Package
com.projectReflection

com.projectReflection
Class ClassReflection

```
java.lang.Object
   |
   +-com.projectReflection.ClassReflection
```

public class **ClassReflection**
extends java.lang.Object

This class allows for mapping of a Class.

Constructor Summary

public	ClassReflection()

Method Summary

void	display(java.lang.Class theClass) Displays a structural mapping of the class
java.util.List	filterFieldsByType(java.util.List fields, java.lang.String type) Filters a list of fields by type.
java.util.List	filterMethodsByParams(java.util.List methods, java.lang.String[] params) Filters a list of methods by parameter type.
java.util.List	filterMethodsByReturnType(java.util.List methods, java.lang.String type) Filters a list of methods by Return type.
java.lang.reflect.Field	getFieldByString(java.lang.String fieldName, java.lang.Class theClass) Gets the field that matches the given field name exactly and exists in the given class.
java.util.List	getFieldsByPattern(java.util.regex.Pattern fieldName, java.lang.Class theClass) Gets a list of fields that match the given regular expression and exist in the given class.
java.util.List	getMethodsByPattern(java.util.regex.Pattern methodName, java.lang.Class theClass) Gets a list of methods that match the regular expression and exist in the given class.
java.util.List	getMethodsByString(java.lang.String methodName, java.lang.Class theClass) Gets a list of methods that match the specified method name in a class.

Methods inherited from class `java.lang.Object`

`clone, equals, finalize, getClass, hashCode, notify, notifyAll, registerNatives, toString, wait, wait, wait`

Constructors

(continued on next page)

(continued from last page)

ClassReflection

```
public ClassReflection()
```

Methods

getMethodsByPattern

```
public java.util.List getMethodsByPattern(java.util.regex.Pattern methodName,
        java.lang.Class theClass)
```

Gets a list of methods that match the regular expression and exist in the given class. It loops through the methods of the class and adds each method that matches the regular expression to a list. That list is returned. If no matches are found, the list is empty.

Parameters:

`methodName` - The regular expression used for matching the method names
`theClass` - The class to search in for the method name

Returns:

a list of methods that match the regular expression
the list is empty if no matches are found

---

getMethodsByString

```
public java.util.List getMethodsByString(java.lang.String methodName,
        java.lang.Class theClass)
```

Gets a list of methods that match the specified method name in a class. It generates a Pattern to exactly match the string calls `getMethodsByPattern(Pattern, Class)`

Parameters:

`methodName` - The method name to search for
`theClass` - The class to search in for the method name

Returns:

a list of methods that match the exact method name
the list is empty if no matches are found

---

filterMethodsByParams

```
public java.util.List filterMethodsByParams(java.util.List methods,
        java.lang.String[] params)
```

Filters a list of methods by parameter type.

Parameters:

`methods` - the list of methods to filter
`params` - the array of strings that contain the names of the classes that the parameters should match - names can be "simple names" (for example: "Bar") or fully qualified names (for example: "com.foo.bar")

Returns:

list of filtered methods
empty list of no matches are found

(continued on next page)

(continued from last page)

filterMethodsByReturnType

```
public java.util.List filterMethodsByReturnType(java.util.List methods,
         java.lang.String type)
```

Filters a list of methods by Return type.

Parameters:

`methods` - the list of methods to filter

`type` - a string containing the name of the type that the return type should match - names can be "simple names" (for example: "Bar") or fully qualified names (for example: "com.foo.bar")

Returns:

list of filtered methods
empty list of no matches are found

---

getFieldsByPattern

```
public java.util.List getFieldsByPattern(java.util.regex.Pattern fieldName,
         java.lang.Class theClass)
```

Gets a list of fields that match the given regular expression and exist in the given class. It loops through the fields of the class and checks for matches. When a match is found, it is added to a list of fields. That list is returned. If no matches are found, the list is empty.

Parameters:

`fieldName` - The name of the field to search for

`theClass` - The class to search in for the field

Returns:

list of fields that match the regular expression
list is empty if no matches were found

---

getFieldByString

```
public java.lang.reflect.Field getFieldByString(java.lang.String fieldName,
         java.lang.Class theClass)
```

Gets the field that matches the given field name exactly and exists in the given class.

Parameters:

`fieldName` - The name of the field to search for

`theClass` - The class to search in for the field

Returns:

the field if a match is found
otherwise, null

---

filterFieldsByType

```
public java.util.List filterFieldsByType(java.util.List fields,
         java.lang.String type)
```

Filters a list of fields by type.

Parameters:

`fields` - the list of fields to be filtered

`type` - a string containing the name of the type that the type should match - names can be "simple names" (for example: "Bar") or fully qualified names (for example: "com.foo.bar")

Returns:

(continued on next page)

(continued from last page)

list of fields that are of the specified type
empty list if none are found

display

```
public void display(java.lang.Class theClass)
```

Displays a structural mapping of the class

Parameters:

`theClass` - the class being displayed

com.projectReflection
Class ProjectReflection

```
java.lang.Object
   |
   +-com.projectReflection.ProjectReflection
```

public class **ProjectReflection**
extends java.lang.Object

This class allows for the mapping of a project.

