws Exception

Definition at line 36 of file Activator.java.

5.1.4 Member Data Documentation

5.1.4.1 Activator edu.illinois.canistelCassabanana.Activator.plugin [static, private]

Definition at line 15 of file Activator.java.

5.1.4.2 final String edu.illinois.canistelCassabanana.Activator.PLUGIN_ID = "edu.illinois.canistelCassabanana" [static]

Definition at line 12 of file Activator.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/Activator.java

5.2 edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor	Class
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5.2 edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor Class Reference

Inherits org::eclipse::jdt::core::dom::ASTVisitor.

Public Member Functions

- AssignmentExpressionVisitor ()
- boolean visit (Assignment assignment)
- Set < Expression > getLeftHandSideAssigmentExpressions ()
- Set < Expression > getRightHandSideAssignmentExpressions ()

Private Attributes

- Set < Expression > leftHandSideAssignmentExpressions
- Set < Expression > rightHandSideAssignmentExpressions

5.2.1 Detailed Description

Collects the assignments found in the AST subtree from the starting root node, and exposes the results.

Author

jon

Definition at line 23 of file AssignmentExpressionVisitor.java.

5.2.2 Constructor & Destructor Documentation

5.2.2.1 edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor.AssignmentExpressionVisitor ()

Definition at line 31 of file AssignmentExpressionVisitor.java.

5.2.3 Member Function Documentation

5.2.3.1 Set < Expression > edu.illinois.canistel Cassabanana.visitors. Assignment Expression Visitor.get Left Hand Side Assignment Expressions ()

Definition at line 50 of file AssignmentExpressionVisitor.java.

5.2.3.2 Set < Expression > edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor.getRightHandSideAssignm ()

Definition at line 54 of file AssignmentExpressionVisitor.java.

Collects the expressions that appear in the left hand side of assignments.

Definition at line 42 of file AssignmentExpressionVisitor.java.

5.2.4 Member Data Documentation

5.2.4.1 Set < Expression > edu.illinois.canistel Cassabanana.visitors. Assignment Expression Visitor.left Hand Significant [private]

The expressions that appear in the left hand side of assignments.

Definition at line 28 of file AssignmentExpressionVisitor.java.

5.2.4.2 Set<Expression> edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor.rightHand [private]

Definition at line 29 of file AssignmentExpressionVisitor.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/visitors/Assignr

5.3 edu.illinois.canistelCassabanana.visitors.ConstructorDeclarationVisitor Class Reference

Inherits org::eclipse::jdt::core::dom::ASTVisitor.

Public Member Functions

- ConstructorDeclarationVisitor ()
- boolean visit (MethodDeclaration node)
- Set < MethodDeclaration > getConstructorDeclarations ()

Private Attributes

• Set< MethodDeclaration > constructorDeclarations

5.3.1 Detailed Description

Collects the constructor declarations found in the AST subtree from the starting root node, and exposes the results.

Author

ion

Definition at line 17 of file ConstructorDeclarationVisitor.java.

5.3.2 Constructor & Destructor Documentation

5.3.2.1 edu.illinois.canistelCassabanana.visitors.ConstructorDeclarationVisitor.ConstructorDeclarationVisitor ()

Definition at line 24 of file ConstructorDeclarationVisitor.java.

5.3.3 Member Function Documentation

5.3.3.1 Set < Method Declaration > edu.illinois.canistel Cassabanana.visitors.Constructor Declaration Visitor.get Constructor Declarations ()

Definition at line 41 of file ConstructorDeclarationVisitor.java.

5.3.3.2 boolean edu.illinois.canistelCassabanana.visitors.ConstructorDeclarationVisitor.visit (MethodDeclaration node)

Collects this method declaration if it is a constructor, and prevents further recursion.

Definition at line 34 of file ConstructorDeclarationVisitor.java.

5.3.4 Member Data Documentation

5.3.4.1 Set<MethodDeclaration> edu.illinois.canistelCassabanana.visitors.ConstructorDeclarationVisitor.constructorOeclarationVisitor.constructorOeclarationVisitor.constructorOeclarationVisitor.constructorOeclarat

The set of constructors (declarations) found

Definition at line 22 of file ConstructorDeclarationVisitor.java.

The documentation for this class was generated from the following file:

• /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Soft-ware Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/visitors/ConstructorDeclarate

5.4 edu.illinois.canistelCassabanana.visitors.ConstructorInvocationVisitor Class Reference

Inherits org::eclipse::jdt::core::dom::ASTVisitor.

Public Member Functions

- ConstructorInvocationVisitor ()
- boolean visit (ConstructorInvocation node)
- Set < ConstructorInvocation > getConstructorInvocations ()

Private Attributes

• Set < ConstructorInvocation > constructorInvocations

5.4.1 Detailed Description

Collects the constructor invocations found in the AST subtree from the starting root node, and exposes the results.

Author

jon

Definition at line 20 of file ConstructorInvocationVisitor.java.

