#### **PMD Results**

The following document contains the results of PMD 6.49.0.

### **Violations By Priority**

# **Priority 1**

#### jpass/crypt/Cbc.java

| Rule                      | Violation   | Line |
|---------------------------|---|------|
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_buffer' is not final.        | 63   |
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_outBuffer' is not final.     | 73   |
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_outBufferUsed' is not final. | 78   |
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_overflowUsed' is not final.  | 88   |

### jpass/crypt/io/CryptInputStream.java

| Rule                      | Violation   | Line |
|---------------------------|---|------|
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_buffer' is not final.        | 71   |
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_bufferUsed' is not final.    | 76   |
| VariableNamingConventions | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), 'lastBufferRead' is not final. | 87   |

#### jpass/data/DataModel.java

| Rule  | Violation  | Line   |
|---|--|--------|
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final                                    | 43–174 |
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final                                    | 43–174 |
| VariableNamingConventions                     | Variables should start with a lowercase character, 'INSTANCE' starts with uppercase character. | 45     |

### jpass/ui/JPassFrame.java

| Rule                      | Violation  | Line |
|---------------------------|--|------|
| VariableNamingConventions | Variables should start with a lowercase character, 'INSTANCE' starts with uppercase character. | 75   |

### jpass/ui/MessageDialog.java

| Rule                                | Violation                                    | Line |
|-------------------------------------|--|------|
| ReturnEmptyCollectionRatherThanNull | Return an empty collection rather than null. | 276  |

### jpass/ui/SearchPanel.java

| Rule                              | Violation   | Line |
|-----------------------------------|---|------|
| ConstructorCallsOverridableMethod | Overridable method 'setVisible' called during object construction | 116  |

### jpass/ui/StatusPanel.java

RuleViolationLineConstructorCallsOverridableMethodOverridable method 'setProcessing' called during object construction56

#### jpass/ui/SvgImageIcon.java

RuleViolationLineVariableNamingConventionsVariables that are final and static should be all capitals, 'svgUniverse' is not all capitals.49

#### jpass/ui/helper/FileHelper.java

| Rule                           | Violation                           | Line |
|--------------------------------|-------------------------------------|------|
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 127  |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 175  |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 235  |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 306  |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 308  |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 348  |

#### jpass/util/ClipboardUtils.java

| Rule                           | Violation                           | Line |
|--------------------------------|-------------------------------------|------|
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 71   |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types. | 84   |

### jpass/util/Configuration.java

RuleViolationLineVariableNamingConventionsVariables should start with a lowercase character, 'INSTANCE' starts with uppercase character.46

#### jpass/util/SpringUtilities.java

| Rule  | Violation   | Line   |
|---|---|--------|
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final | 42–189 |
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final | 42–189 |

# **Priority 2**

#### jpass/ui/JPassFrame.java

| Rule                  | Violation   | Line   |
|-----------------------|---|--------|
| SingleMethodSingleton | Class contains multiple getInstance methods. Please review. | 71–351 |
| SingleMethodSingleton | Class contains multiple getInstance methods. Please review. | 71–351 |
| AvoidUsingVolatile    | Use of modifier volatile is not recommended.                | 94     |
| AvoidUsingVolatile    | Use of modifier volatile is not recommended.                | 94     |

#### jpass/ui/MessageDialog.java

| Rule                      | Violation  | Line |
|---------------------------|--|------|
| GuardLogStatementJavaUtil | Logger calls should be surrounded by log level guards. | 320  |
| GuardDebugLogging         | Logger calls should be surrounded by log level guards. | 320  |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 320  |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 320  |

| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 327 |
|---------------------------|--|-----|
| GuardLogStatementJavaUtil | Logger calls should be surrounded by log level guards. | 327 |
| GuardDebugLogging         | Logger calls should be surrounded by log level guards. | 327 |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 327 |

### jpass/ui/SvgImageIcon.java

| Rule                       | Violation  | Line |
|----------------------------|--|------|
| GuardDebugLogging          | Logger calls should be surrounded by log level guards. | 73   |
| GuardLogStatement          | Logger calls should be surrounded by log level guards. | 73   |
| GuardLogStatementJavaUtil  | Logger calls should be surrounded by log level guards. | 73   |
| GuardLogStatement          | Logger calls should be surrounded by log level guards. | 73   |
| AvoidReassigningParameters | Avoid reassigning parameters such as 'name'            | 80   |

### jpass/util/Configuration.java

| Rule                      | Violation  | Line |
|---------------------------|--|------|
| GuardDebugLogging         | Logger calls should be surrounded by log level guards. | 83   |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 83   |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 83   |
| GuardLogStatementJavaUtil | Logger calls should be surrounded by log level guards. | 83   |

### jpass/util/DateUtils.java

| Rule                      | Violation  | Line |
|---------------------------|--|------|
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 49   |
| GuardLogStatementJavaUtil | Logger calls should be surrounded by log level guards. | 49   |
| GuardDebugLogging         | Logger calls should be surrounded by log level guards. | 49   |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 49   |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 65   |
| GuardLogStatement         | Logger calls should be surrounded by log level guards. | 65   |
| GuardLogStatementJavaUtil | Logger calls should be surrounded by log level guards. | 65   |
| GuardDebugLogging         | Logger calls should be surrounded by log level guards. | 65   |

# **Priority 3**

### jpass/JPass.java

| Rule                          | Violation  | Line  |
|-------------------------------|--|-------|
| UseUtilityClass               | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 50–78 |
| UseUtilityClass               | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 50–78 |
| CommentRequired               | Field comments are required  | 52    |
| CommentRequired               | Public method and constructor comments are required  | 58–77 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 62    |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block   | 72    |
| NullAssignment                | Assigning an Object to null is a code smell. Consider refactoring.   | 76    |

### jpass/crypt/Aes256.java

Rule Violation Line

| TooManyMethods             | This class has too many methods, consider refactoring it.                              | 50-507  |
|----------------------------|--|---------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 85      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 90      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 95      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 151     |
| LocalVariableCouldBeFinal  | Local variable 'tmp' could be declared final   | 227     |
| AvoidArrayLoops            | System.arraycopy is more efficient   | 228–230 |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 245     |
| MethodArgumentCouldBeFinal | Parameter 'index' is not assigned and could be declared final                          | 272     |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 290     |
| ShortVariable              | Avoid variables with short names like b  | 290     |
| MethodArgumentCouldBeFinal | Parameter 'a' is not assigned and could be declared final                              | 310     |
| ShortVariable              | Avoid variables with short names like a  | 310     |
| ShortVariable              | Avoid variables with short names like b  | 310     |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 310     |
| MethodArgumentCouldBeFinal | Parameter 'index' is not assigned and could be declared final                          | 362     |
| LocalVariableCouldBeFinal  | Local variable 's0' could be declared final  | 363-364 |
| ShortVariable              | Avoid variables with short names like s0   | 363     |
| ShortVariable              | Avoid variables with short names like s1   | 365     |
| LocalVariableCouldBeFinal  | Local variable 's1' could be declared final  | 365–366 |
| ShortVariable              | Avoid variables with short names like s2   | 367     |
| LocalVariableCouldBeFinal  | Local variable 's2' could be declared final  | 367–368 |
| ShortVariable              | Avoid variables with short names like s3   | 369     |
| LocalVariableCouldBeFinal  | Local variable 's3' could be declared final  | 369–370 |
| MethodArgumentCouldBeFinal | Parameter 'inBlock' is not assigned and could be declared final                        | 397     |
| MethodArgumentCouldBeFinal | Parameter 'outBlock' is not assigned and could be declared final                       | 397     |
| MethodArgumentCouldBeFinal | Parameter 'inIndex' is not assigned and could be declared final                        | 397     |
| MethodArgumentCouldBeFinal | Parameter 'outIndex' is not assigned and could be declared final                       | 398     |
| MethodArgumentCouldBeFinal | Parameter 'index' is not assigned and could be declared final                          | 455     |
| LocalVariableCouldBeFinal  | Local variable 's0' could be declared final  | 456–457 |
| ShortVariable              | Avoid variables with short names like s0   | 456     |
| LocalVariableCouldBeFinal  | Local variable 's1' could be declared final  | 458–459 |
| ShortVariable              | Avoid variables with short names like s1   | 458     |
| ShortVariable              | Avoid variables with short names like s2   | 460     |
| LocalVariableCouldBeFinal  | Local variable 's2' could be declared final  | 460–461 |
| LocalVariableCouldBeFinal  | Local variable 's3' could be declared final  | 462–463 |
| ShortVariable              | Avoid variables with short names like s3   | 462     |
| MethodArgumentCouldBeFinal | Parameter 'inBlock' is not assigned and could be declared final                        | 490     |
| MethodArgumentCouldBeFinal | Parameter 'outBlock' is not assigned and could be declared final                       | 490     |
| MethodArgumentCouldBeFinal | Parameter 'inIndex' is not assigned and could be declared final                        | 490     |
| MethodArgumentCouldBeFinal | Parameter 'outIndex' is not assigned and could be declared final                       | 491     |
|                            |  |         |

### jpass/crypt/Cbc.java

| Rule                       | Violation  | Line |
|----------------------------|--|------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 53   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 58   |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_buffer'                                  | 63   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 63   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 68   |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_outBuffer'                               | 73   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 73   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 78   |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_outBufferUsed'                           | 78   |

| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 83  |
|----------------------------|--|-----|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 88  |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 90  |
| CommentRequired            | Field comments are required  | 90  |
| ShortVariable              | Avoid variables with short names like iv   | 99  |
| MethodArgumentCouldBeFinal | Parameter 'output' is not assigned and could be declared final                         | 99  |
| MethodArgumentCouldBeFinal | Parameter 'iv' is not assigned and could be declared final                             | 99  |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 99  |
| MethodArgumentCouldBeFinal | Parameter 'inBuffer' is not assigned and could be declared final                       | 118 |
| MethodArgumentCouldBeFinal | Parameter 'outBuffer' is not assigned and could be declared final                      | 118 |
| MethodArgumentCouldBeFinal | Parameter 'inBuffer' is not assigned and could be declared final                       | 131 |
| MethodArgumentCouldBeFinal | Parameter 'data' is not assigned and could be declared final                           | 147 |
| MethodArgumentCouldBeFinal | Parameter 'data' is not assigned and could be declared final                           | 159 |
| MethodArgumentCouldBeFinal | Parameter 'data' is not assigned and could be declared final                           | 173 |
| MethodArgumentCouldBeFinal | Parameter 'length' is not assigned and could be declared final                         | 173 |
| MethodArgumentCouldBeFinal | Parameter 'length' is not assigned and could be declared final                         | 196 |
| MethodArgumentCouldBeFinal | Parameter 'data' is not assigned and could be declared final                           | 196 |
| LocalVariableCouldBeFinal  | Local variable 'pad' could be declared final   | 220 |
| LocalVariableCouldBeFinal  | Local variable 'pad' could be declared final   | 244 |
| LocalVariableCouldBeFinal  | Local variable 'left' could be declared final  | 249 |
|                            |  |     |

### jpass/crypt/DecryptException.java

RuleViolationLineMissingSerialVersionUIDClasses implementing Serializable should set a serialVersionUID40–48

### jpass/crypt/io/CryptInputStream.java

| Rule                       | Violation   | Line    |
|----------------------------|---|---------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 58      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 63      |
| CommentRequired            | Field comments are required   | 65      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 65      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_buffer'   | 71      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 71      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 76      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_bufferUsed'                                     | 76      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 81      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_lastBufferRead'                                 | 87      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.        | 87      |
| MethodArgumentCouldBeFinal | Parameter 'iv' is not assigned and could be declared final                                    | 96      |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                                | 96      |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                                   | 96      |
| ShortVariable              | Avoid variables with short names like iv  | 96      |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor  | 96–100  |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                                | 110     |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                                   | 110     |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor  | 110–123 |
| LocalVariableCouldBeFinal  | Local variable 'iv' could be declared final   | 112     |
| ShortVariable              | Avoid variables with short names like iv  | 112     |
| LocalVariableCouldBeFinal  | Local variable 'cur' could be declared final  | 115     |
| OnlyOneReturn              | A method should have only one exit point, and that should be the last statement in the method | 147     |
| NullAssignment             | Assigning an Object to null is a code smell. Consider refactoring.                            | 151     |

| LocalVariableCouldBeFinal | Local variable 'readed' could be declared final                          | 153 |
|---------------------------|--|-----|
| PreserveStackTrace        | New exception is thrown in catch block, original stack trace may be lost | 160 |
| PreserveStackTrace        | New exception is thrown in catch block, original stack trace may be lost | 160 |

### jpass/crypt/io/CryptOutputStream.java

| Rule                       | Violation  | Line  |
|----------------------------|--|-------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 53    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 58    |
| SingularField              | Perhaps '_buffer' could be replaced by a local variable.                               | 58    |
| SingularField              | Perhaps '_buffer' could be replaced by a local variable.                               | 58    |
| MethodArgumentCouldBeFinal | Parameter 'iv' is not assigned and could be declared final                             | 67    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 67–69 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                         | 67    |
| ShortVariable              | Avoid variables with short names like iv   | 67    |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 67    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 79–87 |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 79    |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                         | 79    |
| LocalVariableCouldBeFinal  | Local variable 'iv' could be declared final  | 81    |
| ShortVariable              | Avoid variables with short names like iv   | 81    |
| LocalVariableCouldBeFinal  | Local variable 'rnd' could be declared final   | 82    |
| ShortVariable              | Avoid variables with short names like b  | 96    |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 96    |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 108   |
| ShortVariable              | Avoid variables with short names like b  | 108   |
|                            |  |       |

### jpass/data/DataModel.java

| Rule                           | Violation   | Line  |
|--------------------------------|---|-------|
| CommentRequired                | Field comments are required   | 45    |
| SuspiciousConstantFieldName    | The field name indicates a constant but its modifiers do not                                  | 45    |
| CommentRequired                | Field comments are required   | 47    |
| CommentRequired                | Field comments are required   | 48    |
| RedundantFieldInitializer      | Avoid using redundant field initializer for 'fileName'  | 48    |
| CommentRequired                | Field comments are required   | 49    |
| RedundantFieldInitializer      | Avoid using redundant field initializer for 'password'  | 49    |
| RedundantFieldInitializer      | Avoid using redundant field initializer for 'modified'  | 50    |
| CommentRequired                | Field comments are required   | 50    |
| AvoidSynchronizedAtMethodLevel | Use block level rather than method level synchronization                                      | 61–66 |
| MethodReturnsInternalArray     | Returning 'password' may expose an internal array.  | 123   |
| MethodArgumentCouldBeFinal     | Parameter 'password' is not assigned and could be declared final                              | 126   |
| ArraylsStoredDirectly          | The user-supplied array 'password' is stored directly.  | 127   |
| NullAssignment                 | Assigning an Object to null is a code smell. Consider refactoring.                            | 135   |
| NullAssignment                 | Assigning an Object to null is a code smell. Consider refactoring.                            | 136   |
| MethodArgumentCouldBeFinal     | Parameter 'title' is not assigned and could be declared final                                 | 157   |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 158   |
| MethodArgumentCouldBeFinal     | Parameter 'title' is not assigned and could be declared final                                 | 167   |
| LocalVariableCouldBeFinal      | Local variable 'entryIndex' could be declared final   | 168   |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 170   |

### jpass/data/DocumentProcessException.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID | 38–43 |
| MethodArgumentCouldBeFinal | Parameter 'message' is not assigned and could be declared final | 40    |
| CommentRequired            | Public method and constructor comments are required             | 40–42 |

# jpass/data/EntriesRepository.java

| Rule                          | Violation  | Line    |
|-------------------------------|--|---------|
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 60      |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 65      |
| AvoidRethrowingException      | A catch statement that catches an exception only to rethrow it should be avoided.                              | 122–124 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 124     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 125     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 125     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 149     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 150     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 150     |

### jpass/ui/CopiablePasswordField.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID     | 40–52 |
| CommentRequired            | Field comments are required   | 42    |
| MethodArgumentCouldBeFinal | Parameter 'copyEnabled' is not assigned and could be declared final | 44    |
| CommentRequired            | Public method and constructor comments are required                 | 44–47 |

### jpass/ui/EntryDetailsTable.java

| Rule                       | Violation  | Line   |
|----------------------------|--|--------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID  | 51–142 |
| CommentRequired            | Field comments are required  | 52–53  |
| CommentRequired            | Enum comments are required   | 55–77  |
| CommentRequired            | Field comments are required  | 62     |
| CommentRequired            | Field comments are required  | 63     |
| UnnecessaryModifier        | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 65–68  |
| UnnecessaryModifier        | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 65–68  |
| UnnecessaryFinalModifier   | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 65–68  |
| MethodArgumentCouldBeFinal | Parameter 'description' is not assigned and could be declared final  | 65     |
| MethodArgumentCouldBeFinal | Parameter 'valueMapper' is not assigned and could be declared final  | 65     |
| MethodArgumentCouldBeFinal | Parameter 'entry' is not assigned and could be declared final  | 74     |
| CommentRequired            | Public method and constructor comments are required  | 74–76  |
| CommentRequired            | Field comments are required  | 79–80  |
| CommentRequired            | Field comments are required  | 82–86  |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.                                 | 88     |
| CommentRequired            | Field comments are required  | 88     |
| CommentRequired            | Field comments are required  | 89     |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.                                 | 89     |
| CommentRequired            | Public method and constructor comments are required  | 91–111 |

| MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final        | 114     |
|----------------------------|--|---------|
| MethodArgumentCouldBeFinal | Parameter 'column' is not assigned and could be declared final     | 114     |
| MethodArgumentCouldBeFinal | Parameter 'renderer' is not assigned and could be declared final   | 119     |
| MethodArgumentCouldBeFinal | Parameter 'column' is not assigned and could be declared final     | 119     |
| MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final        | 119     |
| LocalVariableCouldBeFinal  | Local variable 'component' could be declared final                 | 120     |
| LocalVariableCouldBeFinal  | Local variable 'rendererWidth' could be declared final             | 122     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 122     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 123     |
| LocalVariableCouldBeFinal  | Local variable 'tableColumn' could be declared final               | 123     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 124     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 124     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 124     |
| CommentRequired            | Public method and constructor comments are required                | 129–131 |
| MethodArgumentCouldBeFinal | Parameter 'entry' is not assigned and could be declared final      | 133     |
| CommentRequired            | Public method and constructor comments are required                | 133–137 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 134–136 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 134–136 |
| CommentRequired            | Public method and constructor comments are required                | 139–141 |

# jpass/ui/EntryDialog.java

| Rule                         | Violation  | Line   |
|------------------------------|--|--------|
| StdCyclomaticComplexity      | The class 'EntryDialog' has a Standard Cyclomatic Complexity of 6 (Highest = 11).      | 65–301 |
| ModifiedCyclomaticComplexity | The class 'EntryDialog' has a Modified Cyclomatic Complexity of 6 (Highest = 11).      | 65–301 |
| MissingSerialVersionUID      | Classes implementing Serializable should set a serialVersionUID                        | 65–301 |
| TooManyFields                | Too many fields  | 65–301 |
| CommentRequired              | Field comments are required  | 67     |
| SingularField                | Perhaps 'fieldPanel' could be replaced by a local variable.                            | 69     |
| SingularField                | Perhaps 'fieldPanel' could be replaced by a local variable.                            | 69     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 69     |
| CommentRequired              | Field comments are required  | 69     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 70     |
| SingularField                | Perhaps 'notesPanel' could be replaced by a local variable.                            | 70     |
| CommentRequired              | Field comments are required  | 70     |
| SingularField                | Perhaps 'notesPanel' could be replaced by a local variable.                            | 70     |
| SingularField                | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 71     |
| CommentRequired              | Field comments are required  | 71     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 71     |
| SingularField                | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 71     |
| CommentRequired              | Field comments are required  | 72     |
| SingularField                | Perhaps 'passwordButtonPanel' could be replaced by a local variable.                   | 72     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 72     |
| LongVariable                 | Avoid excessively long variable names like passwordButtonPanel                         | 72     |
| SingularField                | Perhaps 'passwordButtonPanel' could be replaced by a local variable.                   | 72     |
| CommentRequired              | Field comments are required  | 74     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 74     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 75     |
| CommentRequired              | Field comments are required  | 75     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 76     |
| CommentRequired              | Field comments are required  | 76     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 77     |
| CommentRequired              | Field comments are required  | 77     |
| CommentRequired              | Field comments are required  | 78     |

| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 78      |
|------------------------------|---|---------|
| CommentRequired              | Field comments are required   | 79      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 79      |
| CommentRequired              | Field comments are required   | 81      |
| SingularField                | Perhaps 'okButton' could be replaced by a local variable.                                       | 81      |
| SingularField                | Perhaps 'okButton' could be replaced by a local variable.                                       | 81      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 81      |
| CommentRequired              | Field comments are required   | 82      |
| SingularField                | Perhaps 'cancelButton' could be replaced by a local variable.                                   | 82      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 82      |
| SingularField                | Perhaps 'cancelButton' could be replaced by a local variable.                                   | 82      |
| CommentRequired              | Field comments are required   | 83      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 83      |
| SingularField                | Perhaps 'generateButton' could be replaced by a local variable.                                 | 84      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 84      |
| CommentRequired              | Field comments are required   | 84      |
| SingularField                | Perhaps 'generateButton' could be replaced by a local variable.                                 | 84      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 85      |
| SingularField                | Perhaps 'copyButton' could be replaced by a local variable.                                     | 85      |
| SingularField                | Perhaps 'copyButton' could be replaced by a local variable.                                     | 85      |
| CommentRequired              | Field comments are required   | 85      |
| CommentRequired              | Field comments are required   | 87      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 87      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 89      |
| CommentRequired              | Field comments are required   | 89      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 91      |
| CommentRequired              | Field comments are required   | 91      |
| CommentRequired              | Field comments are required   | 93      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.          | 93      |
| MethodArgumentCouldBeFinal   | Parameter 'title' is not assigned and could be declared final                                   | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'parent' is not assigned and could be declared final                                  | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'newEntry' is not assigned and could be declared final                                | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'entry' is not assigned and could be declared final                                   | 103     |
| NessCount                    | The constructor 'EntryDialog(JPassFrame, String, Entry, boolean)' has a NCSS line count of 69.  | 103–191 |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                              | 108     |
| CyclomaticComplexity         | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                    | 194–225 |
| StdCyclomaticComplexity      | The method 'actionPerformed' has a Standard Cyclomatic Complexity of 11.                        | 194–225 |
| ShortVariable                | Avoid variables with short names like e   | 194     |
| MethodArgumentCouldBeFinal   | Parameter 'e' is not assigned and could be declared final                                       | 194     |
| ModifiedCyclomaticComplexity | The method 'actionPerformed' has a Modified Cyclomatic Complexity of 11.                        | 194–225 |
| CyclomaticComplexity         | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                    | 194–225 |
| LocalVariableCouldBeFinal    | Local variable 'command' could be declared final  | 195     |
| InefficientEmptyStringCheck  | String.trim().length() == 0 / String.trim().isEmpty() is an inefficient way to validate a blank | 200     |
| memorentemptyStringCheck     | String.   | 200     |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method   | 202     |
| ConfusingTernary             | Avoid if (x != y); else;  | 203–209 |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method   | 205     |
| LocalVariableCouldBeFinal    | Local variable 'gpd' could be declared final  | 215     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                      | 216–221 |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                      | 216–221 |
| MethodArgumentCouldBeFinal   | Parameter 'entry' is not assigned and could be declared final                                   | 232     |
|                              |   |         |

| NPathComplexity           | The method 'fillDialogFromEntry(Entry)' has an NPath complexity of 256, current threshold is 200 | 232–244 |
|---------------------------|--|---------|
| CyclomaticComplexity      | The method 'getEntryFromDialog()' has a cyclomatic complexity of 11.                             | 251–267 |
| NPathComplexity           | The method 'getEntryFromDialog()' has an NPath complexity of 243, current threshold is 200       | 251–267 |
| CyclomaticComplexity      | The method 'getEntryFromDialog()' has a cyclomatic complexity of 11.                             | 251–267 |
| LocalVariableCouldBeFinal | Local variable 'entry' could be declared final   | 252     |
| LocalVariableCouldBeFinal | Local variable 'title' could be declared final   | 254     |
| LocalVariableCouldBeFinal | Local variable 'user' could be declared final  | 255     |
| LocalVariableCouldBeFinal | Local variable 'password' could be declared final  | 256     |
| LocalVariableCouldBeFinal | Local variable 'url' could be declared final   | 257     |
| LocalVariableCouldBeFinal | Local variable 'notes' could be declared final   | 258     |
| NullAssignment            | Assigning an Object to null is a code smell. Consider refactoring.                               | 260     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 260     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 261     |
| NullAssignment            | Assigning an Object to null is a code smell. Consider refactoring.                               | 261     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 262     |
| NullAssignment            | Assigning an Object to null is a code smell. Consider refactoring.                               | 262     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 263     |
| NullAssignment            | Assigning an Object to null is a code smell. Consider refactoring.                               | 263     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 264     |
| NullAssignment            | Assigning an Object to null is a code smell. Consider refactoring.                               | 264     |
| LocalVariableCouldBeFinal | Local variable 'parent' could be declared final  | 286     |
| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally)                               | 291     |
| LawOfDemeter              | Potential violation of Law of Demeter (method chain calls)                                       | 292     |
| LawOfDemeter              | Potential violation of Law of Demeter (method chain calls)                                       | 292     |
| LocalVariableCouldBeFinal | Local variable 'entry' could be declared final   | 292     |
|                           |  |         |