Field Summary

public static final	CR
private static final	DOT Value: **46**
private static final	SLASH Value: **47**

Constructor Summary

public	ProjectReflection()

Method Summary

boolean	classExists(java.lang.String className, java.util.List classes) Checks to see if a specific class exists in a list of classes.
boolean	classExists(java.lang.String className, java.lang.String packageName) Checks to see if a specific class exists in a package.
void	displayAll(java.util.List classes) Displays a structural mapping of each class in a list.
java.util.List	getAllLoadedClasses() Gets all classes that are loaded.
java.lang.Class	getClass(java.lang.String className, java.util.List classes) Gets a specified class from a list of classes.
java.lang.Class	getClass(java.lang.String className, java.lang.String packageName) Gets a specified class from a package.
java.util.List	getLoadedClassesFromFile(java.io.File file) Gets all loaded classes in a file.
java.util.List	getLoadedClassesFromFile(java.lang.String fileName) Gets all loaded classes from a file (or directory).

java.util.List	getLoadedClassesFromJarFile(java.util.jar.JarFile jarFile) Gets all loaded classes in a jar file.
java.util.List	getLoadedClassesFromPackage(java.lang.String scannedPackage) Generates a List of classes that exist within a specified package.
java.lang.Class	getLoadedClassFromDotClassFile(java.io.File file) Gets the loaded classes in a .class file.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, registerNatives, toString, wait, wait, wait

Fields

DOT

private static final char **DOT**

Constant value: **46**

SLASH

private static final char **SLASH**

Constant value: **47**

CR

public static final com.projectReflection.ClassReflection **CR**

Constructors

ProjectReflection

public **ProjectReflection**()

Methods

getAllLoadedClasses

public java.util.List **getAllLoadedClasses**()

Gets all classes that are loaded.

Returns:

A list of all loaded classes

(continued from last page)

getLoadedClassesFromFile

`public java.util.List getLoadedClassesFromFile(java.lang.String fileName)`

Gets all loaded classes from a file (or directory). Calls `getLoadedClassesFromFile(File)`

Parameters:
`fileName` - The name of the file (or directory) to search in

Returns:
list of loaded classes found
empty list if none are found

---

getLoadedClassesFromFile

`public java.util.List getLoadedClassesFromFile(java.io.File file)`

Gets all loaded classes in a file.

Parameters:
`file` - The file to search for loaded classes in

Returns:
list of loaded classes from the jar file
empty list if no loaded classes are found

---

getLoadedClassesFromJarFile

`public java.util.List getLoadedClassesFromJarFile(java.util.jar.JarFile jarFile)`

Gets all loaded classes in a jar file.

Parameters:
`jarFile` - The jar file to search for loaded classes in

Returns:
list of loaded classes in the jar file
empty list if none are found

---

getLoadedClassFromDotClassFile

`public java.lang.Class getLoadedClassFromDotClassFile(java.io.File file)`

Gets the loaded classes in a .class file.

Parameters:
`file` - The file to search for loaded a class in

Returns:
the class in the .class file if it is loaded
null if the class is not loaded

---

getLoadedClassesFromPackage

`public java.util.List getLoadedClassesFromPackage(java.lang.String scannedPackage)`

Generates a List of classes that exist within a specified package.

Parameters:
`scannedPackage` - Specifies the package to scan for classes

(continued from last page)

Returns:

A list of classes found

---

classExists

```
public boolean classExists(java.lang.String className,
          java.util.List classes)
```

Checks to see if a specific class exists in a list of classes.

Parameters:

`className` - The specified name of the class being checked for existence - this can be the *simple name* (for example: "Bar") or it can be the *fully qualified name* (for example: "com.foo.Bar")
`classes` - The list of classes being searched

Returns:

true if the class is found
false if the class is not found

---

classExists

```
public boolean classExists(java.lang.String className,
          java.lang.String packageName)
```

Checks to see if a specific class exists in a package. This method calls `classExists(String, List)` after generating a list of classes found in the package specified by "packageName".

Parameters:

`className` - The specified name of the class being checked for existence - this can be the *simple name* (for example: "Bar") or it can be the *fully qualified name* (for example: "com.foo.Bar")
`packageName` - Specifies the package name to use when generating a list of classes

Returns:

true if the class is found
false if the class is not found

---

getClass

```
public java.lang.Class getClass(java.lang.String className,
          java.util.List classes)
```

Gets a specified class from a list of classes. It compares the class name to the classes and returns the class if it is found. Otherwise, it returns null.

Parameters:

`className` - The specified name of the class being checked for existence - this can be the *simple name* (for example: "Bar") or it can be the *fully qualified name* (for example: "com.foo.Bar")
`classes` - The list of classes being searched

Returns:

the class if exists
null if the class does not exist

---

getClass

```
public java.lang.Class getClass(java.lang.String className,
          java.lang.String packageName)
```

Gets a specified class from a package. It creates a list of classes and calls `getClass(String, List)` which returns the class if it is found. Otherwise, it returns null.

(continued from last page)

Parameters:

`className` - The specified name of the class being checked for existence - this can be the *simple name* (for example: "Bar") or it can be the *fully qualified name* (for example: "com.foo.Bar")
`packageName` - The specified package to be used when creating the list of classes

Returns:

the class if exists
null if the class does not exist

---

displayAll

```
public void displayAll(java.util.List classes)
```

Displays a structural mapping of each class in a list.

Parameters:

`classes` - list of classes that are to be displayed