5.4.2 Constructor & Destructor Documentation

5.4.2.1 edu.illinois.canistelCassabanana.visitors.ConstructorInvocationVisitor.ConstructorInvocationVisitor

Definition at line 27 of file ConstructorInvocationVisitor.java.

5.4.3 Member Function Documentation

5.4.3.1 Set < ConstructorInvocation > edu.illinois.canistelCassabanana.visitors.ConstructorInvocationVisitor.getConstructorInv

Definition at line 42 of file ConstructorInvocationVisitor.java.

5.4.3.2 boolean edu.illinois.canistelCassabanana.visitors.ConstructorInvocationVisitor.visit (ConstructorInvocation node)

Collects this method invocation if it is a constructor, and prevents further recursion.

Definition at line 37 of file ConstructorInvocationVisitor.java.

5.4.4 Member Data Documentation

5.4.4.1 Set<ConstructorInvocation> edu.illinois.canistelCassabanana.visitors.ConstructorInvocationVisitor.constructorIn

The set of constructor calls found

Definition at line 25 of file ConstructorInvocationVisitor.java.

The documentation for this class was generated from the following file:

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5.5 edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor Class Reference

Inherits org::eclipse::jdt::core::dom::ASTVisitor.

Public Member Functions

- FieldVariableVisitor ()
- boolean visit (SimpleName node)
- Set< IVariableBinding > getFields ()
- Set < Statement > getFieldAssignmentStatements ()
- void setFieldAssignmentStatements (Set < Statement > fieldAssignmentStatements)

Private Attributes

- Set< IVariableBinding > fields
- Set < Statement > fieldAssignmentStatements

5.5.1 Detailed Description

Collects the field variables found in the AST subtree from the starting root node.

Author

jon

Definition at line 19 of file FieldVariableVisitor.java.

5.5.2 Constructor & Destructor Documentation

5.5.2.1 edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor.FieldVariableVisitor()

Definition at line 31 of file FieldVariableVisitor.java.

5.5.3 Member Function Documentation

 $\textbf{5.5.3.1} \quad \textbf{Set} < \textbf{Statement} > \textbf{edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor.getFieldAssignmentStatements} \\ \textbf{() }$

Definition at line 65 of file FieldVariableVisitor.java.

5.5.3.2 Set < IVariable Binding > edu.illinois.canistel Cassabanana.visitors. Field Variable Visitor.get Fields ()

Definition at line 61 of file FieldVariableVisitor.java.

5.5.3.3 void edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor.setFieldAssignmentStatements (Set < Statement > fieldAssignmentStatements)

Definition at line 69 of file FieldVariableVisitor.java.

5.5.3.4 boolean edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor.visit (SimpleName node)

Definition at line 41 of file FieldVariableVisitor.java.

5.5.4 Member Data Documentation

5.5.4.1 Set < Statement > edu.illinois.canistel Cassabanana.visitors. Field Variable Visitor. field Assignment State [private]

The statements corresponding to assignments to fields

Definition at line 29 of file FieldVariableVisitor.java.

5.5.4.2 Set<IVariableBinding> edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor.fields [private]

The fields that appear in any simple name nodes we visit.

Definition at line 24 of file FieldVariableVisitor.java.

The documentation for this class was generated from the following file:

edu. illinois. can istel Cassabanana. Remove Duplicate Code In Constructors Action

Class Reference 17

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/visitors/FieldVariableVisitors/

5.6 edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction Class Reference

Inherits org::eclipse::ui::IWorkbenchWindowActionDelegate.

Public Member Functions

- void dispose ()
- void init (final IWorkbenchWindow window)
- void run (final IAction action)
- void selectionChanged (final IAction action, final ISelection selection)

Private Member Functions

- void refactorTreeSelection (final IAction action, ITreeSelection treeSelection)
- void launchRefactoring (RemoveDuplicateCodeInConstructorsRefactoring refactoring, List< IMethod > constructors)

Private Attributes

- IWorkbenchWindow window
- ICompilationUnit unit

5.6.1 Detailed Description

Action invoked by clicking on the menu item corresponding to this refactoring. This should perform the refactoring on the given code.

Author

jon

Definition at line 28 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2 Member Function Documentation

5.6.2.1 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction.dispose

Definition at line 43 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2.2 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction.init (final IWorkbenchWindow *window*)

Definition at line 50 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2.3 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction.launchRefactoring (RemoveDuplicateCodeInConstructorsRefactoring refactoring, List
IMethod > constructors) [private]

Launches the refactoring.

Definition at line 142 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2.4 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction.refactorTreeSelection (final IAction action, ITreeSelection treeSelection) [private]

Parameters

action	
structuredS-	
election	

Definition at line 108 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2.5 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsAction.run (final IAction action)

Definition at line 57 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.2.6 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsAction.selectionChanged (final IAction action, final ISelection selection)

Definition at line 155 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.3 Member Data Documentation

5.6.3.1 ICompilationUnit edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction.unit [private]

The top-level compilation unit

Definition at line 38 of file RemoveDuplicateCodeInConstructorsAction.java.