# jpass/ui/GeneratePasswordDialog.java

| Rule                         | Violation  | Line   |
|------------------------------|--|--------|
| MissingSerialVersionUID      | Classes implementing Serializable should set a serialVersionUID                              | 63–258 |
| StdCyclomaticComplexity      | The class 'GeneratePasswordDialog' has a Standard Cyclomatic Complexity of 4 (Highest = 11). | 63–258 |
| ModifiedCyclomaticComplexity | The class 'GeneratePasswordDialog' has a Modified Cyclomatic Complexity of 4 (Highest = 11). | 63–258 |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 79     |
| CommentRequired              | Field comments are required  | 79     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 80     |
| CommentRequired              | Field comments are required  | 80     |
| LongVariable                 | Avoid excessively long variable names like customSymbolsCheck                                | 80     |
| LongVariable                 | Avoid excessively long variable names like customSymbolsField                                | 82     |
| CommentRequired              | Field comments are required  | 82     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 82     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 83     |
| CommentRequired              | Field comments are required  | 83     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 85     |
| SingularField                | Perhaps 'lengthLabel' could be replaced by a local variable.                                 | 85     |
| CommentRequired              | Field comments are required  | 85     |
| SingularField                | Perhaps 'lengthLabel' could be replaced by a local variable.                                 | 85     |
| CommentRequired              | Field comments are required  | 86     |
|                              |  |        |

| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 86      |
|----------------------------------|--|---------|
| SingularField                    | Perhaps 'lengthPanel' could be replaced by a local variable.                           | 88      |
| SingularField                    | Perhaps 'lengthPanel' could be replaced by a local variable.                           | 88      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 88      |
| CommentRequired                  | Field comments are required  | 88      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 89      |
| SingularField                    | Perhaps 'charactersPanel' could be replaced by a local variable.                       | 89      |
| CommentRequired                  | Field comments are required  | 89      |
| SingularField                    | Perhaps 'charactersPanel' could be replaced by a local variable.                       | 89      |
| SingularField                    | Perhaps 'passwordPanel' could be replaced by a local variable.                         | 90      |
| CommentRequired                  | Field comments are required  | 90      |
| SingularField                    | Perhaps 'passwordPanel' could be replaced by a local variable.                         | 90      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 90      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 91      |
| CommentRequired                  | Field comments are required  | 91      |
| SingularField                    | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 91      |
| SingularField                    | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 91      |
| CommentRequired                  | Field comments are required  | 93      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 93      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 94      |
| CommentRequired                  | Field comments are required  | 94      |
| SingularField                    | Perhaps 'generateButton' could be replaced by a local variable.                        | 95      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 95      |
| SingularField                    | Perhaps 'generateButton' could be replaced by a local variable.                        | 95      |
| CommentRequired                  | Field comments are required  | 95      |
| CommentRequired                  | Field comments are required  | 97      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 97      |
| CommentRequired                  | Field comments are required  | 99      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors. | 99      |
| MethodArgumentCouldBeFinal       | Parameter 'parent' is not assigned and could be declared final                         | 106     |
| MethodArgumentCouldBeFinal       | Parameter 'parent' is not assigned and could be declared final                         | 116     |
| NcssCount                        | The method 'initDialog(Component, boolean)' has a NCSS line count of 64.               | 129–210 |
| NullAssignment                   | Assigning an Object to null is a code smell. Consider refactoring.                     | 133     |
| LongVariable                     | Avoid excessively long variable names like passwordGenerationLength                    | 139     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)                             | 139     |
| AvoidLiteralsInIfCondition       | Avoid using Literals in Conditional Statements   | 140     |
| AvoidLiteralsInIfCondition       | Avoid using Literals in Conditional Statements   | 143     |
| AvoidInstantiatingObjectsInLoops | Avoid instantiating new objects inside loops   | 155     |
| LongVariable                     | Avoid excessively long variable names like generateButtonPanel                         | 178     |
| LocalVariableCouldBeFinal        | Local variable 'generateButtonPanel' could be declared final                           | 178     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)                             | 201     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)                             | 202     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)                             | 203     |
| CyclomaticComplexity             | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.           | 216–253 |
| StdCyclomaticComplexity          | The method 'actionPerformed' has a Standard Cyclomatic Complexity of 11.               | 216–253 |
| CyclomaticComplexity             | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.           | 216–253 |
| MethodArgumentCouldBeFinal       | Parameter 'e' is not assigned and could be declared final                              | 216     |

| ShortVariable                   | Avoid variables with short names like e  | 216     |
|---------------------------------|--|---------|
| ModifiedCyclomaticComplexity    | The method 'actionPerformed' has a Modified Cyclomatic Complexity of 11.                                 | 216–253 |
| LocalVariableCouldBeFinal       | Local variable 'command' could be declared final   | 217     |
| UseStringBufferForStringAppends | Prefer StringBuilder (non-synchronized) or StringBuffer (synchronized) over += for concatenating strings | 224     |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)                                       | 232     |
| OnlyOneReturn                   | A method should have only one exit point, and that should be the last statement in the method            | 234     |
| LocalVariableCouldBeFinal       | Local variable 'generated' could be declared final   | 237     |
| LocalVariableCouldBeFinal       | Local variable 'passwordLength' could be declared final  | 238     |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)                                       | 240     |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)                                       | 240     |

# jpass/ui/JPassFrame.java

| Rule                        | Violation  | Line   |
|-----------------------------|--|--------|
| TooManyStaticImports        | Too many static imports may lead to messy code   | 29–351 |
| ExcessiveImports            | A high number of imports can indicate a high degree of coupling within an object.      | 29–351 |
| MissingSerialVersionUID     | Classes implementing Serializable should set a serialVersionUID                        | 71–351 |
| CommentRequired             | Field comments are required  | 73     |
| CommentRequired             | Field comments are required  | 75     |
| SuspiciousConstantFieldName | The field name indicates a constant but its modifiers do not                           | 75     |
| CommentRequired             | Field comments are required  | 77     |
| CommentRequired             | Field comments are required  | 78     |
| CommentRequired             | Field comments are required  | 80     |
| SingularField               | Perhaps 'topContainerPanel' could be replaced by a local variable.                     | 81     |
| CommentRequired             | Field comments are required  | 81     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 81     |
| SingularField               | Perhaps 'topContainerPanel' could be replaced by a local variable.                     | 81     |
| SingularField               | Perhaps 'jpassMenuBar' could be replaced by a local variable.                          | 82     |
| CommentRequired             | Field comments are required  | 82     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 82     |
| SingularField               | Perhaps 'jpassMenuBar' could be replaced by a local variable.                          | 82     |
| CommentRequired             | Field comments are required  | 83     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 84     |
| SingularField               | Perhaps 'fileMenu' could be replaced by a local variable.                              | 84     |
| CommentRequired             | Field comments are required  | 84     |
| SingularField               | Perhaps 'fileMenu' could be replaced by a local variable.                              | 84     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 85     |
| CommentRequired             | Field comments are required  | 85     |
| SingularField               | Perhaps 'editMenu' could be replaced by a local variable.                              | 85     |
| SingularField               | Perhaps 'editMenu' could be replaced by a local variable.                              | 85     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 86     |
| CommentRequired             | Field comments are required  | 86     |
| SingularField               | Perhaps 'toolsMenu' could be replaced by a local variable.                             | 86     |
| SingularField               | Perhaps 'toolsMenu' could be replaced by a local variable.                             | 86     |
| SingularField               | Perhaps 'helpMenu' could be replaced by a local variable.                              | 87     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors. | 87     |
| SingularField               | Perhaps 'helpMenu' could be replaced by a local variable.                              | 87     |
| CommentRequired             | Field comments are required  | 87     |

| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide                                    | 88      |
|--------------------------------|--|---------|
| SingularField                  | accessors.  Perhaps 'toolBar' could be replaced by a local variable.   | 88      |
| SingularField                  | Perhaps 'toolBar' could be replaced by a local variable.   | 88      |
| CommentRequired                | Field comments are required  | 88      |
| SingularField                  | Perhaps 'scrollPane' could be replaced by a local variable.  | 89      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 89      |
| CommentRequired                | Field comments are required  | 89      |
| SingularField                  | Perhaps 'scrollPane' could be replaced by a local variable.  | 89      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 91      |
| CommentRequired                | Field comments are required  | 91      |
| CommentRequired                | Field comments are required  | 92      |
| CommentRequired                | Field comments are required  | 93      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 93      |
| RedundantFieldInitializer      | Avoid using redundant field initializer for 'processing'   | 94      |
| CommentRequired                | Field comments are required  | 94      |
| NcssCount                      | The constructor 'JPassFrame(String)' has a NCSS line count of 93.  | 96–211  |
| MethodArgumentCouldBeFinal     | Parameter 'fileName' is not assigned and could be declared final   | 96      |
| ExcessiveMethodLength          | Avoid really long methods.   | 96–211  |
| CallSuperInConstructor         | It is a good practice to call super() in a constructor   | 96–211  |
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 99      |
| CommentRequired                | Public method and constructor comments are required  | 213–215 |
| MethodArgumentCouldBeFinal     | Parameter 'fileName' is not assigned and could be declared final   | 217     |
| AvoidSynchronizedAtMethodLevel | Use block level rather than method level synchronization   | 217–222 |
| CommentRequired                | Public method and constructor comments are required  | 217–222 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 254     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 255     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 255     |
| MethodArgumentCouldBeFinal     | Parameter 'selectTitle' is not assigned and could be declared final  | 264     |
| LocalVariableCouldBeFinal      | Local variable 'entries' could be declared final   | 266     |
| LocalVariableCouldBeFinal      | Local variable 'searchCriteria' could be declared final  | 268     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 269–271 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 269–271 |
| UseLocaleWithCaseConversions   | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 270     |
| UseLocaleWithCaseConversions   | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 270     |
| UseLocaleWithCaseConversions   | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 270     |
| UseLocaleWithCaseConversions   | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 270     |
| LocalVariableCouldBeFinal      | Local variable 'index' could be declared final   | 274     |
| LawOfDemeter                   | Potential violation of Law of Demeter (object not created locally)   | 278     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 297     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                  | 301     |
| LocalVariableCouldBeFinal      | Local variable 'option' could be declared final  | 304     |
| DoNotCallSystemExit            | System.exit() should not be used in J2EE/JEE apps  | 306     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                  | 307     |
| DoNotCallSystemExit            | System.exit() should not be used in J2EE/JEE apps  | 312     |
| MethodArgumentCouldBeFinal     | Parameter 'processing' is not assigned and could be declared final   | 324     |
| LocalVariableCouldBeFinal      | Local variable 'actionType' could be declared final  | 326     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)   | 327     |

jpass/ui/MessageDialog.java

| Rule                          | Violation  | Line    |
|-------------------------------|--|---------|
| ExcessiveImports              | A high number of imports can indicate a high degree of coupling within an object.                              | 29–350  |
| TooManyMethods                | This class has too many methods, consider refactoring it.  | 72–350  |
| MissingSerialVersionUID       | Classes implementing Serializable should set a serialVersionUID  | 72–350  |
| CommentRequired               | Field comments are required  | 74      |
| CommentRequired               | Field comments are required  | 76      |
| CommentRequired               | Field comments are required  | 77      |
| LongVariable                  | Avoid excessively long variable names like YES_NO_CANCEL_OPTION  | 78      |
| CommentRequired               | Field comments are required  | 78      |
| CommentRequired               | Field comments are required  | 79      |
| CommentRequired               | Field comments are required  | 81      |
| CommentRequired               | Field comments are required  | 82      |
| CommentRequired               | Field comments are required  | 83      |
| CommentRequired               | Field comments are required  | 84      |
| CommentRequired               | Field comments are required  | 85      |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 87      |
| CommentRequired               | Field comments are required  | 87      |
| MethodArgumentCouldBeFinal    | Parameter 'optionType' is not assigned and could be declared final   | 89      |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 89      |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 94      |
| MethodArgumentCouldBeFinal    | Parameter 'optionType' is not assigned and could be declared final   | 94      |
| MethodArgumentCouldBeFinal    | Parameter 'optionType' is not assigned and could be declared final   | 99      |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 99      |
| LocalVariableCouldBeFinal     | Local variable 'buttonPanel' could be declared final   | 105     |
| AvoidDuplicateLiterals        | The String literal "accept" appears 4 times in this file; the first occurrence is on line 109                  | 109     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 129     |
| LocalVariableCouldBeFinal     | Local variable 'mainPanel' could be declared final   | 131     |
| LocalVariableCouldBeFinal     | Local variable 'messagePanel' could be declared final  | 134     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 144–145 |
| LocalVariableCouldBeFinal     | Local variable 'image' could be declared final   | 150     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 157     |
| MethodArgumentCouldBeFinal    | Parameter 'option' is not assigned and could be declared final   | 165     |
| MethodArgumentCouldBeFinal    | Parameter 'name' is not assigned and could be declared final   | 165     |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 165     |
| LocalVariableCouldBeFinal     | Local variable 'button' could be declared final  | 166     |
| MethodArgumentCouldBeFinal    | Parameter 'event' is not assigned and could be declared final  | 178     |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 183     |
| MethodArgumentCouldBeFinal    | Parameter 'icon' is not assigned and could be declared final   | 187     |
| MethodArgumentCouldBeFinal    | Parameter 'optionType' is not assigned and could be declared final   | 187     |
| LocalVariableCouldBeFinal     | Local variable 'panel' could be declared final   | 251     |
| LocalVariableCouldBeFinal     | Local variable 'option' could be declared final  | 266     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 268     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                  | 276     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 283     |
| MethodArgumentCouldBeFinal    | Parameter 'name' is not assigned and could be declared final   | 298     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                  | 300     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 301     |
| MethodArgumentCouldBeFinal    | Parameter 'name' is not assigned and could be declared final   | 309     |
| LocalVariableCouldBeFinal     | Local variable 'builder' could be declared final   | 310     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 313     |

| LocalVariableCouldBeFinal     | Local variable 'is' could be declared final   | 313 |
|-------------------------------|---|-----|
| UseProperClassLoader          | In J2EE, getClassLoader() might not work as expected. Use Thread.currentThread().getContextClassLoader() instead. | 313 |
| ShortVariable                 | Avoid variables with short names like is  | 313 |
| CloseResource                 | Ensure that resources like this InputStream object are closed after use   | 313 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 313 |
| CloseResource                 | Ensure that resources like this InputStream object are closed after use   | 313 |
| AssignmentInOperand           | Avoid assignments in operands   | 316 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block    | 319 |
| LocalVariableCouldBeFinal     | Local variable 'area' could be declared final   | 341 |
| LocalVariableCouldBeFinal     | Local variable 'scrollPane' could be declared final   | 346 |
|                               |   |     |

# jpass/ui/SearchPanel.java

| Rule                       | Violation  | Line    |
|----------------------------|--|---------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID                        | 56–158  |
| CommentRequired            | Field comments are required  | 58      |
| LongVariable               | Avoid excessively long variable names like CLOSE_BUTTON_ACTION_COMMAND                 | 58      |
| CommentRequired            | Field comments are required  | 59      |
| LongVariable               | Avoid excessively long variable names like SEARCH_PANEL_CLOSE_ACTION                   | 59      |
| CommentRequired            | Field comments are required  | 61      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 61      |
| CommentRequired            | Field comments are required  | 62      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 62      |
| CommentRequired            | Field comments are required  | 63      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 63      |
| MethodArgumentCouldBeFinal | Parameter 'searchCallback' is not assigned and could be declared final                 | 70      |
| ShortVariable              | Avoid variables with short names like e  | 81      |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 81      |
| ShortVariable              | Avoid variables with short names like e  | 86      |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 86      |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 91      |
| ShortVariable              | Avoid variables with short names like e  | 91      |
| LocalVariableCouldBeFinal  | Local variable 'closeAction' could be declared final                                   | 103-108 |
| ShortVariable              | Avoid variables with short names like e  | 105     |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 105     |
| MethodArgumentCouldBeFinal | Parameter 'visible' is not assigned and could be declared final                        | 120     |
| MethodArgumentCouldBeFinal | Parameter 'enabled' is not assigned and could be declared final                        | 130     |
| ShortVariable              | Avoid variables with short names like e  | 138     |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 138     |
| LocalVariableCouldBeFinal  | Local variable 'command' could be declared final                                       | 139     |
|                            |  |         |

### jpass/ui/StatusPanel.java

| Rule                       | Violation  | Line  |
|----------------------------|--|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID                        | 44–72 |
| CommentRequired            | Field comments are required  | 46    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 46    |
| CommentRequired            | Field comments are required  | 47    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 47    |
| CommentRequired            | Public method and constructor comments are required                                    | 49–57 |
| CommentRequired            | Public method and constructor comments are required                                    | 59–61 |
| CommentRequired            | Public method and constructor comments are required                                    | 63-65 |

CommentRequired Public method and constructor comments are required 67–71

MethodArgumentCouldBeFinal Parameter 'processing' is not assigned and could be declared final 67

### jpass/ui/SvgImageIcon.java

| Rule                           | Violation   | Line   |
|--------------------------------|---|--------|
| MissingSerialVersionUID        | Classes implementing Serializable should set a serialVersionUID   | 45–172 |
| CommentRequired                | Field comments are required   | 46     |
| CommentRequired                | Field comments are required   | 49     |
| CommentRequired                | Field comments are required   | 51     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 51     |
| CommentRequired                | Field comments are required   | 52     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 52     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 53     |
| CommentRequired                | Field comments are required   | 53     |
| MethodArgumentCouldBeFinal     | Parameter 'name' is not assigned and could be declared final  | 55     |
| CallSuperInConstructor         | It is a good practice to call super() in a constructor  | 55–57  |
| CommentRequired                | Public method and constructor comments are required   | 55–57  |
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block | 72     |
| MethodArgumentCouldBeFinal     | Parameter 'dark' is not assigned and could be declared final  | 77     |
| LocalVariableCouldBeFinal      | Local variable 'dotIndex' could be declared final   | 79     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 82     |
| UseProperClassLoader           | In J2EE, getClassLoader() might not work as expected. Use Thread.currentThread().getContextClassLoader() instead. | 82     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 82     |
| MethodArgumentCouldBeFinal     | Parameter 'y' is not assigned and could be declared final   | 98     |
| ShortVariable                  | Avoid variables with short names like c   | 98     |
| MethodArgumentCouldBeFinal     | Parameter 'x' is not assigned and could be declared final   | 98     |
| MethodArgumentCouldBeFinal     | Parameter 'c' is not assigned and could be declared final   | 98     |
| ShortVariable                  | Avoid variables with short names like g   | 98     |
| ShortVariable                  | Avoid variables with short names like x   | 98     |
| MethodArgumentCouldBeFinal     | Parameter 'g' is not assigned and could be declared final   | 98     |
| ShortVariable                  | Avoid variables with short names like y   | 98     |
| AvoidSynchronizedAtMethodLevel | Use block level rather than method level synchronization  | 98–115 |
| LocalVariableCouldBeFinal      | Local variable 'clipBounds' could be declared final   | 101    |
| LocalVariableCouldBeFinal      | Local variable 'g2' could be declared final   | 106    |
| ShortVariable                  | Avoid variables with short names like g2  | 106    |
| ShortVariable                  | Avoid variables with short names like g   | 117    |
| MethodArgumentCouldBeFinal     | Parameter 'x' is not assigned and could be declared final   | 117    |
| MethodArgumentCouldBeFinal     | Parameter 'y' is not assigned and could be declared final   | 117    |
| ShortVariable                  | Avoid variables with short names like x   | 117    |
| MethodArgumentCouldBeFinal     | Parameter 'g' is not assigned and could be declared final   | 117    |
| ShortVariable                  | Avoid variables with short names like y   | 117    |
| ShortVariable                  | Avoid variables with short names like x   | 139    |
| ShortVariable                  | Avoid variables with short names like g   | 139    |
| MethodArgumentCouldBeFinal     | Parameter 'g' is not assigned and could be declared final   | 139    |
| ShortVariable                  | Avoid variables with short names like y   | 139    |
| MethodArgumentCouldBeFinal     | Parameter 'y' is not assigned and could be declared final   | 139    |
| MethodArgumentCouldBeFinal     | Parameter 'x' is not assigned and could be declared final   | 139    |
| LocalVariableCouldBeFinal      | Local variable 'image' could be declared final  | 148    |
| LocalVariableCouldBeFinal      | Local variable 'g' could be declared final  | 149    |
|                                |   |        |

| ShortVariable                           | Avoid variables with short names like g   | 149 |
|---|---|-----|
| FieldDeclarationsShouldBeAtStartOfClass | Fields should be declared at the top of the class, before any method declarations, constructors, initializers or inner classes. | 158 |
| CommentRequired                         | Field comments are required   | 158 |
| LocalVariableCouldBeFinal               | Local variable 'lookAndFeel' could be declared final  | 169 |

### jpass/ui/TextComponentFactory.java

| Rule                       | Violation   | Line |
|----------------------------|---|------|
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 65   |
| LocalVariableCouldBeFinal  | Local variable 'textField' could be declared final                  | 66   |
| MethodArgumentCouldBeFinal | Parameter 'copyEnabled' is not assigned and could be declared final | 87   |
| LocalVariableCouldBeFinal  | Local variable 'passwordField' could be declared final              | 88   |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 109  |
| LocalVariableCouldBeFinal  | Local variable 'textArea' could be declared final                   | 110  |
|                            |   |      |

### jpass/ui/action/AbstractMenuAction.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID     | 41–57 |
| MethodArgumentCouldBeFinal | Parameter 'accelerator' is not assigned and could be declared final | 50    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 50    |
| MethodArgumentCouldBeFinal | Parameter 'icon' is not assigned and could be declared final        | 50    |

### jpass/ui/action/CloseListener.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| AtLeastOneConstructor      | Each class should declare at least one constructor            | 42–55 |
| MethodArgumentCouldBeFinal | Parameter 'event' is not assigned and could be declared final | 50    |

### jpass/ui/action/MenuActionType.java

| Rule                       | Violation  | Line   |
|----------------------------|--|--------|
| TooManyStaticImports       | Too many static imports may lead to messy code             | 29–244 |
| ShortVariable              | Avoid variables with short names like ev                   | 65     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 65     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 71     |
| ShortVariable              | Avoid variables with short names like ev                   | 71     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 77     |
| ShortVariable              | Avoid variables with short names like ev                   | 77     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 83     |
| ShortVariable              | Avoid variables with short names like ev                   | 83     |
| ShortVariable              | Avoid variables with short names like ev                   | 89     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 89     |
| ShortVariable              | Avoid variables with short names like ev                   | 95     |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 95     |
| ShortVariable              | Avoid variables with short names like ev                   | 101    |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 101    |
| LocalVariableCouldBeFinal  | Local variable 'parent' could be declared final            | 102    |
| LocalVariableCouldBeFinal  | Local variable 'password' could be declared final          | 103    |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls) | 107    |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls) | 108    |
| MethodArgumentCouldBeFinal | Parameter 'ev' is not assigned and could be declared final | 117    |

| ShortVariable  | Avoid variables with short names like ev   | 117 |
|--|--|-----|
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 123 |
| ShortVariable  | Avoid variables with short names like ev   | 123 |
| LawOfDemeter   | Potential violation of Law of Demeter (method chain calls)   | 124 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 129 |
| ShortVariable  | Avoid variables with short names like ev   | 129 |
| ShortVariable  | Avoid variables with short names like sb   | 130 |
| LocalVariableCouldBeFinal                            | Local variable 'sb' could be declared final  | 130 |
| InsufficientStringBufferDeclaration                  | StringBuilder has been initialized with size 16, but has at least 77 characters appended.  | 130 |
| ConsecutiveAppendsShouldReuse                        | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 131 |
| InefficientStringBuffering                           | Avoid concatenating nonliterals in a StringBuffer/StringBuilder constructor or append().   | 131 |
| ConsecutiveLiteralAppends                            | StringBuffer (or StringBuilder).append is called 5 consecutive times with literals. Use a single append with a single combined String. | 131 |
| InefficientStringBuffering                           | Avoid concatenating nonliterals in a StringBuffer/StringBuilder constructor or append().   | 132 |
| ConsecutiveAppendsShouldReuse                        | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 132 |
| ConsecutiveAppendsShouldReuse                        | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 133 |
| ConsecutiveAppendsShouldReuse                        | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 134 |
| AppendCharacterWithChar                              | Avoid appending characters as strings in StringBuffer.append.  | 134 |
| AppendCharacterWithChar                              | Avoid appending characters as strings in StringBuffer.append.  | 135 |
| ConsecutiveAppendsShouldReuse                        | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 135 |
| LawOfDemeter   | Potential violation of Law of Demeter (method chain calls)   | 135 |
| LawOfDemeter   | Potential violation of Law of Demeter (method chain calls)   | 136 |
| ShortVariable  | Avoid variables with short names like ev   | 142 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 142 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 148 |
| ShortVariable  | Avoid variables with short names like ev   | 148 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 154 |
| ShortVariable  | Avoid variables with short names like ev   | 154 |
| ShortVariable  | Avoid variables with short names like ev   | 160 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 160 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 166 |
| ShortVariable  | Avoid variables with short names like ev   | 166 |
| ShortVariable  | Avoid variables with short names like ev   | 172 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 172 |
| LocalVariableCouldBeFinal                            | Local variable 'parent' could be declared final  | 173 |
| LocalVariableCouldBeFinal                            | Local variable 'entry' could be declared final   | 174 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 182 |
| Short/Variable                                       | Avoid variables with short names like ev   | 182 |
| LocalVariableCouldBeFinal                            | Local variable 'parent' could be declared final  | 183 |
| LocalVariableCouldBeFinal                            | Local variable 'entry' could be declared final   | 184 |
| ShortVariable  | Avoid variables with short names like ev   | 192 |
|  |  | 192 |
| MethodArgumentCouldBeFinal LocalVariableCouldBeFinal | Parameter 'ev' is not assigned and could be declared final  Local variable 'parent' could be declared final                            | 192 |
| Local Variable Could Be Final                        |  |     |
|  | Local variable 'entry' could be declared final   | 194 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 202 |
| ShortVariable  | Avoid variables with short names like ev   | 202 |
| ShortVariable  | Avoid variables with short names like ev   | 208 |
| MethodArgumentCouldBeFinal                           | Parameter 'ev' is not assigned and could be declared final   | 208 |

| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)  | 209     |
|------------------------------|---|---------|
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)  | 209     |
| CommentRequired              | Field comments are required   | 213     |
| CommentRequired              | Field comments are required   | 214     |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly private | 216–219 |
| MethodArgumentCouldBeFinal   | Parameter 'action' is not assigned and could be declared final  | 216     |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly private | 216–219 |
| UnnecessaryFinalModifier     | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly private | 216–219 |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 217     |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 217     |
| CommentRequired              | Public method and constructor comments are required   | 229–231 |
| MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final   | 233     |
| CommentRequired              | Public method and constructor comments are required   | 233–243 |
| LocalVariableCouldBeFinal    | Local variable 'actionMap' could be declared final  | 234     |
| LocalVariableCouldBeFinal    | Local variable 'inputMap' could be declared final   | 235     |
| LocalVariableCouldBeFinal    | Local variable 'type' could be declared final   | 236     |
| LocalVariableCouldBeFinal    | Local variable 'acc' could be declared final  | 238     |
|                              |   |         |

### jpass/ui/action/TableListener.java

| Rule                       | Violation  | Line    |
|----------------------------|--|---------|
| AtLeastOneConstructor      | Each class should declare at least one constructor                 | 47–109  |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 56      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 57      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 72      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 83      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 92      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 93      |
| LocalVariableCouldBeFinal  | Local variable 'table' could be declared final                     | 97      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 97      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 98      |
| LocalVariableCouldBeFinal  | Local variable 'point' could be declared final                     | 99      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 100     |
| LocalVariableCouldBeFinal  | Local variable 'rowAtPoint' could be declared final                | 100     |
| AvoidDeeplyNestedIfStmts   | Deeply nested ifthen statements are hard to read                   | 101–103 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 102     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 105     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 105     |
|                            |  |         |