5.6.3.2 | Workbench Window edu.illinois.canistel Cassabanana. Remove Duplicate Code In Constructors Action. wife [private]

The workbench window, or null

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants Class Reference 19

Definition at line 33 of file RemoveDuplicateCodeInConstructorsAction.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/RemoveDuplicateCodeInControl

5.7 edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants Class Reference

Static Public Attributes

- static final String NO_DUPLICATE_CODE_MESSAGE = "This refactoring must be performed on containing two or more constructors that contain duplicate code."
- static final String ONE_CONSTRUCTOR_MESSAGE = "This refactoring must be performed on containing two or more constructors."
- static final String NO_CONSTRUCTORS_MESSAGE = "This refactoring must be performed on containing two or more constructors."
- static final String NULL_CONSTRUCTORS_MESSAGE = "Error finding constructors to refactor."
- static final String CHECKING_PRECONDITIONS_MESSAGE = "Checking preconditions for refactoring ..."
- static final String UNEXPECTED_ERROR_MESSAGE = "An unexpected exception occurred. See the error log for more details."
- static final String REFACTORING_ID = "RemoveDuplicateCodeInConstructorsRefactoring"
- static final String REFACTORING_NAME = "Remove Duplicate Code In Constructors"
- static final String REFACTORING_DESCRIPTION = "common construction code to as few constructors or as possible."

Static Private Attributes

static final String UNABLE_TO_REFACTOR = "Preconditions satisfied, but unable to refactor."

5.7.1 Detailed Description

Contains UI constants for the refactoring, including error messages and text constants to appear in the UI.

Author

jon

Definition at line 8 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2 Member Data Documentation

5.7.2.1 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.CHEC PRECONDITIONS_MESSAGE = "Checking preconditions for refactoring ..."

[static]

Definition at line 18 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.2 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.NO_CONSTRUCTORS_MESSAGE = "This refactoring must be performed on
containing two or more constructors." [static]

Definition at line 15 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.3 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.NO_DUPLICATE_CODE_MESSAGE = "This refactoring must be performed on
containing two or more constructors that contain duplicate code." [static]

Definition at line 11 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.4 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.NULL CONSTRUCTORS_MESSAGE = "Error finding constructors to refactor."

[static]

Definition at line 17 of file RemoveDuplicateCodeInConstructorsConstants.java.

Definition at line 13 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.6 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.REFA

DESCRIPTION = "common construction code to as few constructors or as
possible." [static]

Definition at line 25 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.7 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.REFA ID = "RemoveDuplicateCodeInConstructorsRefactoring" [static]

Definition at line 23 of file RemoveDuplicateCodeInConstructorsConstants.java.

edu. il lino is. can istel Cassabanana. Remove Duplicate Code In Constructors Descriptor and the constructors of the construction of the constru

Class Reference

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5.7.2.8 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.REFACTORING_
NAME = "Remove Duplicate Code In Constructors" [static]

Definition at line 24 of file RemoveDuplicateCodeInConstructorsConstants.java.

Definition at line 20 of file RemoveDuplicateCodeInConstructorsConstants.java.

5.7.2.10 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants.UNEXPECTED_
ERROR_MESSAGE = "An unexpected exception occurred. See the error log for more details." [static]

Definition at line 19 of file RemoveDuplicateCodeInConstructorsConstants.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/RemoveDuplicateCodeInControl

5.8 edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsDescriptor Class Reference

Inherits org::eclipse::ltk::core::refactoring::RefactoringDescriptor.

Public Member Functions

- Map getArguments ()
- Refactoring createRefactoring (RefactoringStatus status) throws CoreException

Static Public Attributes

• static final String REFACTORING_ID = "org.eclipse.remove.duplicate.code.in.constructors"

Protected Member Functions

RemoveDuplicateCodeInConstructorsDescriptor (String project, String description, String comment, Map arguments)

Private Attributes

• Map arguments

5.8.1 Detailed Description

Descriptor object to allow refactoring to be used in refactoring scripts.

Author

jon

Definition at line 15 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

5.8.2 Constructor & Destructor Documentation

5.8.2.1 edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsDescriptor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.RemoveDuplicateCodelnConstructor.

Definition at line 25 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

5.8.3 Member Function Documentation

5.8.3.1 Refactoring edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsDescriptor.createRefactoring (RefactoringStatus status) throws CoreException

Definition at line 31 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

5.8.3.2 Map edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsDescriptor.getArguments ()

Definition at line 21 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

5.8.4 Member Data Documentation

5.8.4.1 Map edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsDescriptor.arguments [private]

Definition at line 19 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

5.8.4.2 final String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsDescriptor.REFA ID = "org.eclipse.remove.duplicate.code.in.constructors" [static]

Definition at line 17 of file RemoveDuplicateCodeInConstructorsDescriptor.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/RemoveDuplica edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage Class Reference 23

Class Reference edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage Class Reference

Inherits org::eclipse::ltk::ui::refactoring::UserInputWizardPage.

Public Member Functions

- RemoveDuplicateCodeInConstructorsInputPage (String name, List< IMethod > constructors)
- void createControl (Composite parent)

Package Attributes

- List< IMethod > constructors
- RemoveDuplicateCodeInConstructorsRefactoring refactoring
- Combo accessModifierComboBox
- Button helperMethodCheckBox
- Text helperMethodTextBox

Private Member Functions

- void buildHelperMethodOptions (Composite composite)
- void buildAccessModifierOptions (Composite composite)
- void handleInput ()
- RemoveDuplicateCodeInConstructorsRefactoring getRemoveDuplicateCodeIn-ConstructorsRefactoring ()
- void enableDisableHelperMethodTextBox ()
- SelectionListener getHelperMethodCheckBoxListener ()

5.9.1 Detailed Description

The input page for the refactoring wizard. This class will set the fields corresponding to user input on the refactoring object.

Author

jon

Definition at line 33 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.2 Constructor & Destructor Documentation

5.9.2.1 edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsInputPage.RemoveDuplicateCodelnConstructor (String *name*, List< IMethod > constructors)

Create this input page, initializing the refactoring object and list of constructors.

Parameters

name	The name to display on the input page
constructors	The constructors to selected to refactor

Definition at line 68 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3 Member Function Documentation

5.9.3.1 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsInputPage.buildAccessModifierOptions (Composite composite) [private]

Create the GUI components for the access modifier options, and add them to the parent controls GUI element.

Parameters

composite	The parent for these controls

Definition at line 137 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3.2 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsInputPage.buildHelperMethodOptions (Composite composite) [private]

Create the GUI components for the helper method options, and add them to the parent controls GUI element.

Parameters

composite	The parent for these controls

Definition at line 110 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3.3 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsInputPage.createControl (Composite *parent*)

Create the GUI controls for the input page

Parameters

parent The parent composite object to which to attach all controls
--

5.9	
edu. illinois. can istel Cassabanana. Remove Duplicate Code In Constructors Input Incomplete Code In Code	Page
Class Reference	25
Definition at line 81 of file RemoveDuplicateCodeInConstructorsInputPage.java.	

	<pre>void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.enableDisableHelperMethodTextBox () [private]</pre>
Enables	s or disable the helper method text box based on the check box state.
Definiti	on at line 194 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3.5 SelectionListener edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsInputPage.getHelperMethodCheckBoxListe

Gets the listener for the helper method check box, which enables/disables the corresponding input text box field.

Returns

() [private]

The selection listener to trigger enabling/disabling the helper method input box

Definition at line 209 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3.6 RemoveDuplicateCodeInConstructorsRefactoring edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.getRemoveDuplicateCodeInConstructorsRefactori () [private]

Gets the refactoring associated with this input page from the parent input page.

Returns

The refactoring associated with this input page

Definition at line 186 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.3.7 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.handleInput () [private]

Handle the user input, setting the corresponding options on the refactoring object.

Definition at line 161 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.4 Member Data Documentation

5.9.4.1 Combo edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.accessModifierComb[package]

Combo box to select the access modifier for the new constructor or helper method Definition at line 48 of file RemoveDuplicateCodeInConstructorsInputPage.java.

Generated on Tue Nov 29 2011 01:07:13 for Remove Duplicate Code From Constructors Refactoring by Doxygen

5.9.4.2 List<|Method> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.capeackage]

The list of selected constructors, to pass to the refactoring

Definition at line 38 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.4.3 Button edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.helperMo[package]

Check box to specify whether or not the user would prefer to create a helper method over a new constructor, if it is necessary.

Definition at line 54 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.4.4 Text edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.helperMetP

Text box to specify the name of the helper method to create instead of a constructor, if the checkbox option has been set.

Definition at line 60 of file RemoveDuplicateCodeInConstructorsInputPage.java.

5.9.4.5 RemoveDuplicateCodeInConstructorsRefactoring edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsInputPage.refactoring [package]

The refactoring to launch

Definition at line 43 of file RemoveDuplicateCodeInConstructorsInputPage.java.

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/RemoveDuplica

5.10 edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactorin Class Reference

Inherits org::eclipse::ltk::core::refactoring::Refactoring.