### jpass/ui/action/TextComponentAction.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| AbstractNaming             | Abstract classes should be named AbstractXXX                        | 35–46 |
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID     | 35–46 |
| CommentRequired            | Class comments are required   | 35–46 |
| MethodArgumentCouldBeFinal | Parameter 'accelerator' is not assigned and could be declared final | 37    |
| CommentRequired            | Public method and constructor comments are required                 | 37–43 |
| MethodArgumentCouldBeFinal | Parameter 'mnemonic' is not assigned and could be declared final    | 37    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 37    |
| CommentRequired            | Public method and constructor comments are required                 | 45    |
|                            |   |       |

# jpass/ui/action/TextComponentActionType.java

| Rule                          | Violation  | Line    |
|-------------------------------|--|---------|
| ShortVariable                 | Avoid variables with short names like e  | 57      |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 57      |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 58      |
| EmptyCatchBlock               | Avoid empty catch blocks   | 62-64   |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 62      |
| EmptyCatchBlock               | Avoid empty catch blocks   | 62–64   |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 70      |
| ShortVariable                 | Avoid variables with short names like e  | 81      |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 81      |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 82      |
| EmptyCatchBlock               | Avoid empty catch blocks   | 86–88   |
| EmptyCatchBlock               | Avoid empty catch blocks   | 86–88   |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 86      |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 93      |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 103     |
| ShortVariable                 | Avoid variables with short names like e  | 103     |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 104     |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 111     |
| CyclomaticComplexity          | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 12.                                   | 118–144 |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 118     |
| ShortVariable                 | Avoid variables with short names like e  | 118     |
| CyclomaticComplexity          | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 12.                                   | 118–144 |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 119     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 120     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 120     |
| LocalVariableCouldBeFinal     | Local variable 'doc' could be declared final   | 122     |
| LocalVariableCouldBeFinal     | Local variable 'caret' could be declared final   | 123     |
| LocalVariableCouldBeFinal     | Local variable 'dot' could be declared final   | 124     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 124     |
| LocalVariableCouldBeFinal     | Local variable 'mark' could be declared final  | 125     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 125     |
| ConfusingTernary              | Avoid if (x != y); else;   | 126-139 |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 127     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 128     |
| AvoidDeeplyNestedIfStmts      | Deeply nested ifthen statements are hard to read   | 130–137 |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 130     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 131     |
| LocalVariableCouldBeFinal     | Local variable 'dotChars' could be declared final  | 131     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 132     |
| ShortVariable                 | Avoid variables with short names like c0   | 132     |
| LocalVariableCouldBeFinal     | Local variable 'c0' could be declared final  | 132     |
| LocalVariableCouldBeFinal     | Local variable 'c1' could be declared final  | 133     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 133     |
| ShortVariable                 | Avoid variables with short names like c1   | 133     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)   | 138     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 140     |
| EmptyCatchBlock               | Avoid empty catch blocks   | 140–142 |
| EmptyCatchBlock               | Avoid empty catch blocks   | 140–142 |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 147     |

| ShortVariable                | Avoid variables with short names like e  | 154     |
|------------------------------|--|---------|
| MethodArgumentCouldBeFinal   | Parameter 'e' is not assigned and could be declared final  | 154     |
| LocalVariableCouldBeFinal    | Local variable 'component' could be declared final   | 155     |
| MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final  | 163     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)   | 171     |
| MethodArgumentCouldBeFinal   | Parameter 'e' is not assigned and could be declared final  | 178     |
| ShortVariable                | Avoid variables with short names like e  | 178     |
| LocalVariableCouldBeFinal    | Local variable 'component' could be declared final   | 179     |
| MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final  | 186     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)   | 193     |
| CommentRequired              | Field comments are required  | 199     |
| CommentRequired              | Field comments are required  | 200     |
| MethodArgumentCouldBeFinal   | Parameter 'action' is not assigned and could be declared final   | 202     |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are implicitly<br>private | 202–205 |
| UnnecessaryFinalModifier     | Unnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are implicitly<br>private | 202–205 |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are implicitly<br>private | 202–205 |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 203     |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 203     |
| CommentRequired              | Public method and constructor comments are required  | 215–217 |
| CommentRequired              | Public method and constructor comments are required  | 219–229 |
| MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final  | 219     |
| LocalVariableCouldBeFinal    | Local variable 'actionMap' could be declared final   | 220     |
| LocalVariableCouldBeFinal    | Local variable 'inputMap' could be declared final  | 221     |
| LocalVariableCouldBeFinal    | Local variable 'type' could be declared final  | 222     |
| LocalVariableCouldBeFinal    | Local variable 'acc' could be declared final   | 224     |
|                              |  |         |

### jpass/ui/action/TextComponentPopupListener.java

| Rule                       | Violation  | Line  |
|----------------------------|--|-------|
| TooManyStaticImports       | Too many static imports may lead to messy code   | 29–98 |
| CommentRequired            | Field comments are required  | 58    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 58    |
| CommentRequired            | Field comments are required  | 59    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 59    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 61–77 |
| CommentRequired            | Public method and constructor comments are required                                    | 61–77 |
| ShortVariable              | Avoid variables with short names like e  | 79    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 79    |
| LocalVariableCouldBeFinal  | Local variable 'textComponent' could be declared final                                 | 81    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 82    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 82    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 82    |
| ShortVariable              | Avoid variables with short names like e  | 90    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 90    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 95    |
| ShortVariable              | Avoid variables with short names like e  | 95    |
|                            |  |       |

# jpass/ui/action/Worker.java

| Rule                          | Violation  | Line  |
|-------------------------------|--|-------|
| AbstractNaming                | Abstract classes should be named AbstractXXX   | 43–98 |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 48    |
| CallSuperInConstructor        | It is a good practice to call super() in a constructor   | 55–58 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 71    |
| ShortVariable                 | Avoid variables with short names like e  | 81    |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 84    |

# jpass/ui/helper/EntryHelper.java

| Rule                       | Violation   | Line    |
|----------------------------|---|---------|
| TooManyStaticImports       | Too many static imports may lead to messy code  | 29–161  |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final  | 59      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 60      |
| AvoidDuplicateLiterals     | The String literal "Please select an entry." appears 4 times in this file; the first occurrence is on line 61 | 61      |
| LocalVariableCouldBeFinal  | Local variable 'option' could be declared final   | 64      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 66      |
| LocalVariableCouldBeFinal  | Local variable 'title' could be declared final  | 66      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 66      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 67      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 67      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 67      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 67      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 68      |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final  | 79      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 80      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 84      |
| LocalVariableCouldBeFinal  | Local variable 'title' could be declared final  | 84      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 84      |
| LocalVariableCouldBeFinal  | Local variable 'originalEntry' could be declared final  | 85      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 85      |
| LocalVariableCouldBeFinal  | Local variable 'dialog' could be declared final   | 86      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 87–92   |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final  | 100     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 101     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 105     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 105     |
| LocalVariableCouldBeFinal  | Local variable 'title' could be declared final  | 105     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 106     |
| LocalVariableCouldBeFinal  | Local variable 'originalEntry' could be declared final  | 106     |
| LocalVariableCouldBeFinal  | Local variable 'dialog' could be declared final   | 107     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 108–115 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final  | 123     |
| LocalVariableCouldBeFinal  | Local variable 'dialog' could be declared final   | 124     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 125–130 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final  | 139     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 140     |
| OnlyOneReturn              | A method should have only one exit point, and that should be the last statement in the method                 | 142     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 144     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 144     |
| LocalVariableCouldBeFinal  | Local variable 'title' could be declared final  | 144     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)  | 145     |

MethodArgumentCouldBeFinalParameter 'content' is not assigned and could be declared final154MethodArgumentCouldBeFinalParameter 'parent' is not assigned and could be declared final154AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block157

### jpass/ui/helper/FileHelper.java

| Rule                         | Violation   | Line    |
|------------------------------|---|---------|
| TooManyStaticImports         | Too many static imports may lead to messy code  | 29–420  |
| StdCyclomaticComplexity      | The class 'FileHelper' has a Standard Cyclomatic Complexity of 5 (Highest = 11).              | 59–420  |
| ModifiedCyclomaticComplexity | The class 'FileHelper' has a Modified Cyclomatic Complexity of 5 (Highest = 11).              | 59–420  |
| TooManyMethods               | This class has too many methods, consider refactoring it.                                     | 59–420  |
| LongVariable                 | Avoid excessively long variable names like SAVE_MODIFIED_QUESTION_MESSAGE                     | 60      |
| CommentRequired              | Field comments are required   | 60–62   |
| LongVariable                 | Avoid excessively long variable names like UNENCRYPTED_DATA_WARNING_MESSAGE                   | 63      |
| CommentRequired              | Field comments are required   | 63–65   |
| LongVariable                 | Avoid excessively long variable names like OPEN_ERROR_CHECK_PASSWORD_WARNING_MESSAGE          | 66      |
| CommentRequired              | Field comments are required   | 66–67   |
| CommentRequired              | Field comments are required   | 68–69   |
| LongVariable                 | Avoid excessively long variable names like CREATE_FILE_QUESTION_MESSAGE                       | 68      |
| CommentRequired              | Field comments are required   | 70–71   |
| LongVariable                 | Avoid excessively long variable names like OPERATION_ERROR_MESSAGE                            | 70      |
| LongVariable                 | Avoid excessively long variable names like FILE_OVERWRITE_QUESTION_MESSAGE                    | 72      |
| CommentRequired              | Field comments are required   | 72–73   |
| CommentRequired              | Field comments are required   | 75      |
| CommentRequired              | Field comments are required   | 76      |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                    | 88      |
| LocalVariableCouldBeFinal    | Local variable 'option' could be declared final   | 89      |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method | 96      |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                    | 102     |
| LocalVariableCouldBeFinal    | Local variable 'file' could be declared final   | 113     |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method | 115     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                            | 117     |
| LocalVariableCouldBeFinal    | Local variable 'worker' could be declared final   | 121–131 |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                    | 125     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                    | 125     |
| AvoidCatchingThrowable       | A catch statement should never catch throwable since it includes errors.                      | 126–128 |
| AvoidCatchingThrowable       | A catch statement should never catch throwable since it includes errors.                      | 126–128 |
| PreserveStackTrace           | New exception is thrown in catch block, original stack trace may be lost                      | 127     |
| PreserveStackTrace           | New exception is thrown in catch block, original stack trace may be lost                      | 127     |
| LocalVariableCouldBeFinal    | Local variable 'file' could be declared final   | 141     |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method | 143     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                            | 145     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)                                    | 146     |
| LocalVariableCouldBeFinal    | Local variable 'option' could be declared final   | 147     |

| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 150     |
|-------------------------------|---|---------|
| CommentDefaultAccessModifier  | To avoid mistakes add a comment at the beginning of the importFileInBackground method if you want a default access modifier | 164–181 |
| DefaultPackage                | Use explicit scoping instead of the default package private level   | 164–181 |
| LocalVariableCouldBeFinal     | Local variable 'worker' could be declared final   | 165–179 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 169     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 169     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 170     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 171     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 172     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 173     |
| AvoidCatchingThrowable        | A catch statement should never catch throwable since it includes errors.  | 174–176 |
| AvoidCatchingThrowable        | A catch statement should never catch throwable since it includes errors.  | 174–176 |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost  | 175     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost  | 175     |
| ModifiedCyclomaticComplexity  | The method 'saveFile' has a Modified Cyclomatic Complexity of 11.   | 202–256 |
| StdCyclomaticComplexity       | The method 'saveFile' has a Standard Cyclomatic Complexity of 11.   | 202–256 |
| AvoidFinalLocalVariable       | Avoid using final local variables, turn them into fields  | 203     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 204     |
| LocalVariableCouldBeFinal     | Local variable 'file' could be declared final   | 205     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 207     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)  | 209     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 211     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 214     |
| AvoidFinalLocalVariable       | Avoid using final local variables, turn them into fields  | 217     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 218     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 224     |
| LocalVariableCouldBeFinal     | Local variable 'worker' could be declared final   | 226–254 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 230     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 230     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 231     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 232     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 233     |
| AvoidCatchingThrowable        | A catch statement should never catch throwable since it includes errors.  | 234–236 |
| AvoidCatchingThrowable        | A catch statement should never catch throwable since it includes errors.  | 234–236 |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost  | 235     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost  | 235     |
|                               | Avoid catching generic exceptions such as NullPointerException,   | 246     |
| AvoidCatchingGenericException | RuntimeException, Exception in try-catch block  |         |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 266     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 268     |
| LocalVariableCouldBeFinal     | Local variable 'option' could be declared final   | 269     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 272     |
| LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)  | 277     |
| StdCyclomaticComplexity       | The method 'openFileInBackground' has a Standard Cyclomatic Complexity of 10.   | 286–328 |
| ModifiedCyclomaticComplexity  | The method 'openFileInBackground' has a Modified Cyclomatic Complexity of 10.   | 286–328 |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                               | 289     |
| LocalVariableCouldBeFinal     | Local variable 'worker' could be declared final   | 295–326 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 299     |

| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 299     |
|---|--|---------|
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 300     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 301     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 302     |
| AvoidRethrowingException                | A catch statement that catches an exception only to rethrow it should be avoided.  | 303–305 |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 306     |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 306     |
| AvoidCatchingThrowable                  | A catch statement should never catch throwable since it includes errors.   | 307–309 |
| AvoidCatchingThrowable                  | A catch statement should never catch throwable since it includes errors.   | 307–309 |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 308     |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 308     |
| AvoidCatchingGenericException           | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block                          | 318     |
| DefaultPackage                          | Use explicit scoping instead of the default package private level  | 337–355 |
| CommentDefaultAccessModifier            | To avoid mistakes add a comment at the beginning of the handleFileNotFound method if you want a default access modifier                    | 337–355 |
| LocalVariableCouldBeFinal               | Local variable 'option' could be declared final  | 338     |
| LocalVariableCouldBeFinal               | Local variable 'fileNotFoundWorker' could be declared final  | 340-352 |
| LongVariable                            | Avoid excessively long variable names like fileNotFoundWorker  | 340     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 344     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 344     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 345     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 346     |
| AvoidCatchingGenericException           | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block                             | 347     |
| AvoidThrowingNewInstanceOfSameException | A catch statement that catches an exception only to wrap it in a new instance of the same type of exception and throw it should be avoided | 347–349 |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 348     |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 348     |
| MethodArgumentCouldBeFinal              | Parameter 'description' is not assigned and could be declared final  | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'taskName' is not assigned and could be declared final   | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'extension' is not assigned and could be declared final  | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'parent' is not assigned and could be declared final   | 366     |
| LocalVariableCouldBeFinal               | Local variable 'fc' could be declared final  | 368     |
| ShortVariable                           | Avoid variables with short names like fc   | 368     |
| ShortVariable                           | Avoid variables with short names like f  | 371     |
| MethodArgumentCouldBeFinal              | Parameter 'f' is not assigned and could be declared final  | 371     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 372     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 372     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 372     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 372     |
| LocalVariableCouldBeFinal               | Local variable 'returnVal' could be declared final   | 380     |
| MethodArgumentCouldBeFinal              | Parameter 'fileName' is not assigned and could be declared final   | 394     |
| MethodArgumentCouldBeFinal              | Parameter 'parent' is not assigned and could be declared final   | 394     |
| LocalVariableCouldBeFinal               | Local variable 'file' could be declared final  | 396     |
| LocalVariableCouldBeFinal               | Local variable 'option' could be declared final  | 398     |
| LocalVariableCouldBeFinal               | Local variable 'separator' could be declared final   | 414     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 415     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 415     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 415     |
| OnlyOneReturn                           | A method should have only one exit point, and that should be the last statement in the method  | 416     |

# jpass/util/ClipboardUtils.java

| Rule                            | Violation  | Line    |
|---------------------------------|--|---------|
| MethodArgumentCouldBeFinal      | Parameter 'str' is not assigned and could be declared final              | 62      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 62      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 62      |
| LocalVariableCouldBeFinal       | Local variable 'selection' could be declared final                       | 68      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 69      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 69      |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 70–72   |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 70–72   |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 71      |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 71      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 80      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 80      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 82      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 82      |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 83–85   |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 83–85   |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 84      |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 84      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 96      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 96      |
| LocalVariableCouldBeFinal       | Local variable 'contents' could be declared final                        | 96      |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 97      |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 98      |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 100–102 |
| EmptyCatchBlock                 | Avoid empty catch blocks   | 100-102 |
| EmptyCatchBlock                 | Avoid empty catch blocks   | 100–102 |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 100-102 |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 103     |
| MethodArgumentCouldBeFinal      | Parameter 'flavor' is not assigned and could be declared final           | 121     |
| MethodArgumentCouldBeFinal      | Parameter 'flavor' is not assigned and could be declared final           | 126     |
| MethodArgumentCouldBeFinal      | Parameter 'clipboard' is not assigned and could be declared final        | 131     |
| MethodArgumentCouldBeFinal      | Parameter 'contents' is not assigned and could be declared final         | 131     |
|                                 |  |         |

# jpass/util/Configuration.java

| Rule                          | Violation  | Line  |
|-------------------------------|--|-------|
| CommentRequired               | Field comments are required  | 45    |
| CommentRequired               | Field comments are required  | 46    |
| SuspiciousConstantFieldName   | The field name indicates a constant but its modifiers do not   | 46    |
| CommentRequired               | Field comments are required  | 47    |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 47    |
| ImmutableField                | Private field 'properties' could be made final; it is only initialized in the declaration or constructor.      | 47    |
| LocalVariableCouldBeFinal     | Local variable 'filePath' could be declared final  | 51    |
| LocalVariableCouldBeFinal     | Local variable 'is' could be declared final  | 53    |
| CloseResource                 | Ensure that resources like this FileInputStream object are closed after use                                    | 53    |
| ShortVariable                 | Avoid variables with short names like is   | 53    |
| CloseResource                 | Ensure that resources like this FileInputStream object are closed after use                                    | 53    |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 57    |
| LongVariable                  | Avoid excessively long variable names like configurationFolderPath   | 63    |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 65–69 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 65–69 |

| Potential violation of Law of Demeter (method chain calls)   | 65–69  |
|--|--|
| Potential violation of Law of Demeter (method chain calls)   | 65–69  |
| Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 70   |
| Parameter 'type' is not assigned and could be declared final   | 76   |
| Parameter 'defaultValue' is not assigned and could be declared final   | 76   |
| Parameter 'key' is not assigned and could be declared final  | 76   |
| Local variable 'prop' could be declared final  | 78   |
| Potential violation of Law of Demeter (method chain calls)   | 81   |
| Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 82   |
| Public method and constructor comments are required  | 89–91  |
| Avoid using short method names   | 89–91  |
| Parameter 'key' is not assigned and could be declared final  | 89   |
| Parameter 'defaultValue' is not assigned and could be declared final   | 89   |
| Parameter 'key' is not assigned and could be declared final  | 93   |
| Public method and constructor comments are required  | 93–95  |
| Parameter 'defaultValue' is not assigned and could be declared final   | 93   |
| Parameter 'defaultValue' is not assigned and could be declared final   | 97   |
| Parameter 'key' is not assigned and could be declared final  | 97   |
| Public method and constructor comments are required  | 97–99  |
| Public method and constructor comments are required  | 101–107  |
| Parameter 'key' is not assigned and could be declared final  | 101  |
| Parameter 'defaultValue' is not assigned and could be declared final   | 101  |
| Local variable 'prop' could be declared final  | 102  |
| A method should have only one exit point, and that should be the last statement in the method                  | 104  |
| Public method and constructor comments are required  | 109–114  |
| Use block level rather than method level synchronization   | 109–114  |
|  | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  Parameter 'type' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'key' is not assigned and could be declared final  Local variable 'prop' could be declared final  Potential violation of Law of Demeter (method chain calls)  Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  Public method and constructor comments are required  Avoid using short method names  Parameter 'key' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Public method and constructor comments are required  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'key' is not assigned and could be declared final  Parameter 'key' is not assigned and could be declared final  Parameter 'key' is not assigned and could be declared final  Public method and constructor comments are required  Public method and constructor comments are required  Parameter 'key' is not assigned and could be declared final  Parameter 'key' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final  Parameter 'defaultValue' is not assigned and could be declared final |

# jpass/util/CryptUtils.java

| Rule                            | Violation  | Line |
|---------------------------------|--|------|
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 55   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 55   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 66   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 66   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 88   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception   | 88   |
| LocalVariableCouldBeFinal       | Local variable 'md' could be declared final  | 89   |
| ShortVariable                   | Avoid variables with short names like md   | 89   |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)   | 90   |
| LocalVariableCouldBeFinal       | Local variable 'bytes' could be declared final   | 92   |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)   | 93   |
| AvoidCatchingGenericException   | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 115  |
|                                 |  |      |

### jpass/util/DateUtils.java

| Rule            | Violation  | Line  |
|-----------------|--|-------|
| CommentRequired | Class comments are required  | 41–71 |
| UseUtilityClass | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 41–71 |
| UseUtilityClass | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 41–71 |

| CommentRequiredPublic method and constructor comments are required44–53MethodArgumentCouldBeFinalParameter 'format' is not assigned and could be declared final44AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.48AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block48MethodArgumentCouldBeFinalParameter 'formatter' is not assigned and could be declared final55MethodArgumentCouldBeFinalParameter 'dateString' is not assigned and could be declared final55CommentRequiredPublic method and constructor comments are required55–70AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block59AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.59LocalVariableCouldBeFinalLocal variable 'date' could be declared final62AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block64AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.64LawOfDemeterPotential violation of Law of Demeter (object not created locally)69 | CommentRequired               | Field comments are required  | 42    |
|--|-------------------------------|--|-------|
| AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE.  AvoidCatchingGenericException Exception Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  MethodArgumentCouldBeFinal Parameter 'formatter' is not assigned and could be declared final 55  MethodArgumentCouldBeFinal Parameter 'dateString' is not assigned and could be declared final 55  CommentRequired Public method and constructor comments are required 55–70  AvoidCatchingGenericException Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 59  LocalVariableCouldBeFinal Local variable 'date' could be declared final 62  AvoidCatchingGenericException Exception in try-catch block  AvoidCatchingGenericException Catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 64                       | CommentRequired               | Public method and constructor comments are required                          | 44–53 |
| AvoidCatchingGenericException  | MethodArgumentCouldBeFinal    | Parameter 'format' is not assigned and could be declared final               | 44    |
| Exception in try-catch block  MethodArgumentCouldBeFinal Parameter 'formatter' is not assigned and could be declared final 55  MethodArgumentCouldBeFinal Parameter 'dateString' is not assigned and could be declared final 55  CommentRequired Public method and constructor comments are required 55–70  AvoidCatchingGenericException Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 59  LocalVariableCouldBeFinal Local variable 'date' could be declared final 62  AvoidCatchingGenericException Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 64   | AvoidCatchingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE. | 48    |
| MethodArgumentCouldBeFinalParameter 'dateString' is not assigned and could be declared final55CommentRequiredPublic method and constructor comments are required55–70AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block59AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.59LocalVariableCouldBeFinalLocal variable 'date' could be declared final62AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block64AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.64  | AvoidCatchingGenericException |  | 48    |
| CommentRequiredPublic method and constructor comments are required55–70AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block59AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.59LocalVariableCouldBeFinalLocal variable 'date' could be declared final62AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block64AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.64  | MethodArgumentCouldBeFinal    | Parameter 'formatter' is not assigned and could be declared final            | 55    |
| AvoidCatchingGenericException  | MethodArgumentCouldBeFinal    | Parameter 'dateString' is not assigned and could be declared final           | 55    |
| Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 59  LocalVariableCouldBeFinal Local variable 'date' could be declared final 62  AvoidCatchingGenericException Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE Avoid catching NullPointerException; consider removing the cause of the NPE. 64   | CommentRequired               | Public method and constructor comments are required                          | 55–70 |
| LocalVariableCouldBeFinalLocal variable 'date' could be declared final62AvoidCatchingGenericExceptionAvoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block64AvoidCatchingNPEAvoid catching NullPointerException; consider removing the cause of the NPE.64  | AvoidCatchingGenericException |  | 59    |
| AvoidCatchingGenericException AvoidCatchingGenericException AvoidCatchingNPE  Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  AvoidCatchingNPE  Avoid catching NullPointerException; consider removing the cause of the NPE.  64   | AvoidCatchingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE. | 59    |
| Exception in try-catch block  AvoidCatchingNPE  Avoid catching NullPointerException; consider removing the cause of the NPE.  64   | LocalVariableCouldBeFinal     | Local variable 'date' could be declared final                                | 62    |
|  | AvoidCatchingGenericException |  | 64    |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally) 69   | AvoidCatchingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE. | 64    |
|  | LawOfDemeter                  | Potential violation of Law of Demeter (object not created locally)           | 69    |

# jpass/util/SpringUtilities.java

| Rule                       | Violation  | Line    |
|----------------------------|--|---------|
| MethodArgumentCouldBeFinal | Parameter 'initialY' is not assigned and could be declared final   | 61      |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final     | 61      |
| MethodArgumentCouldBeFinal | Parameter 'xPad' is not assigned and could be declared final       | 61      |
| MethodArgumentCouldBeFinal | Parameter 'rows' is not assigned and could be declared final       | 61      |
| MethodArgumentCouldBeFinal | Parameter 'cols' is not assigned and could be declared final       | 61      |
| MethodArgumentCouldBeFinal | Parameter 'yPad' is not assigned and could be declared final       | 61      |
| MethodArgumentCouldBeFinal | Parameter 'initialX' is not assigned and could be declared final   | 61      |
| LocalVariableCouldBeFinal  | Local variable 'xPadSpring' could be declared final                | 69      |
| LocalVariableCouldBeFinal  | Local variable 'yPadSpring' could be declared final                | 70      |
| LocalVariableCouldBeFinal  | Local variable 'initialXSpring' could be declared final            | 71      |
| LocalVariableCouldBeFinal  | Local variable 'initialYSpring' could be declared final            | 72      |
| LocalVariableCouldBeFinal  | Local variable 'max' could be declared final                       | 73      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 77      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 77      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 78      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 78      |
| LocalVariableCouldBeFinal  | Local variable 'cons' could be declared final                      | 80      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 82      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 83      |
| LocalVariableCouldBeFinal  | Local variable 'cons' could be declared final                      | 89      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 91      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 92      |
| LocalVariableCouldBeFinal  | Local variable 'cons' could be declared final                      | 100     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 103     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 105     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 109     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 111     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 117     |
| LocalVariableCouldBeFinal  | Local variable 'pCons' could be declared final                     | 117     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 118–119 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 119     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 120–121 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 121     |
| MethodArgumentCouldBeFinal | Parameter 'col' is not assigned and could be declared final        | 125     |

| MethodArgumentCouldBeFinal | Parameter 'cols' is not assigned and could be declared final       | 125 |
|----------------------------|--|-----|
| MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final        | 125 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final     | 125 |
| LocalVariableCouldBeFinal  | Local variable 'layout' could be declared final                    | 126 |
| LocalVariableCouldBeFinal  | Local variable 'c' could be declared final                         | 127 |
| ShortVariable              | Avoid variables with short names like c                            | 127 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 128 |
| MethodArgumentCouldBeFinal | Parameter 'initialX' is not assigned and could be declared final   | 145 |
| MethodArgumentCouldBeFinal | Parameter 'initialY' is not assigned and could be declared final   | 145 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final     | 145 |
| MethodArgumentCouldBeFinal | Parameter 'cols' is not assigned and could be declared final       | 145 |
| MethodArgumentCouldBeFinal | Parameter 'rows' is not assigned and could be declared final       | 145 |
| MethodArgumentCouldBeFinal | Parameter 'yPad' is not assigned and could be declared final       | 146 |
| MethodArgumentCouldBeFinal | Parameter 'xPad' is not assigned and could be declared final       | 146 |
| ShortVariable              | Avoid variables with short names like x                            | 155 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 159 |
| LocalVariableCouldBeFinal  | Local variable 'constraints' could be declared final               | 162 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 163 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 164 |
| ShortVariable              | Avoid variables with short names like y                            | 170 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 174 |
| LocalVariableCouldBeFinal  | Local variable 'constraints' could be declared final               | 177 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 178 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 179 |
| LocalVariableCouldBeFinal  | Local variable 'pCons' could be declared final                     | 185 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 185 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 186 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 187 |
|                            |  |     |