Public Member Functions

- RemoveDuplicateCodeInConstructorsRefactoring (ICompilationUnit unit)
- RemoveDuplicateCodeInConstructorsRefactoring ()
- RemoveDuplicateCodeInConstructorsRefactoring (List< IMethod > constructors)

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring Class Reference 27

- String getName ()
- RefactoringStatus checkInitialConditions (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException
- RefactoringStatus checkFinalConditions (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException
- Change createChange (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException
- void setUseHelperFunction (boolean useHelperFunction)
- void setHelperFunctionName (String helperFunctionName)
- void setAccessModifier (String accessModifier)

Private Member Functions

- RefactoringStatus checkNumberOfConstructors (RefactoringStatus errorStatus)
- RefactoringStatus checkCompileErrors (RefactoringStatus status, RefactoringStatus errorStatus)
- void rewriteAST (ASTRewrite astRewrite, ImportRewrite importRewrite)
- boolean isEmptyEdit (TextEdit astEdit)
- void removeFinalFieldAssignments (ASTRewrite astRewrite, Map < IVariableBinding, Expression > finalFieldAssignments, Block block, List < Statement > statements)
- void createMasterConstructorCall (ASTRewrite astRewrite, List< IVariableBinding > fieldsAssignedInOrder, List< Statement > statements, Map< IVariableBinding, Expression > finalFieldAssignments, Block block)
- ASTNode createDefaultValue (IVariableBinding field, AST ast)
- Map< IVariableBinding, Expression > getFieldAssignments (List< Statement > statements)
- MethodDeclaration createMasterConstructor (List< IVariableBinding > fieldsAssignedInOrder, ImportRewrite importRewrite)
- Block createConstructorBody (List< SingleVariableDeclaration > parameters, List< IVariableBinding > fieldsAssigned)
- List< IProblem > initializeConstructors ()
- boolean otherConstructorsCallConstructors (MethodDeclaration constructorAssigningAllAssignedFields)
- MethodDeclaration getConstructorContainingAllAssignedFields ()
- $\bullet \ \ Set < IV a riable Binding > get Fields Assigned In Any Constructor \ () \\$
- boolean constructorsOverlapAssignments ()
- Map < MethodDeclaration, Set < IVariableBinding > > getFieldAssignmentsIn-Constructors (Set < MethodDeclaration > constructorDeclarations)
- Set< MethodDeclaration > getConstructors (CompilationUnit ast)

Private Attributes

- List< IMethod > constructors
- Set< MethodDeclaration > constructorDeclarations
- Map< MethodDeclaration, Set< IVariableBinding >> fieldsInConstructorAssignments

- ICompilationUnit parent
- CompilationUnit compilationUnit
- Map < ICompilationUnit, TextFileChange > changes
- AST ast
- boolean useHelperFunction
- String helperFunctionName
- String accessModifier

5.10.1 Detailed Description

The refactoring itself.

Author

jon

Definition at line 65 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.2 Constructor & Destructor Documentation

5.10.2.1 edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructoring.RemoveDuplicateCodelnConstructoring.RemoveDuplicateCodelnConstructoring.RemoveDuplicateCodelnConstructoring.RemoveDuplicateCodelnCon

Constructs this refactoring given the compilation unit, the parent of all constructors to be refactored.

Parameters

unit The compilation unit, the class in which to perform the refactoring.

Definition at line 129 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.2.2 edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructorsRefactoring.

 $Definition\ at\ line\ 134\ of\ file\ Remove Duplicate Code In Constructors Refactoring. java.$

5.10.2.3 edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.RemoveDuplicateCodelnConstructors (List< |Method > constructors)

Constructs this refactoring given a specific set of constructors to refactor.

Parameters

constructors | The constructors to refactor.

5.10

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring Class Reference 29

Definition at line 145 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3 Member Function Documentation

5.10.3.1 RefactoringStatus edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.checkCompileErrors (RefactoringStatus status, RefactoringStatus errorStatus) [private]

Checks for compile errors in the constructors of the compilation unit, and mergers the proper error statuses into the given status objects if it finds any errors.

Parameters

status	The overall error of the refactoring
errorStatus	A local variable for storing the error status

Returns

The updated refactoring status

Definition at line 258 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.2 RefactoringStatus edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.checkFinalConditions (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException

Checks that the final output of the refactoring is valid

Parameters

progress-	UI component to monitor the progress of the refactoring
Monitor	

Returns

The status of the refactoring

Definition at line 302 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.3 RefactoringStatus edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.checkInitialConditions (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException

Check that the initial conditions for the refactoring are satisfied, specifically that:

- There are at least two constructors in the class
- Each constructor contains no compile errors

progress-	UI component to monitor the progress of the refactoring	
Monitor		

Returns

The status of the refactoring, i.e. if there was an error and what severity it has.

Definition at line 175 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.4 RefactoringStatus edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.checkNumberConstructorsRefactoringStatus errorStatus) [private]

Check for errors with the number of constructors in the class.

Parameters

α	TT1
orror Status	The error status object to update if errors are found.
errorsiaius	The error status object to appear in errors are round.

Returns

The updated error status

Definition at line 229 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.5 boolean edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.constructorsOverlapAss
() [private]

Check for any duplicate assignments between pairs of constructors, from the set of all fields assigned in any constructors. This implicitly handles constructors that give the default value to some field assigned by other constructors.

Returns

True if there are explicit overlapping assignments from the set of all fields assigned in any constructor, false otherwise.

Definition at line 767 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.6 Change edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.createChange (IProgressMonitor progressMonitor) throws CoreException, OperationCanceledException

Actually performs the refactoring.

progress-	A handle on the progress monitor UI component
Monitor	

5.10

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring Class Reference 31

The change object representing the completed refactoring

Definition at line 629 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.7 Block edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.createConstructorBody (List < SingleVariableDeclaration > parameters, List < IVariableBinding > fieldsAssigned) [private]

Create the block of statements for a new constructor or helper method. The lists given for parameters and fields are assumed to be provided in the corresponding order.

Parameters

	parameters	The parameters to the method
Ī	fieldsAs-	The fields that need to be assigned
	signed	

Returns

The block of statements assigning the parameters to the

Definition at line 599 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.8 ASTNode edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.createDefaultValue (IVariableBinding field, AST ast) [private]

Definition at line 477 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.9 MethodDeclaration edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.createMasterConstructor (List< IVariableBinding > fieldsAssignedInOrder, ImportRewrite importRewrite) [private]

Helper function to create the master constructor

Parameters

v	The list of fields assigned, in order
signedI-	
nOrder	
im-	Utility to allow us to effectively deal with types
portRewrite	

Returns

The new constructor, with the body also initialized

Definition at line 548 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

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5.10.3.10 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.createMasterConstructorCa
(ASTRewrite astRewrite, List< IVariableBinding > fieldsAssignedInOrder,
 List< Statement > statements, Map< IVariableBinding, Expression >
 finalFieldAssignments, Block block) [private]

Create the master constructor call in the given constructor.

Parameters

astRewrite	Utility to allow us to rewrite the AST	
fieldsAs-	The list of fields assigned in any constructor, in order (matches the order of	
signedI-	the parameters of the master constructor)	
nOrder		
statements	The statements of this constructor	
finalField-	The map of values assigned to fields in this constructor	
Assignments		
block	TODO	

Definition at line 448 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.11 MethodDeclaration edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.getConstructions () [private]

Returns the constructor with every (explicitly) assigned field as arguments, or null if none exists.

Definition at line 730 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.12 Set < Method Declaration > edu.illinois.canistel Cassabanana.Remove Duplicate Codeln Constructors Refactoring.get C (Compilation Unit ast) [private]

Helper function to recursively retrieve all the constructors in some compilation unit

Parameters

unit	The compilation unit from which to retrieve the constructors	
fieldName	The field name	

Returns

The list of methods in this compilation unit

Definition at line 844 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.13 Map<IVariableBinding, Expression> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.getFieldAssignments (List< Statement > statements) [private]

Gets the map of fields and their assigned values from a list of statements.

1	

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring Class Reference Parameters 33

statements	The list of statements from which to find assigned field values

Returns

The map of fields to their assigned expressions

Definition at line 498 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.14 Map<MethodDeclaration, Set<IVariableBinding>> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.getFieldAssignmentsInConstructors (Set< MethodDeclaration > constructorDeclarations) [private]

Helper function to extract the set of fields that appear in assignment expressions in each constructor

Parameters

construc-	The constructors in question
torDeclara-	
tions	

Returns

A map of constructor declarations to sets of fields

Definition at line 803 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.15 Set < IVariable Binding > edu.illinois.canistel Cassabanana.Remove Duplicate Codeln Constructors Refactoring.get Fields Assigned In A [private]

Returns the set of all fields assigned in all of the constructors.

Returns

A set of variable bindings, corresponding the set of all fields assigned in any constructors.

Definition at line 748 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.16 String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.getName

Gets the name of the refactoring.

The	unique name given to this refactoring

Definition at line 157 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

```
5.10.3.17 List<IProblem> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.initializeConst
( ) [private]
```

Initializes the set of constructors for this class, and returns any problems ('error' level) that it found in these constructors.

Returns

IProblem[] - array of problems found in compilation of the unit. Compiler errors do not include anything within methods that are not constructors.

Definition at line 665 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

```
5.10.3.18 boolean edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.isEmptyEdit ( TextEdit astEdit ) [private]
```

Definition at line 406 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

```
5.10.3.19 boolean edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.otherConstructorsCallC (MethodDeclaration constructorAssigningAllAssignedFields) [private]
```

Determines whether or not all other constructors, besides one assigning all used fields, delegate their work to another constructor.

Parameters

construc-	A constructor that assigns all fields, or null if none exists
torAs-	_
signingAl-	
lAssigned-	
Fields	

Returns

Whether or not all other constructors (besides the parameter) call another constructor.

Definition at line 699 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

```
5.10.3.20 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsRefactoring.removeFinalFieldAssignme ( ASTRewrite astRewrite, Map< IVariableBinding, Expression > finalFieldAssignments, Block block, List< Statement > statements )
[private]
```

Definition at line 410 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10

edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring Class Reference 35

5.10.3.21 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.rewriteAST

(ASTRewrite astRewrite, ImportRewrite importRewrite) [private]

Definition at line 374 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.22 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.setAccessModifier (String accessModifier)

Definition at line 859 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.23 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.setHelperFunctionName (String helperFunctionName)

Definition at line 855 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.3.24 void edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.setUseHelperFunction (boolean useHelperFunction)

Definition at line 851 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4 Member Data Documentation

$\textbf{5.10.4.1} \quad \textbf{String edu.illinois.canistel Cassabanana. Remove Duplicate Code In Constructors Refactoring. access Modifier} \\ [\texttt{private}]$

The access modifier to use for creating a new constructor or helper method.