### jpass/util/StringUtils.java

| Rule                       | Violation   | Line  |
|----------------------------|---|-------|
| CyclomaticComplexity       | The method 'stripNonValidXMLCharacters(String)' has a cyclomatic complexity of 13.            | 52–70 |
| ShortVariable              | Avoid variables with short names like in  | 52    |
| CyclomaticComplexity       | The method 'stripNonValidXMLCharacters(String)' has a cyclomatic complexity of 13.            | 52–70 |
| OnlyOneReturn              | A method should have only one exit point, and that should be the last statement in the method | 54    |
| LocalVariableCouldBeFinal  | Local variable 'out' could be declared final  | 56    |
| CommentRequired            | Public method and constructor comments are required   | 72–74 |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final                                  | 72    |
| MethodArgumentCouldBeFinal | Parameter 'length' is not assigned and could be declared final                                | 76    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final                                  | 76    |
| CommentRequired            | Public method and constructor comments are required   | 76–82 |
|                            |   |       |

# jpass/xml/bind/Entries.java

| Rule                       | Violation  | Line  |
|----------------------------|--|-------|
| AtLeastOneConstructor      | Each class should declare at least one constructor                                     | 28–59 |
| CommentRequired            | Field comments are required  | 30    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 30    |

# jpass/xml/bind/Entry.java

Rule Violation Line

| DataClass                  | The class 'Entry' is suspected to be a Data Class (WOC=0.000%, NOPA=0, NOAM=13, WMC=14) | 40–175 |
|----------------------------|---|--------|
| CommentRequired            | Field comments are required   | 42     |
| CommentRequired            | Field comments are required   | 43     |
| CommentRequired            | Field comments are required   | 44     |
| CommentRequired            | Field comments are required   | 45     |
| CommentRequired            | Field comments are required   | 46     |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 47     |
| CommentRequired            | Field comments are required   | 47     |
| CommentRequired            | Field comments are required   | 48     |
| CommentRequired            | Public method and constructor comments are required                                     | 50–56  |
| LocalVariableCouldBeFinal  | Local variable 'now' could be declared final  | 51–53  |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 72     |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 90     |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 108    |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 126    |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 144    |
| MethodArgumentCouldBeFinal | Parameter 'date' is not assigned and could be declared final                            | 162    |

### jpass/xml/converter/XmlConverter.java

| Rule                       | Violation  | Line  |
|----------------------------|--|-------|
| CommentRequired            | Field comments are required  | 48    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 48    |
| CommentRequired            | Field comments are required  | 49    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 49    |
| CommentRequired            | Public method and constructor comments are required                                    | 51–58 |
| MethodArgumentCouldBeFinal | Parameter 'documentClass' is not assigned and could be declared final                  | 51    |
| LocalVariableCouldBeFinal  | Local variable 'module' could be declared final  | 53    |
| MethodArgumentCouldBeFinal | Parameter 'outputStream' is not assigned and could be declared final                   | 67    |
| MethodArgumentCouldBeFinal | Parameter 'document' is not assigned and could be declared final                       | 67    |
| MethodArgumentCouldBeFinal | Parameter 'inputStream' is not assigned and could be declared final                    | 78    |

# **Priority 4**

### jpass/JPass.java

| Rule                   | Violation            | Line |
|------------------------|----------------------|------|
| UselessParentheses     | Useless parentheses. | 76   |
| UnnecessaryParentheses | Useless parentheses. | 76   |
| UselessParentheses     | Useless parentheses. | 76   |

### jpass/crypt/Aes256.java

| Rule                           | Violation   | Line |
|--------------------------------|---|------|
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 397  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 397  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 397  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 398  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 490  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 490  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 490  |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 491  |

### jpass/crypt/Cbc.java

| Rule                           | Violation   | Line   |
|--------------------------------|---|--------|
| ShortClassName                 | Avoid short class names like Cbc  | 43–255 |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 118    |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 118    |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 131    |

### jpass/ui/SvgImageIcon.java

| Rule                   | Violation            | Line |
|------------------------|----------------------|------|
| UnnecessaryParentheses | Useless parentheses. | 170  |
| UselessParentheses     | Useless parentheses. | 170  |
| UselessParentheses     | Useless parentheses. | 170  |

### jpass/util/Configuration.java

| Rule       | Violation  | Line |
|------------|--|------|
| UseVarargs | Consider using varargs for methods or constructors which take an array the last parameter. | 101  |

### jpass/util/CryptUtils.java

| Rule       | Violation  | Line |
|------------|--|------|
| UseVarargs | Consider using varargs for methods or constructors which take an array the last parameter. | 55   |
| UseVarargs | Consider using varargs for methods or constructors which take an array the last parameter. | 66   |

### jpass/util/StringUtils.java

| Rule                           | Violation   | Line |
|--------------------------------|---|------|
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 52   |
| UselessParentheses             | Useless parentheses.  | 60   |
| UselessParentheses             | Useless parentheses.  | 60   |
| UselessParentheses             | Useless parentheses.  | 60   |
| UnnecessaryParentheses         | Useless parentheses.  | 60   |
| UnnecessaryParentheses         | Useless parentheses.  | 60   |
| UnnecessaryParentheses         | Useless parentheses.  | 60   |
| UselessParentheses             | Useless parentheses.  | 61   |
| UselessParentheses             | Useless parentheses.  | 61   |
| UnnecessaryParentheses         | Useless parentheses.  | 61   |
| UnnecessaryParentheses         | Useless parentheses.  | 61   |
| UselessParentheses             | Useless parentheses.  | 61   |
| UnnecessaryParentheses         | Useless parentheses.  | 61   |
| UselessParentheses             | Useless parentheses.  | 62   |
| UnnecessaryParentheses         | Useless parentheses.  | 62   |
| UselessParentheses             | Useless parentheses.  | 62   |
|                                |   |      |

| UselessParentheses     | Useless parentheses. | 62 |
|------------------------|----------------------|----|
| UselessParentheses     | Useless parentheses. | 62 |
| UselessParentheses     | Useless parentheses. | 62 |
| UnnecessaryParentheses | Useless parentheses. | 62 |
| UselessParentheses     | Useless parentheses. | 62 |
| UnnecessaryParentheses | Useless parentheses. | 62 |
| UselessParentheses     | Useless parentheses. | 63 |
| UnnecessaryParentheses | Useless parentheses. | 63 |
| UselessParentheses     | Useless parentheses. | 63 |
| UnnecessaryParentheses | Useless parentheses. | 63 |
| UselessParentheses     | Useless parentheses. | 63 |
| UselessParentheses     | Useless parentheses. | 63 |
| UnnecessaryParentheses | Useless parentheses. | 63 |
| UselessParentheses     | Useless parentheses. | 63 |
| UselessParentheses     | Useless parentheses. | 63 |

# **Priority 5**

### jpass/crypt/Aes256.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'current' (lines '313'-'322'). | 313–322 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'current' (lines '319'-'322'). | 319-322 |

### jpass/crypt/Cbc.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'pad' (lines '220'-'228'). | 220-228 |

### jpass/data/EntriesRepository.java

| Rule                    | Violation   | Line    |
|-------------------------|---|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'inputStream' (lines '113'-'119').  | 113–119 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'inputStream' (lines '113'-'117').  | 113–117 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'entries' (lines '121'-'132').      | 121–132 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'outputStream' (lines '141'-'144'). | 141–144 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'outputStream' (lines '141'-'146'). | 141–146 |
|                         |   |         |

### jpass/ui/EntryDialog.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'titleIsOk' (lines '285'-'294'). | 285–294 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'parent' (lines '286'-'300').    | 286–300 |

### jpass/ui/MessageDialog.java

| Rule            |          | Violation   | I | Line    |
|-----------------|----------|---|---|---------|
| DataflowAnomaly | Analysis | Found 'DD'-anomaly for variable 'ret' (lines '188'-'196').    |   | 188–196 |
| DataflowAnomaly | Analysis | Found 'DD'-anomaly for variable 'dialog' (lines '189'-'191'). |   | 189–191 |
| DataflowAnomaly | Analysis | Found 'DD'-anomaly for variable 'dialog' (lines '189'-'193'). |   | 189–193 |
| DataflowAnomaly | Analysis | Found 'DD'-anomaly for variable 'repeat' (lines '255'-'257'). | ; | 255–257 |
| DataflowAnomaly | Analysis | Found 'DU'-anomaly for variable 'repeat' (lines '255'-'290'). |   | 255–290 |

| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'passwordHash' (lines '280'-'282').   | 280–282 |
|-------------------------|---|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'bufferedReader' (lines '311'-'314'). | 311–314 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'line' (lines '316'-'331').           | 316-331 |

### jpass/ui/SearchPanel.java

| Rule                    | Violation   | Line    |
|-------------------------|---|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'criteria' (lines '151'-'153'). | 151–153 |

### jpass/ui/action/MenuActionType.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'actionMap' (lines '234'-'243'). | 234–243 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'inputMap' (lines '235'-'243').  | 235-243 |

### jpass/ui/action/TextComponentActionType.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'copyEnabled' (lines '71'-'73'). | 71–73   |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'copyEnabled' (lines '94'-'96'). | 94–96   |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'delChars' (lines '129'-'135').  | 129–135 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'actionMap' (lines '220'-'229'). | 220–229 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').  | 221–229 |

### jpass/ui/helper/FileHelper.java

| Rule                    | Violation   | Line    |
|-------------------------|---|---------|
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '121'-'133').             | 121–133 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '121'-'133').             | 121–133 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileName' (lines '145'-'156').           | 145–156 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '165'-'181').             | 165–181 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '165'-'181').             | 165–181 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').           | 214–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').           | 214–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').           | 214–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').             | 226–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').             | 226–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').             | 226–256 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').             | 295–328 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').             | 295–328 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').             | 295–328 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileNotFoundWorker' (lines '340'-'355'). | 340–355 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'fileNotFoundWorker' (lines '340'-'355'). | 340–355 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').                | 367–385 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').                | 367–385 |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').                | 367–385 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'overwriteAccepted' (lines '395'-'400').  | 395–400 |
|                         |   |         |

### jpass/util/ClipboardUtils.java

| Rule                    | Violation   | Line  |
|-------------------------|---|-------|
| DataflowAnomalvAnalvsis | Found 'DD'-anomaly for variable 'result' (lines '94'-'98'). | 94–98 |

### jpass/util/Configuration.java

| Rule                    | Violation  | Line  |
|-------------------------|--|-------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'configurationFolderPath' (lines '63'-'65'). | 63–65 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'value' (lines '77'-'81').                   | 77–81 |

### jpass/util/CryptUtils.java

| Rule                    | Violation  | Line    |
|-------------------------|--|---------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'ret' (lines '114'-'116'). | 114–116 |

### jpass/util/DateUtils.java

| Rule                    | Violation  | Line  |
|-------------------------|--|-------|
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'formatter' (lines '47'-'50'). | 47–50 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'dateTime' (lines '58'-'63').  | 58–63 |
| DataflowAnomalyAnalysis | Found 'DD'-anomaly for variable 'dateTime' (lines '63'-'66').  | 63–66 |

### jpass/util/SpringUtilities.java

| Rule                    | Violation   | Line    |
|-------------------------|---|---------|
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'layout' (lines '64'-'122').  | 64–122  |
| DataflowAnomalyAnalysis | Found 'DU'-anomaly for variable 'layout' (lines '149'-'188'). | 149-188 |

### jpass/util/StringUtils.java

| Rule                    | Violation   | Line  |
|-------------------------|---|-------|
| DataflowAnomalvAnalysis | Found 'DD'-anomaly for variable 'result' (lines '77'-'79'). | 77–79 |

#### **Files**

# jpass/JPass.java

| Rule                          | Violation  | Priority | Line  |
|-------------------------------|--|----------|-------|
| UseUtilityClass               | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 3        | 50–78 |
| UseUtilityClass               | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 3        | 50–78 |
| CommentRequired               | Field comments are required  | 3        | 52    |
| CommentRequired               | Public method and constructor comments are required  | 3        | 58–77 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 62    |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block  | 3        | 72    |
| NullAssignment                | Assigning an Object to null is a code smell. Consider refactoring.   | 3        | 76    |
| UselessParentheses            | Useless parentheses.   | 4        | 76    |
| UnnecessaryParentheses        | Useless parentheses.   | 4        | 76    |
| UselessParentheses            | Useless parentheses.   | 4        | 76    |

# jpass/crypt/Aes256.java

Rule Violation Priority Line

| TooManyMethods                 | This class has too many methods, consider refactoring it.                               | 3 | 50–507  |
|--------------------------------|---|---|---------|
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3 | 85      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3 | 90      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3 | 95      |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3 | 151     |
| LocalVariableCouldBeFinal      | Local variable 'tmp' could be declared final  | 3 | 227     |
| AvoidArrayLoops                | System.arraycopy is more efficient  | 3 | 228–230 |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final                             | 3 | 245     |
| MethodArgumentCouldBeFinal     | Parameter 'index' is not assigned and could be declared final                           | 3 | 272     |
| MethodArgumentCouldBeFinal     | Parameter 'b' is not assigned and could be declared final                               | 3 | 290     |
| ShortVariable                  | Avoid variables with short names like b   | 3 | 290     |
| MethodArgumentCouldBeFinal     | Parameter 'a' is not assigned and could be declared final                               | 3 | 310     |
| ShortVariable                  | Avoid variables with short names like a   | 3 | 310     |
| ShortVariable                  | Avoid variables with short names like b   | 3 | 310     |
| MethodArgumentCouldBeFinal     | Parameter 'b' is not assigned and could be declared final                               | 3 | 310     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'current' (lines '313'-'322').                          | 5 | 313–322 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'current' (lines '319'-'322').                          | 5 | 319–322 |
| MethodArgumentCouldBeFinal     | Parameter 'index' is not assigned and could be declared final                           | 3 | 362     |
| LocalVariableCouldBeFinal      | Local variable 's0' could be declared final   | 3 | 363–364 |
| ShortVariable                  | Avoid variables with short names like s0  | 3 | 363     |
| ShortVariable                  | Avoid variables with short names like s1  | 3 | 365     |
| LocalVariableCouldBeFinal      | Local variable 's1' could be declared final   | 3 | 365–366 |
| ShortVariable                  | Avoid variables with short names like s2  | 3 | 367     |
| LocalVariableCouldBeFinal      | Local variable 's2' could be declared final   | 3 | 367–368 |
| ShortVariable                  | Avoid variables with short names like s3  | 3 | 369     |
| LocalVariableCouldBeFinal      | Local variable 's3' could be declared final   | 3 | 369–370 |
| MethodArgumentCouldBeFinal     | Parameter 'inBlock' is not assigned and could be declared final                         | 3 | 397     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 397     |
| MethodArgumentCouldBeFinal     | Parameter 'outBlock' is not assigned and could be declared final                        | 3 | 397     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 397     |
| MethodArgumentCouldBeFinal     | Parameter 'inIndex' is not assigned and could be declared final                         | 3 | 397     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 397     |
| MethodArgumentCouldBeFinal     | Parameter 'outIndex' is not assigned and could be declared final                        | 3 | 398     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 398     |
| MethodArgumentCouldBeFinal     | Parameter 'index' is not assigned and could be declared final                           | 3 | 455     |
| LocalVariableCouldBeFinal      | Local variable 's0' could be declared final   | 3 | 456–457 |
| ShortVariable                  | Avoid variables with short names like s0  | 3 | 456     |
| LocalVariableCouldBeFinal      | Local variable 's1' could be declared final   | 3 | 458–459 |
| ShortVariable                  | Avoid variables with short names like s1  | 3 | 458     |
| ShortVariable                  | Avoid variables with short names like s2  | 3 | 460     |
| LocalVariableCouldBeFinal      | Local variable 's2' could be declared final   | 3 | 460–461 |
| LocalVariableCouldBeFinal      | Local variable 's3' could be declared final   | 3 | 462–463 |
| ShortVariable                  | Avoid variables with short names like s3  | 3 | 462     |
| MethodArgumentCouldBeFinal     | Parameter 'inBlock' is not assigned and could be declared final                         | 3 | 490     |
| MethodArgumentCouldBeFinal     | Parameter 'outBlock' is not assigned and could be declared final                        | 3 | 490     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 490     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 490     |

| MethodArgumentCouldBeFinal     | Parameter 'inIndex' is not assigned and could be declared final                         | 3 | 490 |
|--------------------------------|---|---|-----|
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 490 |
| MethodArgumentCouldBeFinal     | Parameter 'outIndex' is not assigned and could be declared final                        | 3 | 491 |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior. | 4 | 491 |

# jpass/crypt/Cbc.java

| Rule                           | Violation   | Priority | Line   |
|--------------------------------|---|----------|--------|
| ShortClassName                 | Avoid short class names like Cbc  | 4        | 43–255 |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 53     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 58     |
| RedundantFieldInitializer      | Avoid using redundant field initializer for '_buffer'   | 3        | 63     |
| VariableNamingConventions      | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_buffer' is not final.        | 1        | 63     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 63     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 68     |
| RedundantFieldInitializer      | Avoid using redundant field initializer for '_outBuffer'  | 3        | 73     |
| VariableNamingConventions      | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_outBuffer' is not final.     | 1        | 73     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 73     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 78     |
| RedundantFieldInitializer      | Avoid using redundant field initializer for '_outBufferUsed'  | 3        | 78     |
| VariableNamingConventions      | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_outBufferUsed' is not final. | 1        | 78     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 83     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 88     |
| VariableNamingConventions      | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_overflowUsed' is not final.  | 1        | 88     |
| BeanMembersShouldSerialize     | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 90     |
| CommentRequired                | Field comments are required   | 3        | 90     |
| ShortVariable                  | Avoid variables with short names like iv  | 3        | 99     |
| MethodArgumentCouldBeFinal     | Parameter 'output' is not assigned and could be declared final  | 3        | 99     |
| MethodArgumentCouldBeFinal     | Parameter 'iv' is not assigned and could be declared final  | 3        | 99     |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3        | 99     |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior.   | 4        | 118    |
| MethodArgumentCouldBeFinal     | Parameter 'inBuffer' is not assigned and could be declared final  | 3        | 118    |
| MethodArgumentCouldBeFinal     | Parameter 'outBuffer' is not assigned and could be declared final   | 3        | 118    |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior.   | 4        | 118    |
| MethodArgumentCouldBeFinal     | Parameter 'inBuffer' is not assigned and could be declared final  | 3        | 131    |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior.   | 4        | 131    |
| MethodArgumentCouldBeFinal     | Parameter 'data' is not assigned and could be declared final  | 3        | 147    |
| MethodArgumentCouldBeFinal     | Parameter 'data' is not assigned and could be declared final  | 3        | 159    |
| MethodArgumentCouldBeFinal     | Parameter 'data' is not assigned and could be declared final  | 3        | 173    |
| MethodArgumentCouldBeFinal     | Parameter 'length' is not assigned and could be declared final  | 3        | 173    |

| MethodArgumentCouldBeFinal | Parameter 'length' is not assigned and could be declared final | 3 | 196     |
|----------------------------|--|---|---------|
| MethodArgumentCouldBeFinal | Parameter 'data' is not assigned and could be declared final   | 3 | 196     |
| DataflowAnomalyAnalysis    | Found 'DU'-anomaly for variable 'pad' (lines '220'-'228').     | 5 | 220–228 |
| LocalVariableCouldBeFinal  | Local variable 'pad' could be declared final                   | 3 | 220     |
| LocalVariableCouldBeFinal  | Local variable 'pad' could be declared final                   | 3 | 244     |
| LocalVariableCouldBeFinal  | Local variable 'left' could be declared final                  | 3 | 249     |

### jpass/crypt/DecryptException.java

| Rule                    | Violation   | Priority | Line  |
|-------------------------|---|----------|-------|
| MissingSerialVersionUID | Classes implementing Serializable should set a serialVersionUID | 3        | 40-48 |

### jpass/crypt/io/CryptInputStream.java

| Rule                       | Violation  | Priority | Line    |
|----------------------------|--|----------|---------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 58      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 63      |
| CommentRequired            | Field comments are required  | 3        | 65      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 65      |
| VariableNamingConventions  | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_buffer' is not final.         | 1        | 71      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_buffer'  | 3        | 71      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 71      |
| VariableNamingConventions  | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_bufferUsed' is not final.     | 1        | 76      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 76      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_bufferUsed'  | 3        | 76      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 81      |
| RedundantFieldInitializer  | Avoid using redundant field initializer for '_lastBufferRead'  | 3        | 87      |
| VariableNamingConventions  | Only variables that are final should contain underscores (except for underscores in standard prefix/suffix), '_lastBufferRead' is not final. | 1        | 87      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.   | 3        | 87      |
| MethodArgumentCouldBeFinal | Parameter 'iv' is not assigned and could be declared final   | 3        | 96      |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final   | 3        | 96      |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final  | 3        | 96      |
| ShortVariable              | Avoid variables with short names like iv   | 3        | 96      |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor   | 3        | 96–100  |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final   | 3        | 110     |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final  | 3        | 110     |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor   | 3        | 110–123 |
| LocalVariableCouldBeFinal  | Local variable 'iv' could be declared final  | 3        | 112     |
| ShortVariable              | Avoid variables with short names like iv   | 3        | 112     |
| LocalVariableCouldBeFinal  | Local variable 'cur' could be declared final   | 3        | 115     |
| OnlyOneReturn              | A method should have only one exit point, and that should be the last statement in the method  | 3        | 147     |
| NullAssignment             | Assigning an Object to null is a code smell. Consider refactoring.   | 3        | 151     |
| LocalVariableCouldBeFinal  | Local variable 'readed' could be declared final  | 3        | 153     |
| PreserveStackTrace         | New exception is thrown in catch block, original stack trace may be lost   | 3        | 160     |
| PreserveStackTrace         | New exception is thrown in catch block, original stack trace may be lost   | 3        | 160     |

## jpass/crypt/io/CryptOutputStream.java

| Rule                       | Violation  | Priority | Line  |
|----------------------------|--|----------|-------|
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 53    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 58    |
| SingularField              | Perhaps '_buffer' could be replaced by a local variable.                               | 3        | 58    |
| SingularField              | Perhaps '_buffer' could be replaced by a local variable.                               | 3        | 58    |
| MethodArgumentCouldBeFinal | Parameter 'iv' is not assigned and could be declared final                             | 3        | 67    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 3        | 67–69 |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                         | 3        | 67    |
| ShortVariable              | Avoid variables with short names like iv   | 3        | 67    |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 3        | 67    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 3        | 79–87 |
| MethodArgumentCouldBeFinal | Parameter 'key' is not assigned and could be declared final                            | 3        | 79    |
| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final                         | 3        | 79    |
| LocalVariableCouldBeFinal  | Local variable 'iv' could be declared final  | 3        | 81    |
| ShortVariable              | Avoid variables with short names like iv   | 3        | 81    |
| LocalVariableCouldBeFinal  | Local variable 'rnd' could be declared final   | 3        | 82    |
| ShortVariable              | Avoid variables with short names like b  | 3        | 96    |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 3        | 96    |
| MethodArgumentCouldBeFinal | Parameter 'b' is not assigned and could be declared final                              | 3        | 108   |
| ShortVariable              | Avoid variables with short names like b  | 3        | 108   |

### jpass/data/DataModel.java

| Rule  | Violation  | Priority | Line   |
|---|--|----------|--------|
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final                                    | 1        | 43–174 |
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final                                    | 1        | 43–174 |
| VariableNamingConventions                     | Variables should start with a lowercase character, 'INSTANCE' starts with uppercase character. | 1        | 45     |
| CommentRequired                               | Field comments are required  | 3        | 45     |
| SuspiciousConstantFieldName                   | The field name indicates a constant but its modifiers do not                                   | 3        | 45     |
| CommentRequired                               | Field comments are required  | 3        | 47     |
| CommentRequired                               | Field comments are required  | 3        | 48     |
| RedundantFieldInitializer                     | Avoid using redundant field initializer for 'fileName'   | 3        | 48     |
| CommentRequired                               | Field comments are required  | 3        | 49     |
| RedundantFieldInitializer                     | Avoid using redundant field initializer for 'password'   | 3        | 49     |
| RedundantFieldInitializer                     | Avoid using redundant field initializer for 'modified'   | 3        | 50     |
| CommentRequired                               | Field comments are required  | 3        | 50     |
| AvoidSynchronizedAtMethodLevel                | Use block level rather than method level synchronization                                       | 3        | 61–66  |
| MethodReturnsInternalArray                    | Returning 'password' may expose an internal array.   | 3        | 123    |
| MethodArgumentCouldBeFinal                    | Parameter 'password' is not assigned and could be declared final                               | 3        | 126    |
| ArraylsStoredDirectly                         | The user-supplied array 'password' is stored directly.   | 3        | 127    |
| NullAssignment                                | Assigning an Object to null is a code smell. Consider refactoring.                             | 3        | 135    |
| NullAssignment                                | Assigning an Object to null is a code smell. Consider refactoring.                             | 3        | 136    |
| MethodArgumentCouldBeFinal                    | Parameter 'title' is not assigned and could be declared final                                  | 3        | 157    |
| LawOfDemeter                                  | Potential violation of Law of Demeter (method chain calls)                                     | 3        | 158    |
| MethodArgumentCouldBeFinal                    | Parameter 'title' is not assigned and could be declared final                                  | 3        | 167    |
| LocalVariableCouldBeFinal                     | Local variable 'entryIndex' could be declared final  | 3        | 168    |