Definition at line 119 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.2 AST edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.ast [private]

The AST to use to create new methods, and from which to create the rewriter.

Definition at line 101 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.3 Map<ICompilationUnit, TextFileChange> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.changes [private]

Stores a map of changes made to each compilation unit.

Definition at line 95 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

Generated on Tue Nov 29 2011 01:07:13 for Remove Duplicate Code From Constructors Refactoring by Doxygen

5.10.4.4 CompilationUnit edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring [private]

The heavy weight, parsed compilation unit corresponding to the class.

Definition at line 90 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.5 Set<MethodDeclaration> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRe [private]

The constructors for this class

Definition at line 75 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.6 List<|Method> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring [private]

The constructors on which to perform this refactoring

Definition at line 70 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.7 Map<MethodDeclaration, Set<IVariableBinding>> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.fieldsInCons [private]

A map of constructors to the fields in them that appear in assignments

Definition at line 80 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.8 String edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.helperF[private]

The name of the helper function, only set if the useHelperFunction is true.

Definition at line 113 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.9 | CompilationUnit edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactorin [private]

The compilation unit, the class on which to perform this refactoring

Definition at line 85 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

5.10.4.10 boolean edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsRefactoring.useH [private]

Whether or not this refactoring should use a helper function instead of a constructor.

Definition at line 107 of file RemoveDuplicateCodeInConstructorsRefactoring.java.

edu. il lino is. can istel Cassabanana. Remove Duplicate Code In Constructors Wizard

Class Reference

The documentation for this class was generated from the following file:

 /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/RemoveDuplicateCodeInControl

5.11 edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsWizard Class Reference

Inherits org::eclipse::ltk::ui::refactoring::RefactoringWizard.

Public Member Functions

RemoveDuplicateCodeInConstructorsWizard (RemoveDuplicateCodeInConstructorsRefactoring refactoring, String pageTitle, List< IMethod > constructors)

Protected Member Functions

• void addUserInputPages ()

Package Attributes

• List< IMethod > constructors

5.11.1 Detailed Description

The refactoring wizard class, which displays the input page and passes data on to the refactoring.

Author

jon

Definition at line 13 of file RemoveDuplicateCodeInConstructorsWizard.java.

5.11.2 Constructor & Destructor Documentation

Builds the refactoring wizard.

	refactoring	The refactoring object to launch	
	pageTitle	The title to be displayed on the wizard	
Ì	constructors	The constructors selected to be refactored. If the class was selected to be	
		refactored, all constructors from the compilation unit will be passed.	

Definition at line 28 of file RemoveDuplicateCodeInConstructorsWizard.java.

5.11.3 Member Function Documentation

5.11.3.1 void edu.illinois.canistelCassabanana.RemoveDuplicateCodelnConstructorsWizard.addUserInputPages () [protected]

Add the only input page for this refactoring wizard

Definition at line 39 of file RemoveDuplicateCodeInConstructorsWizard.java.

5.11.4 Member Data Documentation

5.11.4.1 List<|Method> edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsWizard.com [package]

The constructors to be refactored

Definition at line 18 of file RemoveDuplicateCodeInConstructorsWizard.java.

The documentation for this class was generated from the following file:

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5.12 edu.illinois.canistelCassabanana.visitors.TypeDeclarationVisitor Class Reference

Inherits org::eclipse::jdt::core::dom::ASTVisitor.

Public Member Functions

- List< TypeDeclaration > getTypes ()
- TypeDeclarationVisitor ()
- boolean visit (TypeDeclaration node)

Package Attributes

• List< TypeDeclaration > types

5.12.1 Detailed Description

Collects the type declarations found in the AST subtree from the starting root node.

Author

jon

Definition at line 14 of file TypeDeclarationVisitor.java.

5.12.2 Constructor & Destructor Documentation

5.12.2.1 edu.illinois.canistelCassabanana.visitors.TypeDeclarationVisitor.TypeDeclarationVisitor ()

Definition at line 25 of file TypeDeclarationVisitor.java.

5.12.3 Member Function Documentation

5.12.3.1 List<TypeDeclaration> edu.illinois.canistelCassabanana.visitors.TypeDeclarationVisitor.getTypes ()

Definition at line 21 of file TypeDeclarationVisitor.java.

5.12.3.2 boolean edu.illinois.canistelCassabanana.visitors.TypeDeclarationVisitor.visit (TypeDeclaration *node*)

Definition at line 33 of file TypeDeclarationVisitor.java.