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JPass - PMD Results

OnlyOneReturn

A method should have only one exit point, and that should be 3 the last statement in the method

#### jpass/data/DocumentProcessException.java

| Rule                       | Violation   | Priority | Line  |
|----------------------------|---|----------|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID | 3        | 38–43 |
| MethodArgumentCouldBeFinal | Parameter 'message' is not assigned and could be declared final | 3        | 40    |
| CommentRequired            | Public method and constructor comments are required             | 3        | 40–42 |

### jpass/data/EntriesRepository.java

| Rule                          | Violation  | Priority | Line    |
|-------------------------------|--|----------|---------|
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 3        | 60      |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 3        | 65      |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'inputStream' (lines '113'-'119').   | 5        | 113–119 |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'inputStream' (lines '113'-'117').   | 5        | 113–117 |
| DataflowAnomalyAnalysis       | Found 'DU'-anomaly for variable 'entries' (lines '121'-'132').   | 5        | 121–132 |
| AvoidRethrowingException      | A catch statement that catches an exception only to rethrow it should be avoided.                              | 3        | 122–124 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 124     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 3        | 125     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 3        | 125     |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'outputStream' (lines '141'-'144').  | 5        | 141–144 |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'outputStream' (lines '141'-'146').  | 5        | 141–146 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 149     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 3        | 150     |
| PreserveStackTrace            | New exception is thrown in catch block, original stack trace may be lost                                       | 3        | 150     |
|                               |  |          |         |

#### jpass/ui/CopiablePasswordField.java

| Violation   | Priority  | Line  |
|---|---|---|
| Classes implementing Serializable should set a serialVersionUID     | 3   | 40–52   |
| Field comments are required   | 3   | 42  |
| Parameter 'copyEnabled' is not assigned and could be declared final | 3   | 44  |
| Public method and constructor comments are required                 | 3   | 44–47   |
|   | Classes implementing Serializable should set a serialVersionUID  Field comments are required  Parameter 'copyEnabled' is not assigned and could be declared final | Classes implementing Serializable should set a serialVersionUID 3  Field comments are required 3  Parameter 'copyEnabled' is not assigned and could be declared final 3 |

### jpass/ui/EntryDetailsTable.java

| Rule                    | Violation  | Priority | Line   |
|-------------------------|--|----------|--------|
| MissingSerialVersionUID | Classes implementing Serializable should set a serialVersionUID  | 3        | 51–142 |
| CommentRequired         | Field comments are required  | 3        | 52–53  |
| CommentRequired         | Enum comments are required   | 3        | 55–77  |
| CommentRequired         | Field comments are required  | 3        | 62     |
| CommentRequired         | Field comments are required  | 3        | 63     |
| UnnecessaryModifier     | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 3        | 65–68  |
| UnnecessaryModifier     | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 3        | 65–68  |

| UnnecessaryFinalModifier   | Unnecessary modifier 'private' on constructor 'DetailType(String, Function)': enum constructors are implicitly private | 3 | 65–68   |
|----------------------------|--|---|---------|
| MethodArgumentCouldBeFinal | Parameter 'description' is not assigned and could be declared final  | 3 | 65      |
| MethodArgumentCouldBeFinal | Parameter 'valueMapper' is not assigned and could be declared final  | 3 | 65      |
| MethodArgumentCouldBeFinal | Parameter 'entry' is not assigned and could be declared final  | 3 | 74      |
| CommentRequired            | Public method and constructor comments are required  | 3 | 74–76   |
| CommentRequired            | Field comments are required  | 3 | 79–80   |
| CommentRequired            | Field comments are required  | 3 | 82–86   |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.                                 | 3 | 88      |
| CommentRequired            | Field comments are required  | 3 | 88      |
| CommentRequired            | Field comments are required  | 3 | 89      |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.                                 | 3 | 89      |
| CommentRequired            | Public method and constructor comments are required  | 3 | 91–111  |
| MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final  | 3 | 114     |
| MethodArgumentCouldBeFinal | Parameter 'column' is not assigned and could be declared final   | 3 | 114     |
| MethodArgumentCouldBeFinal | Parameter 'renderer' is not assigned and could be declared final   | 3 | 119     |
| MethodArgumentCouldBeFinal | Parameter 'column' is not assigned and could be declared final   | 3 | 119     |
| MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final  | 3 | 119     |
| LocalVariableCouldBeFinal  | Local variable 'component' could be declared final   | 3 | 120     |
| LocalVariableCouldBeFinal  | Local variable 'rendererWidth' could be declared final   | 3 | 122     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)   | 3 | 122     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)   | 3 | 123     |
| LocalVariableCouldBeFinal  | Local variable 'tableColumn' could be declared final   | 3 | 123     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)   | 3 | 124     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)   | 3 | 124     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)   | 3 | 124     |
| CommentRequired            | Public method and constructor comments are required  | 3 | 129–131 |
| MethodArgumentCouldBeFinal | Parameter 'entry' is not assigned and could be declared final  | 3 | 133     |
| CommentRequired            | Public method and constructor comments are required  | 3 | 133–137 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)   | 3 | 134–136 |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)   | 3 | 134–136 |
| CommentRequired            | Public method and constructor comments are required  | 3 | 139–141 |
|                            |  |   |         |

# jpass/ui/EntryDialog.java

| Rule                         | Violation  | Priority | Line   |
|------------------------------|--|----------|--------|
| StdCyclomaticComplexity      | The class 'EntryDialog' has a Standard Cyclomatic Complexity of 6 (Highest = 11).      | 3        | 65–301 |
| ModifiedCyclomaticComplexity | The class 'EntryDialog' has a Modified Cyclomatic Complexity of 6 (Highest = 11).      | 3        | 65–301 |
| MissingSerialVersionUID      | Classes implementing Serializable should set a serialVersionUID                        | 3        | 65–301 |
| TooManyFields                | Too many fields  | 3        | 65–301 |
| CommentRequired              | Field comments are required  | 3        | 67     |
| SingularField                | Perhaps 'fieldPanel' could be replaced by a local variable.                            | 3        | 69     |
| SingularField                | Perhaps 'fieldPanel' could be replaced by a local variable.                            | 3        | 69     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 69     |
| CommentRequired              | Field comments are required  | 3        | 69     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 70     |
| SingularField                | Perhaps 'notesPanel' could be replaced by a local variable.                            | 3        | 70     |
| CommentRequired              | Field comments are required  | 3        | 70     |
| SingularField                | Perhaps 'notesPanel' could be replaced by a local variable.                            | 3        | 70     |
|                              |  |          |        |

| SingularField                                  | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 3 | 71 |
|--|--|---|----|
| CommentRequired                                | Field comments are required  | 3 | 71 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 71 |
| SingularField                                  | Perhaps 'buttonPanel' could be replaced by a local variable.                           | 3 | 71 |
| CommentRequired                                | Field comments are required  | 3 | 72 |
| SingularField                                  | Perhaps 'passwordButtonPanel' could be replaced by a local variable.                   | 3 | 72 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 72 |
| LongVariable                                   | Avoid excessively long variable names like passwordButtonPanel                         | 3 | 72 |
| SingularField                                  | Perhaps 'passwordButtonPanel' could be replaced by a local variable.                   | 3 | 72 |
| CommentRequired                                | Field comments are required  | 3 | 74 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 74 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 75 |
| CommentRequired                                | Field comments are required  | 3 | 75 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 76 |
| CommentRequired                                | Field comments are required  | 3 | 76 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 77 |
| CommentRequired                                | Field comments are required  | 3 | 77 |
| CommentRequired                                | Field comments are required  | 3 | 78 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 78 |
| CommentRequired                                | Field comments are required  | 3 | 79 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 79 |
| CommentRequired                                | Field comments are required  | 3 | 81 |
| SingularField                                  | Perhaps 'okButton' could be replaced by a local variable.                              | 3 | 81 |
| SingularField                                  | Perhaps 'okButton' could be replaced by a local variable.                              | 3 | 81 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 81 |
| CommentRequired                                | Field comments are required  | 3 | 82 |
| SingularField                                  | Perhaps 'cancelButton' could be replaced by a local variable.                          | 3 | 82 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 82 |
| SingularField                                  | Perhaps 'cancelButton' could be replaced by a local variable.                          | 3 | 82 |
| CommentRequired                                | Field comments are required  | 3 | 83 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 83 |
| SingularField                                  | Perhaps 'generateButton' could be replaced by a local variable.                        | 3 | 84 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 84 |
| CommentRequired                                | Field comments are required  | 3 | 84 |
| SingularField                                  | Perhaps 'generateButton' could be replaced by a local variable.                        | 3 | 84 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 85 |
| SingularField                                  | Perhaps 'copyButton' could be replaced by a local variable.                            | 3 | 85 |
| SingularField                                  | Perhaps 'copyButton' could be replaced by a local variable.                            | 3 | 85 |
| CommentRequired                                | Field comments are required  | 3 | 85 |
| CommentRequired  Rear Mambara Should Socialize | Field comments are required  | 3 | 87 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 87 |
| BeanMembersShouldSerialize                     | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3 | 89 |
| CommentRequired                                | Field comments are required  | 3 | 89 |

| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.                  | 3 | 91      |
|------------------------------|---|---|---------|
| CommentRequired              | Field comments are required   | 3 | 91      |
| CommentRequired              | Field comments are required   | 3 | 93      |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.                  | 3 | 93      |
| MethodArgumentCouldBeFinal   | Parameter 'title' is not assigned and could be declared final   | 3 | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'parent' is not assigned and could be declared final  | 3 | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'newEntry' is not assigned and could be declared final  | 3 | 103     |
| MethodArgumentCouldBeFinal   | Parameter 'entry' is not assigned and could be declared final   | 3 | 103     |
| NcssCount                    | The constructor 'EntryDialog(JPassFrame, String, Entry, boolean)' has a NCSS line count of 69.          | 3 | 103–191 |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 108     |
| CyclomaticComplexity         | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                            | 3 | 194–225 |
| StdCyclomaticComplexity      | The method 'actionPerformed' has a Standard Cyclomatic Complexity of 11.                                | 3 | 194–225 |
| ShortVariable                | Avoid variables with short names like e   | 3 | 194     |
| MethodArgumentCouldBeFinal   | Parameter 'e' is not assigned and could be declared final   | 3 | 194     |
| ModifiedCyclomaticComplexity | The method 'actionPerformed' has a Modified Cyclomatic Complexity of 11.                                | 3 | 194–225 |
| CyclomaticComplexity         | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                            | 3 | 194–225 |
| LocalVariableCouldBeFinal    | Local variable 'command' could be declared final  | 3 | 195     |
| InefficientEmptyStringCheck  | String.trim().length() == 0 / String.trim().isEmpty() is an inefficient way to validate a blank String. | 3 | 200     |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method           | 3 | 202     |
| ConfusingTernary             | Avoid if (x != y); else;  | 3 | 203-209 |
| OnlyOneReturn                | A method should have only one exit point, and that should be the last statement in the method           | 3 | 205     |
| LocalVariableCouldBeFinal    | Local variable 'gpd' could be declared final  | 3 | 215     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)  | 3 | 216–221 |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)  | 3 | 216–221 |
| MethodArgumentCouldBeFinal   | Parameter 'entry' is not assigned and could be declared final   | 3 | 232     |
| NPathComplexity              | The method 'fillDialogFromEntry(Entry)' has an NPath complexity of 256, current threshold is 200        | 3 | 232–244 |
| CyclomaticComplexity         | The method 'getEntryFromDialog()' has a cyclomatic complexity of 11.                                    | 3 | 251–267 |
| NPathComplexity              | The method 'getEntryFromDialog()' has an NPath complexity of 243, current threshold is 200              | 3 | 251–267 |
| CyclomaticComplexity         | The method 'getEntryFromDialog()' has a cyclomatic complexity of 11.                                    | 3 | 251–267 |
| LocalVariableCouldBeFinal    | Local variable 'entry' could be declared final  | 3 | 252     |
| LocalVariableCouldBeFinal    | Local variable 'title' could be declared final  | 3 | 254     |
| LocalVariableCouldBeFinal    | Local variable 'user' could be declared final   | 3 | 255     |
| LocalVariableCouldBeFinal    | Local variable 'password' could be declared final   | 3 | 256     |
| LocalVariableCouldBeFinal    | Local variable 'url' could be declared final  | 3 | 257     |
| LocalVariableCouldBeFinal    | Local variable 'notes' could be declared final  | 3 | 258     |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 260     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                                      | 3 | 260     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                                      | 3 | 261     |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 261     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                                      | 3 | 262     |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 262     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                                      | 3 | 263     |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 263     |
| LawOfDemeter                 | Potential violation of Law of Demeter (object not created locally)                                      | 3 | 264     |
| NullAssignment               | Assigning an Object to null is a code smell. Consider refactoring.                                      | 3 | 264     |
| DataflowAnomalyAnalysis      | Found 'DD'-anomaly for variable 'titlelsOk' (lines '285'-'294').  | 5 | 285–294 |
| LocalVariableCouldBeFinal    | Local variable 'parent' could be declared final   | 3 | 286     |
| DataflowAnomalyAnalysis      | Found 'DU'-anomaly for variable 'parent' (lines '286'-'300').   | 5 | 286–300 |
|                              | • • •   |   |         |

| LawOfDemeter              | Potential violation of Law of Demeter (object not created locally) | 3 | 291 |
|---------------------------|--|---|-----|
| LawOfDemeter              | Potential violation of Law of Demeter (method chain calls)         | 3 | 292 |
| LawOfDemeter              | Potential violation of Law of Demeter (method chain calls)         | 3 | 292 |
| LocalVariableCouldBeFinal | Local variable 'entry' could be declared final                     | 3 | 292 |

# jpass/ui/GeneratePasswordDialog.java

| Rule                         | Violation  | Priority | Line   |
|------------------------------|--|----------|--------|
| MissingSerialVersionUID      | Classes implementing Serializable should set a serialVersionUID                              | 3        | 63–258 |
| StdCyclomaticComplexity      | The class 'GeneratePasswordDialog' has a Standard Cyclomatic Complexity of 4 (Highest = 11). | 3        | 63–258 |
| ModifiedCyclomaticComplexity | The class 'GeneratePasswordDialog' has a Modified Cyclomatic Complexity of 4 (Highest = 11). | 3        | 63–258 |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 79     |
| CommentRequired              | Field comments are required  | 3        | 79     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 80     |
| CommentRequired              | Field comments are required  | 3        | 80     |
| LongVariable                 | Avoid excessively long variable names like customSymbolsCheck                                | 3        | 80     |
| LongVariable                 | Avoid excessively long variable names like customSymbolsField                                | 3        | 82     |
| CommentRequired              | Field comments are required  | 3        | 82     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 82     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 83     |
| CommentRequired              | Field comments are required  | 3        | 83     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 85     |
| SingularField                | Perhaps 'lengthLabel' could be replaced by a local variable.                                 | 3        | 85     |
| CommentRequired              | Field comments are required  | 3        | 85     |
| SingularField                | Perhaps 'lengthLabel' could be replaced by a local variable.                                 | 3        | 85     |
| CommentRequired              | Field comments are required  | 3        | 86     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 86     |
| SingularField                | Perhaps 'lengthPanel' could be replaced by a local variable.                                 | 3        | 88     |
| SingularField                | Perhaps 'lengthPanel' could be replaced by a local variable.                                 | 3        | 88     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 88     |
| CommentRequired              | Field comments are required  | 3        | 88     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 89     |
| SingularField                | Perhaps 'charactersPanel' could be replaced by a local variable.                             | 3        | 89     |
| CommentRequired              | Field comments are required  | 3        | 89     |
| SingularField                | Perhaps 'charactersPanel' could be replaced by a local variable.                             | 3        | 89     |
| SingularField                | Perhaps 'passwordPanel' could be replaced by a local variable.                               | 3        | 90     |
| CommentRequired              | Field comments are required  | 3        | 90     |
| SingularField                | Perhaps 'passwordPanel' could be replaced by a local variable.                               | 3        | 90     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 90     |
| BeanMembersShouldSerialize   | Found non-transient, non-static member. Please mark as transient or provide accessors.       | 3        | 91     |
| CommentRequired              | Field comments are required  | 3        | 91     |
| SingularField                | Perhaps 'buttonPanel' could be replaced by a local variable.                                 | 3        | 91     |
| SingularField                | Perhaps 'buttonPanel' could be replaced by a local variable.                                 | 3        | 91     |
| CommentRequired              | Field comments are required  | 3        | 93     |
|                              |  |          |        |

| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors.                   | 3 | 93      |
|----------------------------------|--|---|---------|
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors.                   | 3 | 94      |
| CommentRequired                  | Field comments are required  | 3 | 94      |
| SingularField                    | Perhaps 'generateButton' could be replaced by a local variable.  | 3 | 95      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors.                   | 3 | 95      |
| SingularField                    | Perhaps 'generateButton' could be replaced by a local variable.  | 3 | 95      |
| CommentRequired                  | Field comments are required  | 3 | 95      |
| CommentRequired                  | Field comments are required  | 3 | 97      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors.                   | 3 | 97      |
| CommentRequired                  | Field comments are required  | 3 | 99      |
| BeanMembersShouldSerialize       | Found non-transient, non-static member. Please mark as transient or provide accessors.                   | 3 | 99      |
| MethodArgumentCouldBeFinal       | Parameter 'parent' is not assigned and could be declared final   | 3 | 106     |
| MethodArgumentCouldBeFinal       | Parameter 'parent' is not assigned and could be declared final   | 3 | 116     |
| NcssCount                        | The method 'initDialog(Component, boolean)' has a NCSS line count of 64.                                 | 3 | 129–210 |
| NullAssignment                   | Assigning an Object to null is a code smell. Consider refactoring.                                       | 3 | 133     |
| LongVariable                     | Avoid excessively long variable names like passwordGenerationLength                                      | 3 | 139     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)   | 3 | 139     |
| AvoidLiteralsInIfCondition       | Avoid using Literals in Conditional Statements   | 3 | 140     |
| AvoidLiteralsInIfCondition       | Avoid using Literals in Conditional Statements   | 3 | 143     |
| AvoidInstantiatingObjectsInLoops | Avoid instantiating new objects inside loops   | 3 | 155     |
| LongVariable                     | Avoid excessively long variable names like generateButtonPanel   | 3 | 178     |
| LocalVariableCouldBeFinal        | Local variable 'generateButtonPanel' could be declared final   | 3 | 178     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)   | 3 | 201     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)   | 3 | 202     |
| LawOfDemeter                     | Potential violation of Law of Demeter (method chain calls)   | 3 | 203     |
| CyclomaticComplexity             | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                             | 3 | 216–253 |
| StdCyclomaticComplexity          | The method 'actionPerformed' has a Standard Cyclomatic Complexity of 11.                                 | 3 | 216–253 |
| CyclomaticComplexity             | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 11.                             | 3 | 216–253 |
| MethodArgumentCouldBeFinal       | Parameter 'e' is not assigned and could be declared final  | 3 | 216     |
| ShortVariable                    | Avoid variables with short names like e  | 3 | 216     |
| ModifiedCyclomaticComplexity     | The method 'actionPerformed' has a Modified Cyclomatic Complexity of 11.                                 | 3 | 216–253 |
| LocalVariableCouldBeFinal        | Local variable 'command' could be declared final   | 3 | 217     |
| UseStringBufferForStringAppends  | Prefer StringBuilder (non-synchronized) or StringBuffer (synchronized) over += for concatenating strings | 3 | 224     |
| LawOfDemeter                     | Potential violation of Law of Demeter (object not created locally)                                       | 3 | 232     |
| OnlyOneReturn                    | A method should have only one exit point, and that should be the last statement in the method            | 3 | 234     |
| LocalVariableCouldBeFinal        | Local variable 'generated' could be declared final   | 3 | 237     |
| LocalVariableCouldBeFinal        | Local variable 'passwordLength' could be declared final  | 3 | 238     |
| LawOfDemeter                     | Potential violation of Law of Demeter (object not created locally)                                       | 3 | 240     |
| LawOfDemeter                     | Potential violation of Law of Demeter (object not created locally)                                       | 3 | 240     |
|                                  |  |   |         |

## jpass/ui/JPassFrame.java

| Rule                  | Violation   | Priority | Line   |
|-----------------------|---|----------|--------|
| TooManyStaticImports  | Too many static imports may lead to messy code                                    | 3        | 29–351 |
| ExcessiveImports      | A high number of imports can indicate a high degree of coupling within an object. | 3        | 29–351 |
| SingleMethodSingleton | Class contains multiple getInstance methods. Please review.                       | 2        | 71–351 |

| SingleMethodSingleton       | Class contains multiple getInstance methods. Please review.                                    | 2 | 71–351 |
|-----------------------------|--|---|--------|
| MissingSerialVersionUID     | Classes implementing Serializable should set a serialVersionUID                                | 3 | 71–351 |
| CommentRequired             | Field comments are required  | 3 | 73     |
| VariableNamingConventions   | Variables should start with a lowercase character, 'INSTANCE' starts with uppercase character. | 1 | 75     |
| CommentRequired             | Field comments are required  | 3 | 75     |
| SuspiciousConstantFieldName | The field name indicates a constant but its modifiers do not                                   | 3 | 75     |
| CommentRequired             | Field comments are required  | 3 | 77     |
| CommentRequired             | Field comments are required  | 3 | 78     |
| CommentRequired             | Field comments are required  | 3 | 80     |
| SingularField               | Perhaps 'topContainerPanel' could be replaced by a local variable.                             | 3 | 81     |
| CommentRequired             | Field comments are required  | 3 | 81     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 81     |
| SingularField               | Perhaps 'topContainerPanel' could be replaced by a local variable.                             | 3 | 81     |
| SingularField               | Perhaps 'jpassMenuBar' could be replaced by a local variable.                                  | 3 | 82     |
| CommentRequired             | Field comments are required  | 3 | 82     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 82     |
| SingularField               | Perhaps 'jpassMenuBar' could be replaced by a local variable.                                  | 3 | 82     |
| CommentRequired             | Field comments are required  | 3 | 83     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 84     |
| SingularField               | Perhaps 'fileMenu' could be replaced by a local variable.                                      | 3 | 84     |
| CommentRequired             | Field comments are required  | 3 | 84     |
| SingularField               | Perhaps 'fileMenu' could be replaced by a local variable.                                      | 3 | 84     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 85     |
| CommentRequired             | Field comments are required  | 3 | 85     |
| SingularField               | Perhaps 'editMenu' could be replaced by a local variable.                                      | 3 | 85     |
| SingularField               | Perhaps 'editMenu' could be replaced by a local variable.                                      | 3 | 85     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 86     |
| CommentRequired             | Field comments are required  | 3 | 86     |
| SingularField               | Perhaps 'toolsMenu' could be replaced by a local variable.                                     | 3 | 86     |
| SingularField               | Perhaps 'toolsMenu' could be replaced by a local variable.                                     | 3 | 86     |
| SingularField               | Perhaps 'helpMenu' could be replaced by a local variable.                                      | 3 | 87     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 87     |
| SingularField               | Perhaps 'helpMenu' could be replaced by a local variable.                                      | 3 | 87     |
| CommentRequired             | Field comments are required  | 3 | 87     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 88     |
| SingularField               | Perhaps 'toolBar' could be replaced by a local variable.                                       | 3 | 88     |
| SingularField               | Perhaps 'toolBar' could be replaced by a local variable.                                       | 3 | 88     |
| CommentRequired             | Field comments are required  | 3 | 88     |
| SingularField               | Perhaps 'scrollPane' could be replaced by a local variable.                                    | 3 | 89     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 89     |
| CommentRequired             | Field comments are required  | 3 | 89     |
| SingularField               | Perhaps 'scrollPane' could be replaced by a local variable.                                    | 3 | 89     |
| BeanMembersShouldSerialize  | Found non-transient, non-static member. Please mark as transient or provide accessors.         | 3 | 91     |
| CommentRequired             | Field comments are required  | 3 | 91     |
| CommentRequired             | Field comments are required  | 3 | 92     |
| CommentRequired             | Field comments are required  | 3 | 93     |

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|--|---|---|---------|
| BeanMembersShouldSerialize                 | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 3 | 93      |
| RedundantFieldInitializer                  | Avoid using redundant field initializer for 'processing'  | 3 | 94      |
| CommentRequired                            | Field comments are required   | 3 | 94      |
| AvoidUsingVolatile                         | Use of modifier volatile is not recommended.  | 2 | 94      |
| AvoidUsingVolatile                         | Use of modifier volatile is not recommended.  | 2 | 94      |
| NcssCount                                  | The constructor 'JPassFrame(String)' has a NCSS line count of 93.   | 3 | 96–211  |
| MethodArgumentCouldBeFinal                 | Parameter 'fileName' is not assigned and could be declared final  | 3 | 96      |
| ExcessiveMethodLength                      | Avoid really long methods.  | 3 | 96–211  |
| CallSuperInConstructor                     | It is a good practice to call super() in a constructor  | 3 | 96–211  |
| AvoidCatchingGenericException              | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block | 3 | 99      |
| CommentRequired                            | Public method and constructor comments are required   | 3 | 213–215 |
| MethodArgumentCouldBeFinal                 | Parameter 'fileName' is not assigned and could be declared final  | 3 | 217     |
| AvoidSynchronizedAtMethodLevel             | Use block level rather than method level synchronization  | 3 | 217–222 |
| CommentRequired                            | Public method and constructor comments are required   | 3 | 217–222 |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 254     |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 255     |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 255     |
| MethodArgumentCouldBeFinal                 | Parameter 'selectTitle' is not assigned and could be declared final   | 3 | 264     |
| LocalVariableCouldBeFinal                  | Local variable 'entries' could be declared final  | 3 | 266     |
| LocalVariableCouldBeFinal                  | Local variable 'searchCriteria' could be declared final   | 3 | 268     |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 269–271 |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 269–271 |
| UseLocaleWithCaseConversions               | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 3 | 270     |
| UseLocaleWithCaseConversions               | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 3 | 270     |
| UseLocaleWithCaseConversions               | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 3 | 270     |
| UseLocaleWithCaseConversions               | When doing a String.toLowerCase()/toUpperCase() call, use a Locale  | 3 | 270     |
| LocalVariableCouldBeFinal                  | Local variable 'index' could be declared final  | 3 | 274     |
| LawOfDemeter                               | Potential violation of Law of Demeter (object not created locally)  | 3 | 278     |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 297     |
| OnlyOneReturn                              | A method should have only one exit point, and that should be the last statement in the method                     | 3 | 301     |
| LocalVariableCouldBeFinal                  | Local variable 'option' could be declared final   | 3 | 304     |
| DoNotCallSystemExit                        | System.exit() should not be used in J2EE/JEE apps   | 3 | 306     |
| OnlyOneReturn                              | A method should have only one exit point, and that should be the last statement in the method                     | 3 | 307     |
| DoNotCallSystemExit                        | System.exit() should not be used in J2EE/JEE apps   | 3 | 312     |
| MethodArgumentCouldBeFinal                 | Parameter 'processing' is not assigned and could be declared final  | 3 | 324     |
| LocalVariableCouldBeFinal                  | Local variable 'actionType' could be declared final   | 3 | 326     |
| LawOfDemeter                               | Potential violation of Law of Demeter (method chain calls)  | 3 | 327     |
|  |   |   |         |

# jpass/ui/MessageDialog.java

| Rule                    | Violation   | Priority | Line   |
|-------------------------|---|----------|--------|
| ExcessiveImports        | A high number of imports can indicate a high degree of coupling within an object. | 3        | 29–350 |
| TooManyMethods          | This class has too many methods, consider refactoring it.                         | 3        | 72–350 |
| MissingSerialVersionUID | Classes implementing Serializable should set a serialVersionUID                   | 3        | 72–350 |
| CommentRequired         | Field comments are required   | 3        | 74     |
| CommentRequired         | Field comments are required   | 3        | 76     |
| CommentRequired         | Field comments are required   | 3        | 77     |
| LongVariable            | Avoid excessively long variable names like YES_NO_CANCEL_OPTION                   | 3        | 78     |
| CommentRequired         | Field comments are required   | 3        | 78     |

| CommentRequired                     | Field comments are required  | 3 | 79      |
|-------------------------------------|--|---|---------|
| CommentRequired                     | Field comments are required  | 3 | 81      |
| CommentRequired                     | Field comments are required  | 3 | 82      |
| CommentRequired                     | Field comments are required  | 3 | 83      |
| CommentRequired                     | Field comments are required  | 3 | 84      |
| CommentRequired                     | Field comments are required  | 3 | 85      |
| BeanMembersShouldSerialize          | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 3 | 87      |
| CommentRequired                     | Field comments are required  | 3 | 87      |
| MethodArgumentCouldBeFinal          | Parameter 'optionType' is not assigned and could be declared final   | 3 | 89      |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 89      |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 94      |
| MethodArgumentCouldBeFinal          | Parameter 'optionType' is not assigned and could be declared final   | 3 | 94      |
| MethodArgumentCouldBeFinal          | Parameter 'optionType' is not assigned and could be declared final   | 3 | 99      |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 99      |
| LocalVariableCouldBeFinal           | Local variable 'buttonPanel' could be declared final   | 3 | 105     |
| AvoidDuplicateLiterals              | The String literal "accept" appears 4 times in this file; the first occurrence is on line 109                  | 3 | 109     |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3 | 129     |
| LocalVariableCouldBeFinal           | Local variable 'mainPanel' could be declared final   | 3 | 131     |
| LocalVariableCouldBeFinal           | Local variable 'messagePanel' could be declared final  | 3 | 134     |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3 | 144–145 |
| LocalVariableCouldBeFinal           | Local variable 'image' could be declared final   | 3 | 150     |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3 | 157     |
| MethodArgumentCouldBeFinal          | Parameter 'option' is not assigned and could be declared final   | 3 | 165     |
| MethodArgumentCouldBeFinal          | Parameter 'name' is not assigned and could be declared final   | 3 | 165     |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 165     |
| LocalVariableCouldBeFinal           | Local variable 'button' could be declared final  | 3 | 166     |
| MethodArgumentCouldBeFinal          | Parameter 'event' is not assigned and could be declared final  | 3 | 178     |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 183     |
| MethodArgumentCouldBeFinal          | Parameter 'icon' is not assigned and could be declared final   | 3 | 187     |
| MethodArgumentCouldBeFinal          | Parameter 'coptionType' is not assigned and could be declared final  | 3 | 187     |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'ret' (lines '188'-'196').   | 5 | 188–196 |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'dialog' (lines '189'-'191').  | 5 | 189–191 |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'dialog' (lines '189'-'193').  | 5 | 189–193 |
| LocalVariableCouldBeFinal           | Local variable 'panel' could be declared final   | 3 | 251     |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'repeat' (lines '255'-'257').  | 5 | 255–257 |
|                                     |  |   |         |
| DataflowAnomalyAnalysis             | Found 'DU'-anomaly for variable 'repeat' (lines '255'-'290').  | 5 | 255–290 |
| LocalVariableCouldBeFinal           | Local variable 'option' could be declared final  | 3 | 266     |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3 | 268     |
| ReturnEmptyCollectionRatherThanNull | Return an empty collection rather than null.   | 1 | 276     |
| OnlyOneReturn                       | A method should have only one exit point, and that should be the last statement in the method                  | 3 | 276     |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'passwordHash' (lines '280'-'282').  | 5 | 280–282 |
| AvoidCatchingGenericException       | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3 | 283     |
| MethodArgumentCouldBeFinal          | Parameter 'name' is not assigned and could be declared final   | 3 | 298     |
| OnlyOneReturn                       | A method should have only one exit point, and that should be the last statement in the method                  | 3 | 300     |
| AvoidCatchingGenericException       | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3 | 301     |
| MethodArgumentCouldBeFinal          | Parameter 'name' is not assigned and could be declared final   | 3 | 309     |
| LocalVariableCouldBeFinal           | Local variable 'builder' could be declared final   | 3 | 310     |
| DataflowAnomalyAnalysis             | Found 'DD'-anomaly for variable 'bufferedReader' (lines '311'-'314').  | 5 | 311–314 |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3 | 313     |
| LocalVariableCouldBeFinal           | Local variable 'is' could be declared final  | 3 | 313     |
|                                     |  |   |         |

| UseProperClassLoader          | In J2EE, getClassLoader() might not work as expected. Use Thread.currentThread().getContextClassLoader() instead. | 3 | 313     |
|-------------------------------|---|---|---------|
| ShortVariable                 | Avoid variables with short names like is  | 3 | 313     |
| CloseResource                 | Ensure that resources like this InputStream object are closed after use   | 3 | 313     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 3 | 313     |
| CloseResource                 | Ensure that resources like this InputStream object are closed after use   | 3 | 313     |
| DataflowAnomalyAnalysis       | Found 'DU'-anomaly for variable 'line' (lines '316'-'331').   | 5 | 316–331 |
| AssignmentInOperand           | Avoid assignments in operands   | 3 | 316     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block    | 3 | 319     |
| GuardLogStatementJavaUtil     | Logger calls should be surrounded by log level guards.  | 2 | 320     |
| GuardDebugLogging             | Logger calls should be surrounded by log level guards.  | 2 | 320     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2 | 320     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2 | 320     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2 | 327     |
| GuardLogStatementJavaUtil     | Logger calls should be surrounded by log level guards.  | 2 | 327     |
| GuardDebugLogging             | Logger calls should be surrounded by log level guards.  | 2 | 327     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2 | 327     |
| LocalVariableCouldBeFinal     | Local variable 'area' could be declared final   | 3 | 341     |
| LocalVariableCouldBeFinal     | Local variable 'scrollPane' could be declared final   | 3 | 346     |

# jpass/ui/SearchPanel.java

| Rule                              | Violation  | Priority | Line    |
|-----------------------------------|--|----------|---------|
| MissingSerialVersionUID           | Classes implementing Serializable should set a serialVersionUID                        | 3        | 56–158  |
| CommentRequired                   | Field comments are required  | 3        | 58      |
| LongVariable                      | Avoid excessively long variable names like CLOSE_BUTTON_ACTION_COMMAND                 | 3        | 58      |
| CommentRequired                   | Field comments are required  | 3        | 59      |
| LongVariable                      | Avoid excessively long variable names like SEARCH_PANEL_CLOSE_ACTION                   | 3        | 59      |
| CommentRequired                   | Field comments are required  | 3        | 61      |
| BeanMembersShouldSerialize        | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 61      |
| CommentRequired                   | Field comments are required  | 3        | 62      |
| BeanMembersShouldSerialize        | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 62      |
| CommentRequired                   | Field comments are required  | 3        | 63      |
| BeanMembersShouldSerialize        | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 63      |
| MethodArgumentCouldBeFinal        | Parameter 'searchCallback' is not assigned and could be declared final                 | 3        | 70      |
| ShortVariable                     | Avoid variables with short names like e  | 3        | 81      |
| MethodArgumentCouldBeFinal        | Parameter 'e' is not assigned and could be declared final                              | 3        | 81      |
| ShortVariable                     | Avoid variables with short names like e  | 3        | 86      |
| MethodArgumentCouldBeFinal        | Parameter 'e' is not assigned and could be declared final                              | 3        | 86      |
| MethodArgumentCouldBeFinal        | Parameter 'e' is not assigned and could be declared final                              | 3        | 91      |
| ShortVariable                     | Avoid variables with short names like e  | 3        | 91      |
| LocalVariableCouldBeFinal         | Local variable 'closeAction' could be declared final                                   | 3        | 103-108 |
| ShortVariable                     | Avoid variables with short names like e  | 3        | 105     |
| MethodArgumentCouldBeFinal        | Parameter 'e' is not assigned and could be declared final                              | 3        | 105     |
| ConstructorCallsOverridableMethod | Overridable method 'setVisible' called during object construction                      | 1        | 116     |
| MethodArgumentCouldBeFinal        | Parameter 'visible' is not assigned and could be declared final                        | 3        | 120     |
| MethodArgumentCouldBeFinal        | Parameter 'enabled' is not assigned and could be declared final                        | 3        | 130     |
| ShortVariable                     | Avoid variables with short names like e  | 3        | 138     |
| MethodArgumentCouldBeFinal        | Parameter 'e' is not assigned and could be declared final                              | 3        | 138     |

LocalVariableCouldBeFinalLocal variable 'command' could be declared final3139DataflowAnomalyAnalysisFound 'DD'-anomaly for variable 'criteria' (lines '151'-'153').5151-153

### jpass/ui/StatusPanel.java

| Rule                              | Violation  | Priority | Line  |
|-----------------------------------|--|----------|-------|
| MissingSerialVersionUID           | Classes implementing Serializable should set a serialVersionUID                        | 3        | 44–72 |
| CommentRequired                   | Field comments are required  | 3        | 46    |
| BeanMembersShouldSerialize        | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 46    |
| CommentRequired                   | Field comments are required  | 3        | 47    |
| BeanMembersShouldSerialize        | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 47    |
| CommentRequired                   | Public method and constructor comments are required                                    | 3        | 49–57 |
| ConstructorCallsOverridableMethod | Overridable method 'setProcessing' called during object construction                   | 1        | 56    |
| CommentRequired                   | Public method and constructor comments are required                                    | 3        | 59–61 |
| CommentRequired                   | Public method and constructor comments are required                                    | 3        | 63–65 |
| CommentRequired                   | Public method and constructor comments are required                                    | 3        | 67–71 |
| MethodArgumentCouldBeFinal        | Parameter 'processing' is not assigned and could be declared final                     | 3        | 67    |

#### jpass/ui/Svglmagelcon.java

| Rule                          | Violation   | Priority | Line   |
|-------------------------------|---|----------|--------|
| MissingSerialVersionUID       | Classes implementing Serializable should set a serialVersionUID   | 3        | 45–172 |
| CommentRequired               | Field comments are required   | 3        | 46     |
| CommentRequired               | Field comments are required   | 3        | 49     |
| VariableNamingConventions     | Variables that are final and static should be all capitals, 'svgUniverse' is not all capitals.                    | 1        | 49     |
| CommentRequired               | Field comments are required   | 3        | 51     |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 3        | 51     |
| CommentRequired               | Field comments are required   | 3        | 52     |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 3        | 52     |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                            | 3        | 53     |
| CommentRequired               | Field comments are required   | 3        | 53     |
| MethodArgumentCouldBeFinal    | Parameter 'name' is not assigned and could be declared final  | 3        | 55     |
| CallSuperInConstructor        | It is a good practice to call super() in a constructor  | 3        | 55–57  |
| CommentRequired               | Public method and constructor comments are required   | 3        | 55–57  |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block    | 3        | 72     |
| GuardDebugLogging             | Logger calls should be surrounded by log level guards.  | 2        | 73     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2        | 73     |
| GuardLogStatementJavaUtil     | Logger calls should be surrounded by log level guards.  | 2        | 73     |
| GuardLogStatement             | Logger calls should be surrounded by log level guards.  | 2        | 73     |
| MethodArgumentCouldBeFinal    | Parameter 'dark' is not assigned and could be declared final  | 3        | 77     |
| LocalVariableCouldBeFinal     | Local variable 'dotIndex' could be declared final   | 3        | 79     |
| AvoidReassigningParameters    | Avoid reassigning parameters such as 'name'   | 2        | 80     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 3        | 82     |
| UseProperClassLoader          | In J2EE, getClassLoader() might not work as expected. Use Thread.currentThread().getContextClassLoader() instead. | 3        | 82     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)  | 3        | 82     |
| MethodArgumentCouldBeFinal    | Parameter 'y' is not assigned and could be declared final   | 3        | 98     |
| ShortVariable                 | Avoid variables with short names like c   | 3        | 98     |

| MethodArgumentCouldBeFinal              | Parameter 'x' is not assigned and could be declared final   | 3 | 98     |
|---|---|---|--------|
| MethodArgumentCouldBeFinal              | Parameter 'c' is not assigned and could be declared final   | 3 | 98     |
| ShortVariable                           | Avoid variables with short names like g   | 3 | 98     |
| ShortVariable                           | Avoid variables with short names like x   | 3 | 98     |
| MethodArgumentCouldBeFinal              | Parameter 'g' is not assigned and could be declared final   | 3 | 98     |
| ShortVariable                           | Avoid variables with short names like y   | 3 | 98     |
| AvoidSynchronizedAtMethodLevel          | Use block level rather than method level synchronization  | 3 | 98–115 |
| LocalVariableCouldBeFinal               | Local variable 'clipBounds' could be declared final   | 3 | 101    |
| LocalVariableCouldBeFinal               | Local variable 'g2' could be declared final   | 3 | 106    |
| ShortVariable                           | Avoid variables with short names like g2  | 3 | 106    |
| ShortVariable                           | Avoid variables with short names like g   | 3 | 117    |
| MethodArgumentCouldBeFinal              | Parameter 'x' is not assigned and could be declared final   | 3 | 117    |
| MethodArgumentCouldBeFinal              | Parameter 'y' is not assigned and could be declared final   | 3 | 117    |
| ShortVariable                           | Avoid variables with short names like x   | 3 | 117    |
| MethodArgumentCouldBeFinal              | Parameter 'g' is not assigned and could be declared final   | 3 | 117    |
| ShortVariable                           | Avoid variables with short names like y   | 3 | 117    |
| ShortVariable                           | Avoid variables with short names like x   | 3 | 139    |
| ShortVariable                           | Avoid variables with short names like g   | 3 | 139    |
| MethodArgumentCouldBeFinal              | Parameter 'g' is not assigned and could be declared final   | 3 | 139    |
| ShortVariable                           | Avoid variables with short names like y   | 3 | 139    |
| MethodArgumentCouldBeFinal              | Parameter 'y' is not assigned and could be declared final   | 3 | 139    |
| MethodArgumentCouldBeFinal              | Parameter 'x' is not assigned and could be declared final   | 3 | 139    |
| LocalVariableCouldBeFinal               | Local variable 'image' could be declared final  | 3 | 148    |
| LocalVariableCouldBeFinal               | Local variable 'g' could be declared final  | 3 | 149    |
| ShortVariable                           | Avoid variables with short names like g   | 3 | 149    |
| FieldDeclarationsShouldBeAtStartOfClass | Fields should be declared at the top of the class, before any method declarations, constructors, initializers or inner classes. | 3 | 158    |
| CommentRequired                         | Field comments are required   | 3 | 158    |
| LocalVariableCouldBeFinal               | Local variable 'lookAndFeel' could be declared final  | 3 | 169    |
| UnnecessaryParentheses                  | Useless parentheses.  | 4 | 170    |
| UselessParentheses                      | Useless parentheses.  | 4 | 170    |
| UselessParentheses                      | Useless parentheses.  | 4 | 170    |
|   |   |   |        |

### jpass/ui/TextComponentFactory.java

| Rule                       | Violation   | Priority | Line |
|----------------------------|---|----------|------|
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 3        | 65   |
| LocalVariableCouldBeFinal  | Local variable 'textField' could be declared final                  | 3        | 66   |
| MethodArgumentCouldBeFinal | Parameter 'copyEnabled' is not assigned and could be declared final | 3        | 87   |
| LocalVariableCouldBeFinal  | Local variable 'passwordField' could be declared final              | 3        | 88   |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 3        | 109  |
| LocalVariableCouldBeFinal  | Local variable 'textArea' could be declared final                   | 3        | 110  |

### jpass/ui/action/AbstractMenuAction.java

| Rule                       | Violation   | Priority | Line  |
|----------------------------|---|----------|-------|
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID     | 3        | 41–57 |
| MethodArgumentCouldBeFinal | Parameter 'accelerator' is not assigned and could be declared final | 3        | 50    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 3        | 50    |
| MethodArgumentCouldBeFinal | Parameter 'icon' is not assigned and could be declared final        | 3        | 50    |

### jpass/ui/action/CloseListener.java

| Rule                       | Violation   | Priority | Line  |
|----------------------------|---|----------|-------|
| AtLeastOneConstructor      | Each class should declare at least one constructor            | 3        | 42–55 |
| MethodArgumentCouldBeFinal | Parameter 'event' is not assigned and could be declared final | 3        | 50    |

# jpass/ui/action/MenuActionType.java

| Rule                                | Violation  | Priority | Line   |
|-------------------------------------|--|----------|--------|
| TooManyStaticImports                | Too many static imports may lead to messy code   | 3        | 29–244 |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 65     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 65     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 71     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 71     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 77     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 77     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 83     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 83     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 89     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 89     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 95     |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 95     |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 101    |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 101    |
| LocalVariableCouldBeFinal           | Local variable 'parent' could be declared final  | 3        | 102    |
| LocalVariableCouldBeFinal           | Local variable 'password' could be declared final  | 3        | 103    |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3        | 107    |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3        | 108    |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 117    |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 117    |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 123    |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 123    |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3        | 124    |
| MethodArgumentCouldBeFinal          | Parameter 'ev' is not assigned and could be declared final   | 3        | 129    |
| ShortVariable                       | Avoid variables with short names like ev   | 3        | 129    |
| ShortVariable                       | Avoid variables with short names like sb   | 3        | 130    |
| LocalVariableCouldBeFinal           | Local variable 'sb' could be declared final  | 3        | 130    |
| InsufficientStringBufferDeclaration | StringBuilder has been initialized with size 16, but has at least 77 characters appended.  | 3        | 130    |
| ConsecutiveAppendsShouldReuse       | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 3        | 131    |
| InefficientStringBuffering          | Avoid concatenating nonliterals in a StringBuffer/StringBuilder constructor or append().   | 3        | 131    |
| ConsecutiveLiteralAppends           | StringBuffer (or StringBuilder).append is called 5 consecutive times with literals. Use a single append with a single combined String. | 3        | 131    |
| InefficientStringBuffering          | Avoid concatenating nonliterals in a StringBuffer/StringBuilder constructor or append().   | 3        | 132    |
| ConsecutiveAppendsShouldReuse       | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 3        | 132    |
| ConsecutiveAppendsShouldReuse       | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 3        | 133    |
| ConsecutiveAppendsShouldReuse       | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 3        | 134    |
| AppendCharacterWithChar             | Avoid appending characters as strings in StringBuffer.append.  | 3        | 134    |
| AppendCharacterWithChar             | Avoid appending characters as strings in StringBuffer.append.  | 3        | 135    |
| ConsecutiveAppendsShouldReuse       | StringBuffer (or StringBuilder).append is called consecutively without reusing the target variable.                                    | 3        | 135    |
| LawOfDemeter                        | Potential violation of Law of Demeter (method chain calls)   | 3        | 135    |

| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)   | 3 | 136     |
|------------------------------|--|---|---------|
| ShortVariable                | Avoid variables with short names like ev   | 3 | 142     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 142     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 148     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 148     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 154     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 154     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 160     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 160     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 166     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 166     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 172     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 172     |
| LocalVariableCouldBeFinal    | Local variable 'parent' could be declared final  | 3 | 173     |
| LocalVariableCouldBeFinal    | Local variable 'entry' could be declared final   | 3 | 174     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 182     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 182     |
| LocalVariableCouldBeFinal    | Local variable 'parent' could be declared final  | 3 | 183     |
| LocalVariableCouldBeFinal    | Local variable 'entry' could be declared final   | 3 | 184     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 192     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 192     |
| LocalVariableCouldBeFinal    | Local variable 'parent' could be declared final  | 3 | 193     |
| LocalVariableCouldBeFinal    | Local variable 'entry' could be declared final   | 3 | 194     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 202     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 202     |
| ShortVariable                | Avoid variables with short names like ev   | 3 | 208     |
| MethodArgumentCouldBeFinal   | Parameter 'ev' is not assigned and could be declared final   | 3 | 208     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)   | 3 | 209     |
| LawOfDemeter                 | Potential violation of Law of Demeter (method chain calls)   | 3 | 209     |
| CommentRequired              | Field comments are required  | 3 | 213     |
| CommentRequired              | Field comments are required  | 3 | 214     |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly<br>private | 3 | 216–219 |
| MethodArgumentCouldBeFinal   | Parameter 'action' is not assigned and could be declared final   | 3 | 216     |
| UnnecessaryModifier          | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly<br>private | 3 | 216–219 |
| UnnecessaryFinalModifier     | Unnecessary modifier 'private' on constructor<br>'MenuActionType(AbstractMenuAction)': enum constructors are implicitly<br>private | 3 | 216–219 |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 217     |
| UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 217     |
| CommentRequired              | Public method and constructor comments are required  | 3 | 229–231 |
| MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final  | 3 | 233     |
| CommentRequired              | Public method and constructor comments are required  | 3 | 233–243 |
| LocalVariableCouldBeFinal    | Local variable 'actionMap' could be declared final   | 3 | 234     |
| DataflowAnomalyAnalysis      | Found 'DU'-anomaly for variable 'actionMap' (lines '234'-'243').   | 5 | 234–243 |
| LocalVariableCouldBeFinal    | Local variable 'inputMap' could be declared final  | 3 | 235     |
| DataflowAnomalyAnalysis      | Found 'DU'-anomaly for variable 'inputMap' (lines '235'-'243').  | 5 | 235–243 |
| LocalVariableCouldBeFinal    | Local variable 'type' could be declared final  | 3 | 236     |
| LocalVariableCouldBeFinal    | Local variable 'acc' could be declared final   | 3 | 238     |
|                              |  |   |         |

## jpass/ui/action/TableListener.java

| Rule                       | Violation  | Priority | Line    |
|----------------------------|--|----------|---------|
| AtLeastOneConstructor      | Each class should declare at least one constructor                 | 3        | 47–109  |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 3        | 56      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3        | 57      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 3        | 72      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 3        | 83      |
| MethodArgumentCouldBeFinal | Parameter 'evt' is not assigned and could be declared final        | 3        | 92      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3        | 93      |
| LocalVariableCouldBeFinal  | Local variable 'table' could be declared final                     | 3        | 97      |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3        | 97      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3        | 98      |
| LocalVariableCouldBeFinal  | Local variable 'point' could be declared final                     | 3        | 99      |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3        | 100     |
| LocalVariableCouldBeFinal  | Local variable 'rowAtPoint' could be declared final                | 3        | 100     |
| AvoidDeeplyNestedIfStmts   | Deeply nested ifthen statements are hard to read                   | 3        | 101–103 |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3        | 102     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3        | 105     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3        | 105     |
|                            |  |          |         |

### jpass/ui/action/TextComponentAction.java

| Rule                       | Violation   | Priority | Line  |
|----------------------------|---|----------|-------|
| AbstractNaming             | Abstract classes should be named AbstractXXX                        | 3        | 35–46 |
| MissingSerialVersionUID    | Classes implementing Serializable should set a serialVersionUID     | 3        | 35–46 |
| CommentRequired            | Class comments are required   | 3        | 35–46 |
| MethodArgumentCouldBeFinal | Parameter 'accelerator' is not assigned and could be declared final | 3        | 37    |
| CommentRequired            | Public method and constructor comments are required                 | 3        | 37–43 |
| MethodArgumentCouldBeFinal | Parameter 'mnemonic' is not assigned and could be declared final    | 3        | 37    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final        | 3        | 37    |
| CommentRequired            | Public method and constructor comments are required                 | 3        | 45    |
|                            |   |          |       |