5.12.4 Member Data Documentation

$\textbf{5.12.4.1} \quad \textbf{List} < \textbf{TypeDeclaration} > \textbf{edu.illinois.canistelCassabanana.visitors.TypeDeclarationVisitor.types} \\ \quad [\texttt{package}]$

The list of type declarations visited.

Definition at line 19 of file TypeDeclarationVisitor.java.

The documentation for this class was generated from the following file:

• /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/visitors/TypeDeclarationVisi

5.13 edu.illinois.canistelCassabanana.utility.Utility Class Reference

Static Public Member Functions

- static String fullyQualifiedName (ITypeBinding type)
- static IType lookupIType (ITypeBinding type, IJavaProject in)
- static ICompilationUnit getParent (List< IMethod > constructors)
- static List< IMethod > getConstructors (ICompilationUnit unit)
- static< T > Set< Set< T > setPairs (Set< T > originalSet)

5.13.1 Detailed Description

A utility class that contains shared static methods for the plugin.

Author

jon

Definition at line 21 of file Utility.java.

5.13.2 Member Function Documentation

5.13.2.1 static String edu.illinois.canistelCassabanana.utility.Utility.fullyQualifiedName ($\mbox{ ITypeBinding } \mbox{ type } \mbox{) } \mbox{ [static]}$

Returns the fully qualified name for a ITypeBinding or null if the name can't be determined.

Parameters

	type	The binding to determine the fully qualified name for.	
--	------	--	--

Returns

The fully qualified name of the binding.

Definition at line 30 of file Utility.java.

5.13.2.2 static List < IMethod> edu.illinois.canistel Cassabanana.utility.Utility.get Constructors (ICompilation Unit *unit*) [static]

Helper function to recursively retrieve all the constructors in some compilation unit.

unit The compilation unit from which to retrieve the constructors	
fieldName	The field name

Returns

The list of methods in this compilation unit

Definition at line 138 of file Utility.java.

```
5.13.2.3 static <T> Set<Set<T> edu.illinois.canistelCassabanana.utility.Utility.getPairs ( Set<T> originalSet ) [static]
```

Find every pair of items from a set

Parameters

```
originalSet | The original set
```

Returns

A set of every possible pair from the original set

See also

http://stackoverflow.com/questions/1670862/obtaining-powerset-of-a-set-in-java

Definition at line 172 of file Utility.java.

5.13.2.4 static ICompilationUnit edu.illinois.canistelCassabanana.utility.Utility.getParent (List< IMethod > constructors) [static]

Finds the parent compilation unit of the given constructors.

Parameters

```
constructors The list of constructors for which to find the parent
```

Returns

The compilation unit containing the given constructors. If the constructors do not share the same compilation unit, this method will return null.

Definition at line 114 of file Utility.java.

5.13.2.5 static IType edu.illinois.canistelCassabanana.utility.Utility.lookuplType (ITypeBinding *type*, IJavaProject *in*) [static]

Converts an AST org.eclipse.jdt.core.dom.ITypeBinding into an org.eclipse.jtd.core.IType, or null if the conversion is not possible. This conversion is useful for resolving types on a project basis a project basis (rather than within a single Java file). If the given ITypeBinding is an array then the IType of the element type is returned.

Parameters

type	The ITypeBinding to convert to an IType.
in	The Java project the binding is contained within.

Returns

The IType corresponding to binding, or null.

Definition at line 78 of file Utility.java.

The documentation for this class was generated from the following file:

• /media/Documents/Documents/Dropbox/16 - College - Senior/CS 427 - Software Engineering I/edu.illinois.canistelCassabanana/src/edu/illinois/canistelCassabanana/utility/Utility.ja

Chapter 6

File Documentation

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File Reference

Classes

• class edu.illinois.canistelCassabanana.Activator

Packages

- package edu.illinois.canistelCassabanana
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Classes

• class edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsAction

Packages

• package edu.illinois.canistelCassabanana

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Classes

• class edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsConstants

Packages

- package edu.illinois.canistelCassabanana
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Classes

• class edu.illinois.canistelCassabanana.RemoveDuplicateCodeInConstructorsDescriptor

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• package edu.illinois.canistelCassabanana

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 File Reference

Classes

• class edu.illinois.canistelCassabanana.utility.Utility

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• package edu.illinois.canistelCassabanana.utility

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Classes

• class edu.illinois.canistelCassabanana.visitors.AssignmentExpressionVisitor

Packages

• package edu.illinois.canistelCassabanana.visitors

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Classes

 $\bullet \ class\ edu. illinois. can istel Cassabanana. visitors. Constructor Declaration Visitor$

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- package edu.illinois.canistelCassabanana.visitors
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Classes

 $\bullet \ class \ edu. il lino is. can istel Cassabanana. visitors. Constructor Invocation Visitor \\$

Packages

• package edu.illinois.canistelCassabanana.visitors

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Classes

• class edu.illinois.canistelCassabanana.visitors.FieldVariableVisitor

Packages

• package edu.illinois.canistelCassabanana.visitors

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