## jpass/ui/action/TextComponentActionType.java

| Rule                          | Violation  | Priority | Line  |
|-------------------------------|--|----------|-------|
| ShortVariable                 | Avoid variables with short names like e  | 3        | 57    |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 3        | 57    |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 3        | 58    |
| EmptyCatchBlock               | Avoid empty catch blocks   | 3        | 62–64 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 62    |
| EmptyCatchBlock               | Avoid empty catch blocks   | 3        | 62–64 |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 3        | 70    |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'copyEnabled' (lines '71'-'73').   | 5        | 71–73 |
| ShortVariable                 | Avoid variables with short names like e  | 3        | 81    |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 3        | 81    |
| LocalVariableCouldBeFinal     | Local variable 'component' could be declared final   | 3        | 82    |
| EmptyCatchBlock               | Avoid empty catch blocks   | 3        | 86–88 |
| EmptyCatchBlock               | Avoid empty catch blocks   | 3        | 86–88 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 86    |
| MethodArgumentCouldBeFinal    | Parameter 'component' is not assigned and could be declared final  | 3        | 93    |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'copyEnabled' (lines '94'-'96').   | 5        | 94–96 |
| MethodArgumentCouldBeFinal    | Parameter 'e' is not assigned and could be declared final  | 3        | 103   |

| ShortVariable                               | Avoid variables with short names like e   | 3 | 103     |
|---|---|---|---------|
| LocalVariableCouldBeFinal                   | Local variable 'component' could be declared final  | 3 | 104     |
| MethodArgumentCouldBeFinal                  | Parameter 'component' is not assigned and could be declared final   | 3 | 111     |
| CyclomaticComplexity                        | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 12.  | 3 | 118–144 |
| MethodArgumentCouldBeFinal                  | Parameter 'e' is not assigned and could be declared final   | 3 | 118     |
| ShortVariable                               | Avoid variables with short names like e   | 3 | 118     |
| CyclomaticComplexity                        | The method 'actionPerformed(ActionEvent)' has a cyclomatic complexity of 12.  | 3 | 118–144 |
| LocalVariableCouldBeFinal                   | Local variable 'component' could be declared final  | 3 | 119     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 120     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 120     |
| LocalVariableCouldBeFinal                   | Local variable 'doc' could be declared final  | 3 | 122     |
| LocalVariableCouldBeFinal                   | Local variable 'caret' could be declared final  | 3 | 123     |
| LocalVariableCouldBeFinal                   | Local variable 'dot' could be declared final  | 3 | 124     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 124     |
| LocalVariableCouldBeFinal                   | Local variable 'mark' could be declared final   | 3 | 125     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 125     |
| ConfusingTernary                            | Avoid if (x != y); else;  | 3 | 126–139 |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 127     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 128     |
| DataflowAnomalyAnalysis                     | Found 'DD'-anomaly for variable 'delChars' (lines '129'-'135').   | 5 | 129–135 |
| AvoidDeeplyNestedIfStmts                    | Deeply nested ifthen statements are hard to read  | 3 | 130-137 |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 130     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 131     |
| LocalVariableCouldBeFinal                   | Local variable 'dotChars' could be declared final   | 3 | 131     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 132     |
| ShortVariable                               | Avoid variables with short names like c0  | 3 | 132     |
| LocalVariableCouldBeFinal                   | Local variable 'c0' could be declared final   | 3 | 132     |
| LocalVariableCouldBeFinal                   | Local variable 'c1' could be declared final   | 3 | 133     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 133     |
| ShortVariable                               | Avoid variables with short names like c1  | 3 | 133     |
| LawOfDemeter                                | Potential violation of Law of Demeter (object not created locally)  | 3 | 138     |
| AvoidCatchingGenericException               | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block  | 3 | 140     |
| EmptyCatchBlock                             | Avoid empty catch blocks  | 3 | 140–142 |
| EmptyCatchBlock                             | Avoid empty catch blocks  | 3 | 140–142 |
| MethodArgumentCouldBeFinal                  | Parameter 'component' is not assigned and could be declared final   | 3 | 147     |
| ShortVariable                               | Avoid variables with short names like e   | 3 | 154     |
| MethodArgumentCouldBeFinal                  | Parameter 'e' is not assigned and could be declared final   | 3 | 154     |
| LocalVariableCouldBeFinal                   | Local variable 'component' could be declared final  | 3 | 155     |
| MethodArgumentCouldBeFinal                  | Parameter 'component' is not assigned and could be declared final   | 3 | 163     |
| LawOfDemeter                                | Potential violation of Law of Demeter (method chain calls)  | 3 | 171     |
| MethodArgumentCouldBeFinal                  | Parameter 'e' is not assigned and could be declared final   | 3 | 178     |
| ShortVariable                               | Avoid variables with short names like e   | 3 | 178     |
| LocalVariableCouldBeFinal                   | Local variable 'component' could be declared final  | 3 | 179     |
| MethodArgumentCouldBeFinal                  | Parameter 'component' is not assigned and could be declared final   | 3 | 186     |
| LawOfDemeter                                | Potential violation of Law of Demeter (method chain calls)  | 3 | 193     |
| CommentRequired                             | Field comments are required   | 3 | 199     |
| CommentRequired                             | Field comments are required   | 3 | 200     |
| MethodArgumentCouldBeFinal                  | Parameter 'action' is not assigned and could be declared final  | 3 | 202     |
| UnnecessaryModifier                         | Unnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are<br>implicitly private  | 3 | 202–205 |
| CommentRequired  MethodArgumentCouldBeFinal | Field comments are required  Parameter 'action' is not assigned and could be declared final  Unnecessary modifier 'private' on constructor  'TextComponentActionType(TextComponentAction)': enum constructors are | 3 | }<br>}  |

| Unnecessary ModifierUnnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are<br>implicitly private3202–205UseLocaleWithCaseConversionsWhen doing a String.toLowerCase()/toUpperCase() call, use a Locale3203UseLocaleWithCaseConversionsWhen doing a String.toLowerCase()/toUpperCase() call, use a Locale3203CommentRequiredPublic method and constructor comments are required3215–217CommentRequiredPublic method and constructor comments are required3219–229MethodArgumentCouldBeFinalParameter 'component' is not assigned and could be declared final3219DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'actionMap' (lines '220'-'229').5220–229LocalVariableCouldBeFinalLocal variable 'actionMap' could be declared final3220LocalVariableCouldBeFinalLocal variable 'inputMap' could be declared final3221DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').5221–229LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222LocalVariableCouldBeFinalLocal variable 'acc' could be declared final3224 | UnnecessaryFinalModifier     | Unnecessary modifier 'private' on constructor<br>'TextComponentActionType(TextComponentAction)': enum constructors are<br>implicitly private | 3 | 202–205 |
|--|------------------------------|--|---|---------|
| UseLocaleWithCaseConversions When doing a String.toLowerCase()/toUpperCase() call, use a Locale  203 CommentRequired Public method and constructor comments are required Public method and constructor comments are required Public method and constructor comments are required 3 219–229 MethodArgumentCouldBeFinal Parameter 'component' is not assigned and could be declared final 3 219 DataflowAnomalyAnalysis Found 'DU'-anomaly for variable 'actionMap' (lines '220'-'229'). 5 220–229 LocalVariableCouldBeFinal Local variable 'actionMap' could be declared final 3 220 LocalVariableCouldBeFinal Local variable 'inputMap' could be declared final DataflowAnomalyAnalysis Found 'DU'-anomaly for variable 'inputMap' (lines '221'-'229'). 5 221–229 LocalVariableCouldBeFinal Local variable 'type' could be declared final 3 222  | UnnecessaryModifier          | 'TextComponentActionType(TextComponentAction)': enum constructors are  | 3 | 202–205 |
| CommentRequiredPublic method and constructor comments are required3215–217CommentRequiredPublic method and constructor comments are required3219–229MethodArgumentCouldBeFinalParameter 'component' is not assigned and could be declared final3219DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'actionMap' (lines '220'-'229').5220–229LocalVariableCouldBeFinalLocal variable 'actionMap' could be declared final3220LocalVariableCouldBeFinalLocal variable 'inputMap' could be declared final3221DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').5221–229LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222  | UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 203     |
| CommentRequired Public method and constructor comments are required 3 219–229  MethodArgumentCouldBeFinal Parameter 'component' is not assigned and could be declared final 3 219  DataflowAnomalyAnalysis Found 'DU'-anomaly for variable 'actionMap' (lines '220'-'229'). 5 220–229  LocalVariableCouldBeFinal Local variable 'actionMap' could be declared final 3 220  LocalVariableCouldBeFinal Local variable 'inputMap' could be declared final 3 221  DataflowAnomalyAnalysis Found 'DU'-anomaly for variable 'inputMap' (lines '221'-'229'). 5 221–229  LocalVariableCouldBeFinal Local variable 'type' could be declared final 3 222   | UseLocaleWithCaseConversions | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 203     |
| MethodArgumentCouldBeFinalParameter 'component' is not assigned and could be declared final3219DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'actionMap' (lines '220'-'229').5220-229LocalVariableCouldBeFinalLocal variable 'actionMap' could be declared final3220LocalVariableCouldBeFinalLocal variable 'inputMap' could be declared final3221DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').5221-229LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222  | CommentRequired              | Public method and constructor comments are required  | 3 | 215–217 |
| DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'actionMap' (lines '220'-'229').5220–229LocalVariableCouldBeFinalLocal variable 'actionMap' could be declared final3220LocalVariableCouldBeFinalLocal variable 'inputMap' could be declared final3221DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').5221–229LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222   | CommentRequired              | Public method and constructor comments are required  | 3 | 219–229 |
| LocalVariableCouldBeFinalLocal variable 'actionMap' could be declared final3220LocalVariableCouldBeFinalLocal variable 'inputMap' could be declared final3221DataflowAnomalyAnalysisFound 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').5221-229LocalVariableCouldBeFinalLocal variable 'type' could be declared final3222  | MethodArgumentCouldBeFinal   | Parameter 'component' is not assigned and could be declared final  | 3 | 219     |
| Local Variable Could Be Final Local variable 'input Map' could be declared final 3 221  Dataflow Anomaly Analysis Found 'DU'-anomaly for variable 'input Map' (lines '221'-'229'). 5 221–229  Local Variable Could Be Final Local variable 'type' could be declared final 3 222  | DataflowAnomalyAnalysis      | Found 'DU'-anomaly for variable 'actionMap' (lines '220'-'229').   | 5 | 220–229 |
| DataflowAnomalyAnalysis Found 'DU'-anomaly for variable 'inputMap' (lines '221'-'229'). 5 221–229  LocalVariableCouldBeFinal Local variable 'type' could be declared final 3 222   | LocalVariableCouldBeFinal    | Local variable 'actionMap' could be declared final   | 3 | 220     |
| Local Variable Could Be Final Local variable 'type' could be declared final 3 222  | LocalVariableCouldBeFinal    | Local variable 'inputMap' could be declared final  | 3 | 221     |
|  | DataflowAnomalyAnalysis      | Found 'DU'-anomaly for variable 'inputMap' (lines '221'-'229').  | 5 | 221–229 |
| Local Variable Could Be Final Local variable 'acc' could be declared final 3 224   | LocalVariableCouldBeFinal    | Local variable 'type' could be declared final  | 3 | 222     |
|  | LocalVariableCouldBeFinal    | Local variable 'acc' could be declared final   | 3 | 224     |

## jpass/ui/action/TextComponentPopupListener.java

| Rule                       | Violation  | Priority | Line  |
|----------------------------|--|----------|-------|
| TooManyStaticImports       | Too many static imports may lead to messy code   | 3        | 29–98 |
| CommentRequired            | Field comments are required  | 3        | 58    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 58    |
| CommentRequired            | Field comments are required  | 3        | 59    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 59    |
| CallSuperInConstructor     | It is a good practice to call super() in a constructor                                 | 3        | 61–77 |
| CommentRequired            | Public method and constructor comments are required                                    | 3        | 61–77 |
| ShortVariable              | Avoid variables with short names like e  | 3        | 79    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 3        | 79    |
| LocalVariableCouldBeFinal  | Local variable 'textComponent' could be declared final                                 | 3        | 81    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 3        | 82    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 3        | 82    |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally)                     | 3        | 82    |
| ShortVariable              | Avoid variables with short names like e  | 3        | 90    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 3        | 90    |
| MethodArgumentCouldBeFinal | Parameter 'e' is not assigned and could be declared final                              | 3        | 95    |
| ShortVariable              | Avoid variables with short names like e  | 3        | 95    |

## jpass/ui/action/Worker.java

| Rule                          | Violation  | Priority | Line  |
|-------------------------------|--|----------|-------|
| AbstractNaming                | Abstract classes should be named AbstractXXX   | 3        | 43–98 |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 3        | 48    |
| CallSuperInConstructor        | It is a good practice to call super() in a constructor   | 3        | 55–58 |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 71    |
| ShortVariable                 | Avoid variables with short names like e  | 3        | 81    |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 84    |

### jpass/ui/helper/EntryHelper.java

| Rule                          | Violation  | Priority | Line    |
|-------------------------------|--|----------|---------|
| TooManyStaticImports          | Too many static imports may lead to messy code   | 3        | 29–161  |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 59      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 60      |
| AvoidDuplicateLiterals        | The String literal "Please select an entry." appears 4 times in this file; the first occurrence is on line 61  | 3        | 61      |
| LocalVariableCouldBeFinal     | Local variable 'option' could be declared final  | 3        | 64      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 66      |
| LocalVariableCouldBeFinal     | Local variable 'title' could be declared final   | 3        | 66      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 66      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 67      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 67      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 67      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 67      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 68      |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 79      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 80      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 84      |
| LocalVariableCouldBeFinal     | Local variable 'title' could be declared final   | 3        | 84      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 84      |
| LocalVariableCouldBeFinal     | Local variable 'originalEntry' could be declared final   | 3        | 85      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 85      |
| LocalVariableCouldBeFinal     | Local variable 'dialog' could be declared final  | 3        | 86      |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 87–92   |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 100     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 101     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 105     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 105     |
| LocalVariableCouldBeFinal     | Local variable 'title' could be declared final   | 3        | 105     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 106     |
| LocalVariableCouldBeFinal     | Local variable 'originalEntry' could be declared final   | 3        | 106     |
| LocalVariableCouldBeFinal     | Local variable 'dialog' could be declared final  | 3        | 107     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 108–115 |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 123     |
| LocalVariableCouldBeFinal     | Local variable 'dialog' could be declared final  | 3        | 124     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 125-130 |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 139     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 140     |
| OnlyOneReturn                 | A method should have only one exit point, and that should be the last statement in the method                  | 3        | 142     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 144     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 144     |
| LocalVariableCouldBeFinal     | Local variable 'title' could be declared final   | 3        | 144     |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 145     |
| MethodArgumentCouldBeFinal    | Parameter 'content' is not assigned and could be declared final  | 3        | 154     |
| MethodArgumentCouldBeFinal    | Parameter 'parent' is not assigned and could be declared final   | 3        | 154     |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 157     |

### jpass/ui/helper/FileHelper.java

RuleViolationPriorityLineTooManyStaticImportsToo many static imports may lead to messy code329–420

| StdCyclomaticComplexity        | The class 'FileHelper' has a Standard Cyclomatic Complexity of 5 (Highest = 11).              | 3 | 59–420  |
|--------------------------------|---|---|---------|
| ModifiedCyclomaticComplexity   | The class 'FileHelper' has a Modified Cyclomatic Complexity of 5 (Highest = 11).              | 3 | 59–420  |
| TooManyMethods                 | This class has too many methods, consider refactoring it.                                     | 3 | 59–420  |
| LongVariable                   | Avoid excessively long variable names like SAVE_MODIFIED_QUESTION_MESSAGE                     | 3 | 60      |
| CommentRequired                | Field comments are required   | 3 | 60–62   |
| LongVariable                   | Avoid excessively long variable names like UNENCRYPTED_DATA_WARNING_MESSAGE                   | 3 | 63      |
| CommentRequired                | Field comments are required   | 3 | 63–65   |
| LongVariable                   | Avoid excessively long variable names like OPEN_ERROR_CHECK_PASSWORD_WARNING_MESSAGE          | 3 | 66      |
| CommentRequired                | Field comments are required   | 3 | 66–67   |
| CommentRequired                | Field comments are required   | 3 | 68–69   |
| LongVariable                   | Avoid excessively long variable names like CREATE_FILE_QUESTION_MESSAGE                       | 3 | 68      |
| CommentRequired                | Field comments are required   | 3 | 70–71   |
| LongVariable                   | Avoid excessively long variable names like OPERATION_ERROR_MESSAGE                            | 3 | 70      |
| LongVariable                   | Avoid excessively long variable names like FILE_OVERWRITE_QUESTION_MESSAGE                    | 3 | 72      |
| CommentRequired                | Field comments are required   | 3 | 72–73   |
| CommentRequired                | Field comments are required   | 3 | 75      |
| CommentRequired                | Field comments are required   | 3 | 76      |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 88      |
| LocalVariableCouldBeFinal      | Local variable 'option' could be declared final   | 3 | 89      |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3 | 96      |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 102     |
| LocalVariableCouldBeFinal      | Local variable 'file' could be declared final   | 3 | 113     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3 | 115     |
| LawOfDemeter                   | Potential violation of Law of Demeter (object not created locally)                            | 3 | 117     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '121'-'133').                                 | 5 | 121–133 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '121'-'133').                                 | 5 | 121–133 |
| LocalVariableCouldBeFinal      | Local variable 'worker' could be declared final   | 3 | 121–131 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 125     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 125     |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 126–128 |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 126–128 |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost                      | 3 | 127     |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost                      | 3 | 127     |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types.   | 1 | 127     |
| LocalVariableCouldBeFinal      | Local variable 'file' could be declared final   | 3 | 141     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3 | 143     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileName' (lines '145'-'156').                               | 5 | 145–156 |
| LawOfDemeter                   | Potential violation of Law of Demeter (object not created locally)                            | 3 | 145     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 146     |
| LocalVariableCouldBeFinal      | Local variable 'option' could be declared final   | 3 | 147     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be                                  | 3 | 150     |
|                                | the last statement in the method  |   |         |

| CommentDefaultAccessModifier   | To avoid mistakes add a comment at the beginning of the                                       | 3 | 164–181 |
|--------------------------------|---|---|---------|
|                                | importFileInBackground method if you want a default access modifier                           |   |         |
| DefaultPackage                 | Use explicit scoping instead of the default package private level                             | 3 | 164–181 |
| LocalVariableCouldBeFinal      | Local variable 'worker' could be declared final   | 3 | 165–179 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '165'-'181').                                 | 5 | 165–181 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '165'-'181').                                 | 5 | 165–181 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 169     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 169     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 170     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 171     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 172     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 173     |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 174–176 |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 174–176 |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost                      | 3 | 175     |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types.   | 1 | 175     |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost                      | 3 | 175     |
| ModifiedCyclomaticComplexity   | The method 'saveFile' has a Modified Cyclomatic Complexity of 11.                             | 3 | 202–256 |
| StdCyclomaticComplexity        | The method 'saveFile' has a Standard Cyclomatic Complexity of 11.                             | 3 | 202–256 |
| AvoidFinalLocalVariable        | Avoid using final local variables, turn them into fields                                      | 3 | 203     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 204     |
| LocalVariableCouldBeFinal      | Local variable 'file' could be declared final   | 3 | 205     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3 | 207     |
| LawOfDemeter                   | Potential violation of Law of Demeter (object not created locally)                            | 3 | 209     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3 | 211     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').                               | 5 | 214–256 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').                               | 5 | 214–256 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileName' (lines '214'-'256').                               | 5 | 214–256 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 214     |
| AvoidFinalLocalVariable        | Avoid using final local variables, turn them into fields                                      | 3 | 217     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 218     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 224     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').                                 | 5 | 226–256 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').                                 | 5 | 226–256 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '226'-'256').                                 | 5 | 226–256 |
| LocalVariableCouldBeFinal      | Local variable 'worker' could be declared final   | 3 | 226–254 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 230     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 230     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 231     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 232     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)                                    | 3 | 233     |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 234–236 |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.                      | 3 | 234–236 |
| PreserveStackTrace             | be lost   | 3 | 235     |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types.   | 1 | 235     |

| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost  | 3 | 235     |
|--------------------------------|---|---|---------|
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block          | 3 | 246     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                           | 3 | 266     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 268     |
| LocalVariableCouldBeFinal      | Local variable 'option' could be declared final   | 3 | 269     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                           | 3 | 272     |
| LawOfDemeter                   | Potential violation of Law of Demeter (object not created locally)  | 3 | 277     |
| StdCyclomaticComplexity        | The method 'openFileInBackground' has a Standard Cyclomatic Complexity of 10.   | 3 | 286–328 |
| ModifiedCyclomaticComplexity   | The method 'openFileInBackground' has a Modified Cyclomatic Complexity of 10.   | 3 | 286–328 |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                           | 3 | 289     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').   | 5 | 295–328 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').   | 5 | 295–328 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'worker' (lines '295'-'328').   | 5 | 295–328 |
| LocalVariableCouldBeFinal      | Local variable 'worker' could be declared final   | 3 | 295–326 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 299     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 299     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 300     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 301     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 302     |
| AvoidRethrowingException       | A catch statement that catches an exception only to rethrow it should be avoided.                                       | 3 | 303–305 |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types.   | 1 | 306     |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost  | 3 | 306     |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost  | 3 | 306     |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.  | 3 | 307–309 |
| AvoidCatchingThrowable         | A catch statement should never catch throwable since it includes errors.  | 3 | 307–309 |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost  | 3 | 308     |
| AvoidThrowingRawExceptionTypes | Avoid throwing raw exception types.   | 1 | 308     |
| PreserveStackTrace             | New exception is thrown in catch block, original stack trace may be lost  | 3 | 308     |
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block          | 3 | 318     |
| DefaultPackage                 | Use explicit scoping instead of the default package private level   | 3 | 337–355 |
| CommentDefaultAccessModifier   | To avoid mistakes add a comment at the beginning of the handleFileNotFound method if you want a default access modifier | 3 | 337–355 |
| LocalVariableCouldBeFinal      | Local variable 'option' could be declared final   | 3 | 338     |
| LocalVariableCouldBeFinal      | Local variable 'fileNotFoundWorker' could be declared final   | 3 | 340–352 |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileNotFoundWorker' (lines '340'-'355').   | 5 | 340–355 |
| LongVariable                   | Avoid excessively long variable names like fileNotFoundWorker   | 3 | 340     |
| DataflowAnomalyAnalysis        | Found 'DU'-anomaly for variable 'fileNotFoundWorker' (lines '340'-'355').   | 5 | 340–355 |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 344     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 344     |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 345     |
|                                |   |   |         |

| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 3 | 346     |
|---|--|---|---------|
| AvoidCatchingGenericException           | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block                                   | 3 | 347     |
| AvoidThrowingNewInstanceOfSameException | A catch statement that catches an exception only to wrap it in a<br>new instance of the same type of exception and throw it should<br>be avoided | 3 | 347–349 |
| AvoidThrowingRawExceptionTypes          | Avoid throwing raw exception types.  | 1 | 348     |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 3 | 348     |
| PreserveStackTrace                      | New exception is thrown in catch block, original stack trace may be lost   | 3 | 348     |
| MethodArgumentCouldBeFinal              | Parameter 'description' is not assigned and could be declared final  | 3 | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'taskName' is not assigned and could be declared final   | 3 | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'extension' is not assigned and could be declared final  | 3 | 366     |
| MethodArgumentCouldBeFinal              | Parameter 'parent' is not assigned and could be declared final   | 3 | 366     |
| DataflowAnomalyAnalysis                 | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').   | 5 | 367–385 |
| DataflowAnomalyAnalysis                 | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').   | 5 | 367–385 |
| DataflowAnomalyAnalysis                 | Found 'DU'-anomaly for variable 'ret' (lines '367'-'385').   | 5 | 367–385 |
| LocalVariableCouldBeFinal               | Local variable 'fc' could be declared final  | 3 | 368     |
| ShortVariable                           | Avoid variables with short names like fc   | 3 | 368     |
| ShortVariable                           | Avoid variables with short names like f  | 3 | 371     |
| MethodArgumentCouldBeFinal              | Parameter 'f' is not assigned and could be declared final  | 3 | 371     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 3 | 372     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 3 | 372     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 372     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 372     |
| LocalVariableCouldBeFinal               | Local variable 'returnVal' could be declared final   | 3 | 380     |
| MethodArgumentCouldBeFinal              | Parameter 'fileName' is not assigned and could be declared final   | 3 | 394     |
| MethodArgumentCouldBeFinal              | Parameter 'parent' is not assigned and could be declared final   | 3 | 394     |
| DataflowAnomalyAnalysis                 | Found 'DD'-anomaly for variable 'overwriteAccepted' (lines '395'-'400').   | 5 | 395–400 |
| LocalVariableCouldBeFinal               | Local variable 'file' could be declared final  | 3 | 396     |
| LocalVariableCouldBeFinal               | Local variable 'option' could be declared final  | 3 | 398     |
| LocalVariableCouldBeFinal               | Local variable 'separator' could be declared final   | 3 | 414     |
| LawOfDemeter                            | Potential violation of Law of Demeter (method chain calls)   | 3 | 415     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 415     |
| UseLocaleWithCaseConversions            | When doing a String.toLowerCase()/toUpperCase() call, use a Locale   | 3 | 415     |
| OnlyOneReturn                           | A method should have only one exit point, and that should be the last statement in the method  | 3 | 416     |

# jpass/util/ClipboardUtils.java

| Rule                            | Violation  | Priority | Line |
|---------------------------------|--|----------|------|
| MethodArgumentCouldBeFinal      | Parameter 'str' is not assigned and could be declared final          | 3        | 62   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception | 3        | 62   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception | 3        | 62   |
| LocalVariableCouldBeFinal       | Local variable 'selection' could be declared final                   | 3        | 68   |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)           | 3        | 69   |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)           | 3        | 69   |

| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 70–72   |
|---------------------------------|--|---|---------|
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 70–72   |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 3 | 71      |
| AvoidThrowingRawExceptionTypes  | Avoid throwing raw exception types.                                      | 1 | 71      |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 3 | 71      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 3 | 80      |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception     | 3 | 80      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 3 | 82      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 3 | 82      |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 83–85   |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 83–85   |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 3 | 84      |
| AvoidThrowingRawExceptionTypes  | Avoid throwing raw exception types.                                      | 1 | 84      |
| PreserveStackTrace              | New exception is thrown in catch block, original stack trace may be lost | 3 | 84      |
| DataflowAnomalyAnalysis         | Found 'DD'-anomaly for variable 'result' (lines '94'-'98').              | 5 | 94–98   |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 3 | 96      |
| LawOfDemeter                    | Potential violation of Law of Demeter (method chain calls)               | 3 | 96      |
| LocalVariableCouldBeFinal       | Local variable 'contents' could be declared final                        | 3 | 96      |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 3 | 97      |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 3 | 98      |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 100-102 |
| EmptyCatchBlock                 | Avoid empty catch blocks   | 3 | 100–102 |
| EmptyCatchBlock                 | Avoid empty catch blocks   | 3 | 100–102 |
| AvoidCatchingThrowable          | A catch statement should never catch throwable since it includes errors. | 3 | 100–102 |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)       | 3 | 103     |
| MethodArgumentCouldBeFinal      | Parameter 'flavor' is not assigned and could be declared final           | 3 | 121     |
| MethodArgumentCouldBeFinal      | Parameter 'flavor' is not assigned and could be declared final           | 3 | 126     |
| MethodArgumentCouldBeFinal      | Parameter 'clipboard' is not assigned and could be declared final        | 3 | 131     |
| MethodArgumentCouldBeFinal      | Parameter 'contents' is not assigned and could be declared final         | 3 | 131     |
|                                 |  |   |         |

# jpass/util/Configuration.java

| Rule                          | Violation  | Priority | Line  |
|-------------------------------|--|----------|-------|
| CommentRequired               | Field comments are required  | 3        | 45    |
| CommentRequired               | Field comments are required  | 3        | 46    |
| SuspiciousConstantFieldName   | The field name indicates a constant but its modifiers do not   | 3        | 46    |
| VariableNamingConventions     | Variables should start with a lowercase character, 'INSTANCE' starts with uppercase character.                 | 1        | 46    |
| CommentRequired               | Field comments are required  | 3        | 47    |
| BeanMembersShouldSerialize    | Found non-transient, non-static member. Please mark as transient or provide accessors.                         | 3        | 47    |
| ImmutableField                | Private field 'properties' could be made final; it is only initialized in the declaration or constructor.      | 3        | 47    |
| LocalVariableCouldBeFinal     | Local variable 'filePath' could be declared final  | 3        | 51    |
| LocalVariableCouldBeFinal     | Local variable 'is' could be declared final  | 3        | 53    |
| CloseResource                 | Ensure that resources like this FileInputStream object are closed after use                                    | 3        | 53    |
| ShortVariable                 | Avoid variables with short names like is   | 3        | 53    |
| CloseResource                 | Ensure that resources like this FileInputStream object are closed after use                                    | 3        | 53    |
| AvoidCatchingGenericException | Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block | 3        | 57    |
| DataflowAnomalyAnalysis       | Found 'DD'-anomaly for variable 'configurationFolderPath' (lines '63'-'65').                                   | 5        | 63–65 |
| LongVariable                  | Avoid excessively long variable names like configurationFolderPath   | 3        | 63    |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 65–69 |
| LawOfDemeter                  | Potential violation of Law of Demeter (method chain calls)   | 3        | 65-69 |

| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 65–69   |
|--------------------------------|---|---|---------|
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 65–69   |
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block | 3 | 70      |
| MethodArgumentCouldBeFinal     | Parameter 'type' is not assigned and could be declared final  | 3 | 76      |
| MethodArgumentCouldBeFinal     | Parameter 'defaultValue' is not assigned and could be declared final  | 3 | 76      |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3 | 76      |
| DataflowAnomalyAnalysis        | Found 'DD'-anomaly for variable 'value' (lines '77'-'81').  | 5 | 77–81   |
| LocalVariableCouldBeFinal      | Local variable 'prop' could be declared final   | 3 | 78      |
| LawOfDemeter                   | Potential violation of Law of Demeter (method chain calls)  | 3 | 81      |
| AvoidCatchingGenericException  | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block | 3 | 82      |
| GuardDebugLogging              | Logger calls should be surrounded by log level guards.  | 2 | 83      |
| GuardLogStatement              | Logger calls should be surrounded by log level guards.  | 2 | 83      |
| GuardLogStatement              | Logger calls should be surrounded by log level guards.  | 2 | 83      |
| GuardLogStatementJavaUtil      | Logger calls should be surrounded by log level guards.  | 2 | 83      |
| CommentRequired                | Public method and constructor comments are required   | 3 | 89–91   |
| ShortMethodName                | Avoid using short method names  | 3 | 89–91   |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3 | 89      |
| MethodArgumentCouldBeFinal     | Parameter 'defaultValue' is not assigned and could be declared final  | 3 | 89      |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3 | 93      |
| CommentRequired                | Public method and constructor comments are required   | 3 | 93–95   |
| MethodArgumentCouldBeFinal     | Parameter 'defaultValue' is not assigned and could be declared final  | 3 | 93      |
| MethodArgumentCouldBeFinal     | Parameter 'defaultValue' is not assigned and could be declared final  | 3 | 97      |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3 | 97      |
| CommentRequired                | Public method and constructor comments are required   | 3 | 97–99   |
| CommentRequired                | Public method and constructor comments are required   | 3 | 101–107 |
| MethodArgumentCouldBeFinal     | Parameter 'key' is not assigned and could be declared final   | 3 | 101     |
| MethodArgumentCouldBeFinal     | Parameter 'defaultValue' is not assigned and could be declared final  | 3 | 101     |
| UseVarargs                     | Consider using varargs for methods or constructors which take an array the last parameter.                        | 4 | 101     |
| LocalVariableCouldBeFinal      | Local variable 'prop' could be declared final   | 3 | 102     |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method                     | 3 | 104     |
| CommentRequired                | Public method and constructor comments are required   | 3 | 109–114 |
| AvoidSynchronizedAtMethodLevel | Use block level rather than method level synchronization  | 3 | 109–114 |
|                                |   |   |         |

# jpass/util/CryptUtils.java

| Rule                            | Violation  | Priority | Line |
|---------------------------------|--|----------|------|
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 55   |
| UseVarargs                      | Consider using varargs for methods or constructors which take an array the last parameter. | 4        | 55   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 55   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 66   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 66   |
| UseVarargs                      | Consider using varargs for methods or constructors which take an array the last parameter. | 4        | 66   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 88   |
| SignatureDeclareThrowsException | A method/constructor should not explicitly throw java.lang.Exception                       | 3        | 88   |
| LocalVariableCouldBeFinal       | Local variable 'md' could be declared final  | 3        | 89   |
| ShortVariable                   | Avoid variables with short names like md   | 3        | 89   |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)                         | 3        | 90   |
| LocalVariableCouldBeFinal       | Local variable 'bytes' could be declared final   | 3        | 92   |
| LawOfDemeter                    | Potential violation of Law of Demeter (object not created locally)                         | 3        | 93   |

DataflowAnomalyAnalysis Found 'DD'-anomaly for variable 'ret' (lines '114'-'116'). 5 114–116

AvoidCatchingGenericException Avoid catching generic exceptions such as NullPointerException, RuntimeException, Exception in try-catch block

#### jpass/util/DateUtils.java

| Rule       |                       | Violation  | Priority | Line  |
|------------|-----------------------|--|----------|-------|
| Commen     | tRequired             | Class comments are required  | 3        | 41–71 |
| UseUtility | /Class                | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 3        | 41–71 |
| UseUtility | /Class                | All methods are static. Consider using a utility class instead. Alternatively, you could add a private constructor or make the class abstract to silence this warning. | 3        | 41–71 |
| Commen     | tRequired             | Field comments are required  | 3        | 42    |
| Commen     | tRequired             | Public method and constructor comments are required  | 3        | 44–53 |
| MethodA    | rgumentCouldBeFinal   | Parameter 'format' is not assigned and could be declared final   | 3        | 44    |
| Dataflow   | AnomalyAnalysis       | Found 'DD'-anomaly for variable 'formatter' (lines '47'-'50').   | 5        | 47–50 |
| AvoidCate  | chingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE.   | 3        | 48    |
| AvoidCate  | chingGenericException | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block  | 3        | 48    |
| GuardLo    | gStatement            | Logger calls should be surrounded by log level guards.   | 2        | 49    |
| GuardLog   | gStatementJavaUtil    | Logger calls should be surrounded by log level guards.   | 2        | 49    |
| GuardDe    | bugLogging            | Logger calls should be surrounded by log level guards.   | 2        | 49    |
| GuardLo    | gStatement            | Logger calls should be surrounded by log level guards.   | 2        | 49    |
| MethodA    | rgumentCouldBeFinal   | Parameter 'formatter' is not assigned and could be declared final  | 3        | 55    |
| MethodA    | rgumentCouldBeFinal   | Parameter 'dateString' is not assigned and could be declared final   | 3        | 55    |
| Commen     | tRequired             | Public method and constructor comments are required  | 3        | 55–70 |
| Dataflow   | AnomalyAnalysis       | Found 'DD'-anomaly for variable 'dateTime' (lines '58'-'63').  | 5        | 58–63 |
| AvoidCate  | chingGenericException | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block  | 3        | 59    |
| AvoidCate  | chingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE.   | 3        | 59    |
| LocalVari  | ableCouldBeFinal      | Local variable 'date' could be declared final  | 3        | 62    |
| Dataflow   | AnomalyAnalysis       | Found 'DD'-anomaly for variable 'dateTime' (lines '63'-'66').  | 5        | 63–66 |
| AvoidCat   | chingGenericException | Avoid catching generic exceptions such as NullPointerException,<br>RuntimeException, Exception in try-catch block  | 3        | 64    |
| AvoidCate  | chingNPE              | Avoid catching NullPointerException; consider removing the cause of the NPE.   | 3        | 64    |
| GuardLo    | gStatement            | Logger calls should be surrounded by log level guards.   | 2        | 65    |
| GuardLo    | gStatement            | Logger calls should be surrounded by log level guards.   | 2        | 65    |
| GuardLo    | gStatementJavaUtil    | Logger calls should be surrounded by log level guards.   | 2        | 65    |
| GuardDe    | bugLogging            | Logger calls should be surrounded by log level guards.   | 2        | 65    |
| LawOfDe    | meter                 | Potential violation of Law of Demeter (object not created locally)   | 3        | 69    |
|            |                       |  |          |       |

### jpass/util/SpringUtilities.java

| Rule  | Violation  | Priority | Line   |
|---|--|----------|--------|
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final      | 1        | 42–189 |
| ClassWithOnlyPrivateConstructorsShouldBeFinal | A class which only has private constructors should be final      | 1        | 42–189 |
| MethodArgumentCouldBeFinal                    | Parameter 'initialY' is not assigned and could be declared final | 3        | 61     |
| MethodArgumentCouldBeFinal                    | Parameter 'parent' is not assigned and could be declared final   | 3        | 61     |
| MethodArgumentCouldBeFinal                    | Parameter 'xPad' is not assigned and could be declared final     | 3        | 61     |
| MethodArgumentCouldBeFinal                    | Parameter 'rows' is not assigned and could be declared final     | 3        | 61     |
| MethodArgumentCouldBeFinal                    | Parameter 'cols' is not assigned and could be declared final     | 3        | 61     |

| Nethodo/rgument/CouldBeFinal   Parameter 'initial's is not assigned and could be declared   3   61   | MethodArgumentCouldBeFinal | Parameter 'yPad' is not assigned and could be declared final | 3 | 61      |
|--|----------------------------|--|---|---------|
| Initial   DetailfowAnomalyAnalysis   Found TDU-anomaly for variable layout (lines %4-122), 5   64-122   LocalVariableCouldBeFinal   Local Variable (ParaSpring) could be declared final   3   70   LocalVariableCouldBeFinal   Local Variable (mistXSpring) could be declared final   3   71   LocalVariableCouldBeFinal   LocalVariableCouldBeFinal   LocalVariable (mistXSpring) could be declared final   3   72   LocalVariableCouldBeFinal   LocalVariable (mistXSpring) could be declared final   3   72   LocalVariableCouldBeFinal   LocalVariable (mistXSpring) could be declared final   3   73   73   LocalVariableCouldBeFinal   LocalVariable (mistXSpring) could be declared final   3   73   73   LocalVariableCouldBeFinal   LocalVariable (mistXSpring) could be declared final   3   73   74   LocalVariableCouldBeFinal     |                            | -  |   |         |
| LocalVariableCouldBeFinal   Local variable 'APadSpring' could be declared final   3   70   | <b>3</b>                   |  |   |         |
| Local/variableCouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created totally) LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (object not created locally) Local/variableCouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created locally) LawOlDemeter Potential violation of Law of Demeter (object not created locally) Local/variableCouldBeFinal Potential violation of Law of Demeter (object not created final locally) LawOlDemeter Potential violation of Law of Demeter (object not created final locally) LawOlDemeter Potential violation of Law of Demeter (object not created final locally) LawOlDemeter | DataflowAnomalyAnalysis    | Found 'DU'-anomaly for variable 'layout' (lines '64'-'122'). | 5 | 64–122  |
| Local Variable CouldBeFinal Local Variable Finitial X-Spring could be declared final Local Variable Finitial X-Spring could be declared final Local Variable Finitial X-Spring could be declared final Law OlDemeter Potential violation of Law of Demeter (polipict not created could be declared final Law OlDemeter Potential violation of Law of Demeter (method chain calls) 3 77 (locally) Law OlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 (locally) Law OlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 (locally) Local Variable CouldBeFinal Law OlDemeter Potential violation of Law of Demeter (object not created 3 78 (locally) Local Variable CouldBeFinal Law OlDemeter Potential violation of Law of Demeter (object not created 3 82 (locally) Local Variable CouldBeFinal Law OlDemeter Potential violation of Law of Demeter (object not created 1 3 83 (locally) Local Variable CouldBeFinal Local Variable cons could be declared final 3 89 (locally) Local Variable CouldBeFinal Local Variable cons could be declared final 3 89 (locally) Low OlDemeter Potential violation of Law of Demeter (object not created 1 locally) Low OlDemeter Potential violation of Law of Demeter (object not created 1 locally) Low OlDemeter Potential violation of Law of Demeter (object not created 1 locally) Law OlDemeter Potential violation of Law of Demeter (object not created 1 locally) Law OlDemeter Potential violation of Law of Demeter (object not created 2 103 (locally) Law OlDemeter Potential violation of Law of Demeter (object not created 3 103 (locally) Law OlDemeter Potential violation of Law of Demeter (object not created 3 103 (locally) Law OlDemeter Potential violation of Law of Demeter (object not created 3 111 (local Variable Could BeFinal 1 Local Variable Could BeFinal 2 112 (local Variable Could BeFinal 2 112 (local Variable Could BeFinal 2 113 (local Variable Could BeFinal 2 114 (local Variable Could BeFinal 2 115 (local Variable Could BeFinal 2 115 (local Variable Could BeFinal 2 115 (local  | LocalVariableCouldBeFinal  |  | 3 | 69      |
| Local Variable CouldBeFinal Local Variable "initial" Spring" could be declared final Jord Variable CouldBeFinal Local Variable "max" could be declared final Jord Variable CouldBeFinal Local Variable "max" could be declared final Jord Variable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (inethod chain calls) Jord Variable CouldBeFinal Local Variable "Could be declared final Local Variable CouldBeFinal Local Variable "Could be declared final Local Variable "Could BeFinal Local Variable "Could Demeter (object not created Jord Variable "CouldBeFinal Local Variable "Cons" could be declared final Local Variable "Could BeFinal Local Variable |                            |  | 3 | 70      |
| Local Variable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 3 77 locally) LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 77 locally) LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 locally) Local Variable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 locally included in the control of Law of Demeter (object not created 3 8 locally) Local Variable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 3 8 locally) Local Variable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 1 3 locally) LocalVariable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 1 3 locally) LocalVariable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 1 3 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 3 locally locally) LocalVariable CouldBeFinal LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 locally) LawOlDemeter Potential v |                            |  |   | 71      |
| LawOlDemeter Potential violation of Law of Demeter (object not created locally) LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 80 LawOlDemeter Potential violation of Law of Demeter (object not created 3 82 Local VariableCouldBeFinal Local variable cons' could be declared final 3 83 LawOlDemeter Potential violation of Law of Demeter (object not created 3 82 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 89 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 89 LawOlDemeter Potential violation of Law of Demeter (object not created 3 91 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 92 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 100 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 100 LocalVariableCouldBeFinal Local variable cons' could be declared final 3 103 LawOlDemeter Potential violation of Law of Demeter (object not created 10cally) LawOlDemeter Potential violation of Law of Demeter (object not created 10cally) LawOlDemeter Potential violation of Law of Demeter (object not created 10cally) LawOlDemeter Potential violation of Law of Demeter (object not created 10cally) LawOlDemeter Potential violation of Law of Demeter (object not created 1110 LocalVariableCouldBeFinal Local variable cons' could be declared final 117 LocalVariableCouldBeFinal Local variable cons' could be declared final 117 LocalVariableCouldBeFinal Potential violation of Law of Demeter (object not created 118) LawOlDemeter Potential violation of Law of Demeter (object not created 118) LocalVariableCouldBeFinal Potential violation of Law of Demeter (object not created 118) LocalVariableCouldBeFinal Potential violation of Law of Demeter (object not created 118) LocalV |                            | . 5  |   |         |
| locally  |                            |  |   |         |
| LawOlDemeter Potential violation of Law of Demeter (method chain calls) 3 78 LawOlDemeter Potential violation of Law of Demeter (object not created locally) LocalVariableCouldBeFinal Local variable coner's could be declared final 3 80 LawOlDemeter Potential violation of Law of Demeter (object not created locally) LawOlDemeter Potential violation of Law of Demeter (object not created locally) LawOlDemeter Potential violation of Law of Demeter (object not created locally) LocalVariableCouldBeFinal Local variable coner's could be declared final 3 89 LawOlDemeter Potential violation of Law of Demeter (object not created 3 91 LawOlDemeter Potential violation of Law of Demeter (object not created 3 92 LocalVariableCouldBeFinal Local variable coner's could be declared final 3 100 LawOlDemeter Potential violation of Law of Demeter (object not created 1 100 LawOlDemeter Potential violation of Law of Demeter (object not created 1 100 LawOlDemeter Potential violation of Law of Demeter (object not created 1 100 LawOlDemeter Potential violation of Law of Demeter (object not created 1 100 LawOlDemeter Potential violation of Law of Demeter (object not created 1 100 LocalVariableCouldBeFinal Locally) LawOlDemeter Potential violation of Law of Demeter (object not created 1 111 LawOlDemeter Potential violation of Law of Demeter (object not created 1 117 LawOlDemeter Potential violation of Law of Demeter (object not created 1 117 LawOlDemeter Potential violation of Law of Demeter (object not created 1 117 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 118 LawOlDemeter Potential violation of Law of Demeter (object not created 1 |                            | locally)   |   |         |
| LexivOlDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable Could BeFinal LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable Could BeFinal LawOlDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable Could BeFinal LawOlDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable Could BeFinal Local Variable 'cons' could be declared final 3 92 locally)  Local Variable Could BeFinal Local Variable 'cons' could be declared final 3 100 locally)  Local Variable Could BeFinal Local Variable 'cons' could be declared final 3 103 locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  LawOlDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final locally violation of Law of Demeter (object not created loc |                            | ` '  |   |         |
| locally)   |                            |  |   |         |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'cons' could be declared final 3 99  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'cons' could be declared final 3 99  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'cons' could be declared final 3 100  LocalVariableCouldBeFinal Local variable 'cons' could be declared final 3 100  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 118–119  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 125  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Loc | LawOfDemeter               |  | 3 | 78      |
| locally  |                            |  |   |         |
| Local/VariableCouldBeFinal   Local variable cons' could be declared final   3   89   | LawOfDemeter               |  | 3 | 82      |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable CouldBeFinal Local variable 'cons' could be declared final 3 100  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'rool' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'rool' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Local variable 'g' could be declared final 3 125  MethodArgumentCouldBeFinal Local variable 'g' could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'initialy' is not assigned and co | LawOfDemeter               |  | 3 | 83      |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable CouldBeFinal Local variable 'cons' could be declared final 3 100  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'rol' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'rol' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'rol' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'rol' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Local variable 'c' could be declared final 127  ShortVariable Avoid variables with short names like c | LocalVariableCouldBeFinal  | Local variable 'cons' could be declared final                | 3 | 89      |
| LocalVariableCouldBeFinal Local variable 'cons' could be declared final LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117 LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) LawOfDemeter Potential violation of Law of Demeter (object not created locally) MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125 MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125 MethodArgumentCouldBeFinal Local variable 'alyout' could be declared final 3 125 ShortVariable Avoid variables with short names like c 3 127 LawOfDemeter Potential violation of Law of Demeter (object not created locally) MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared final 3 128 MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 91      |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  Local Variable Could Be Final Local variable 'p Cons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'cols' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Local variable 'c' could be declared final 3 125  LocalVariable Avoid variables with short names like c 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared final 3 126  HawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 92      |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created 3 118–119 locally)  LawOfDemeter Potential violation of Law of Demeter (object not created 3 119 locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Local variable 'ayout' could be declared final 125  MethodArgumentCouldBeFinal Local variable 'c' could be declared final 127  ShortVariable Avoid variables with short names like c 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation of Law of Demeter (object not created 127  LawOfDemeter Potential violation | LocalVariableCouldBeFinal  | Local variable 'cons' could be declared final                | 3 | 100     |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'cols' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  LocalVariableCouldBeFinal Local variable 'ayout' could be declared final 3 126  LocalVariableCouldBeFinal Local variables with short names like c 3 127  LocalVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 103     |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  LocalVariableCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 126  LocalVariableCouldBeFinal Local variable 'ayout' could be declared final 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initial'y' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initial'y' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 105     |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LocalVariableCouldBeFinal Local variable 'pCons' could be declared final 3 117  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'cols' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  LocalVariableCouldBeFinal Local variable 'layout' could be declared final 3 126  LocalVariableCouldBeFinal Local variable 'c' could be declared final 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 128  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 128  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145   | LawOfDemeter               |  | 3 | 109     |
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| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'cols' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  LocalVariableCouldBeFinal Local variable 'layout' could be declared final 3 126  LocalVariableCouldBeFinal Local variable 'c' could be declared final 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145   | LawOfDemeter               | ` ,  | 3 | 117     |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 125  LocalVariableCouldBeFinal Local variable 'layout' could be declared final 126  LocalVariableCouldBeFinal Local variable 'c' could be declared final 127  ShortVariable Avoid variables with short names like c 13 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145   | LocalVariableCouldBeFinal  | Local variable 'pCons' could be declared final               | 3 | 117     |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'cols' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  LocalVariableCouldBeFinal Local variable 'layout' could be declared final 3 126  LocalVariableCouldBeFinal Local variable 'c' could be declared final 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 118–119 |
| LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'col' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'row' is not assigned and could be declared final 3 125  MethodArgumentCouldBeFinal Parameter 'parent' is not assigned and could be declared final 3 125  LocalVariableCouldBeFinal Local variable 'layout' could be declared final 3 126  LocalVariableCouldBeFinal Local variable 'c' could be declared final 3 127  ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared 3 145  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145  | LawOfDemeter               |  | 3 | 119     |
| locally)   MethodArgumentCouldBeFinal   Parameter 'col' is not assigned and could be declared final   3   125     MethodArgumentCouldBeFinal   Parameter 'cols' is not assigned and could be declared final   3   125     MethodArgumentCouldBeFinal   Parameter 'row' is not assigned and could be declared final   3   125     MethodArgumentCouldBeFinal   Parameter 'parent' is not assigned and could be declared final   3   125     LocalVariableCouldBeFinal   Local variable 'layout' could be declared final   3   126     LocalVariableCouldBeFinal   Local variable 'c' could be declared final   3   127     ShortVariable   Avoid variables with short names like c   3   127     LawOfDemeter   Potential violation of Law of Demeter (object not created locally)     MethodArgumentCouldBeFinal   Parameter 'initialX' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assigned and could be declared   3   145     MethodArgumentCouldBeFinal   Parameter 'initialY' is not assig   | LawOfDemeter               |  | 3 | 120–121 |
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| MethodArgumentCouldBeFinalParameter 'row' is not assigned and could be declared final3125MethodArgumentCouldBeFinalParameter 'parent' is not assigned and could be declared final3125LocalVariableCouldBeFinalLocal variable 'layout' could be declared final3126LocalVariableCouldBeFinalLocal variable 'c' could be declared final3127ShortVariableAvoid variables with short names like c3127LawOfDemeterPotential violation of Law of Demeter (object not created locally)3128MethodArgumentCouldBeFinalParameter 'initialX' is not assigned and could be declared final3145MethodArgumentCouldBeFinalParameter 'initialY' is not assigned and could be declared3145   | MethodArgumentCouldBeFinal | Parameter 'col' is not assigned and could be declared final  | 3 | 125     |
| MethodArgumentCouldBeFinalParameter 'parent' is not assigned and could be declared final3125LocalVariableCouldBeFinalLocal variable 'layout' could be declared final3126LocalVariableCouldBeFinalLocal variable 'c' could be declared final3127ShortVariableAvoid variables with short names like c3127LawOfDemeterPotential violation of Law of Demeter (object not created locally)3128MethodArgumentCouldBeFinalParameter 'initialX' is not assigned and could be declared final3145MethodArgumentCouldBeFinalParameter 'initialY' is not assigned and could be declared3145  | MethodArgumentCouldBeFinal | Parameter 'cols' is not assigned and could be declared final | 3 | 125     |
| final  LocalVariableCouldBeFinal  Local variable 'layout' could be declared final  3 126  LocalVariableCouldBeFinal  Local variable 'c' could be declared final  3 127  ShortVariable  Avoid variables with short names like c  3 127  LawOfDemeter  Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal  Parameter 'initialX' is not assigned and could be declared  final  MethodArgumentCouldBeFinal  Parameter 'initialY' is not assigned and could be declared  3 145  | MethodArgumentCouldBeFinal | Parameter 'row' is not assigned and could be declared final  | 3 | 125     |
| LocalVariableCouldBeFinalLocal variable 'c' could be declared final3127ShortVariableAvoid variables with short names like c3127LawOfDemeterPotential violation of Law of Demeter (object not created locally)3128MethodArgumentCouldBeFinalParameter 'initialX' is not assigned and could be declared final3145MethodArgumentCouldBeFinalParameter 'initialY' is not assigned and could be declared3145  | MethodArgumentCouldBeFinal |  | 3 | 125     |
| ShortVariable Avoid variables with short names like c 3 127  LawOfDemeter Potential violation of Law of Demeter (object not created locally)  MethodArgumentCouldBeFinal Parameter 'initialX' is not assigned and could be declared final  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145   | LocalVariableCouldBeFinal  | Local variable 'layout' could be declared final              | 3 | 126     |
| LawOfDemeterPotential violation of Law of Demeter (object not created locally)3128MethodArgumentCouldBeFinalParameter 'initialX' is not assigned and could be declared final3145MethodArgumentCouldBeFinalParameter 'initialY' is not assigned and could be declared3145   | LocalVariableCouldBeFinal  | Local variable 'c' could be declared final                   | 3 | 127     |
| locally)  MethodArgumentCouldBeFinal  Parameter 'initialX' is not assigned and could be declared final  MethodArgumentCouldBeFinal  Parameter 'initialY' is not assigned and could be declared 3 145   | ShortVariable              | Avoid variables with short names like c                      | 3 | 127     |
| final  MethodArgumentCouldBeFinal Parameter 'initialY' is not assigned and could be declared 3 145   | LawOfDemeter               |  | 3 | 128     |
|  | MethodArgumentCouldBeFinal |  | 3 | 145     |
|  | MethodArgumentCouldBeFinal |  | 3 | 145     |

| MethodArgumentCouldBeFinal | Parameter 'parent' is not assigned and could be declared final     | 3 | 145     |
|----------------------------|--|---|---------|
| MethodArgumentCouldBeFinal | Parameter 'cols' is not assigned and could be declared final       | 3 | 145     |
| MethodArgumentCouldBeFinal | Parameter 'rows' is not assigned and could be declared final       | 3 | 145     |
| MethodArgumentCouldBeFinal | Parameter 'yPad' is not assigned and could be declared final       | 3 | 146     |
| MethodArgumentCouldBeFinal | Parameter 'xPad' is not assigned and could be declared final       | 3 | 146     |
| DataflowAnomalyAnalysis    | Found 'DU'-anomaly for variable 'layout' (lines '149'-'188').      | 5 | 149–188 |
| ShortVariable              | Avoid variables with short names like x                            | 3 | 155     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3 | 159     |
| LocalVariableCouldBeFinal  | Local variable 'constraints' could be declared final               | 3 | 162     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 163     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 164     |
| ShortVariable              | Avoid variables with short names like y                            | 3 | 170     |
| LawOfDemeter               | Potential violation of Law of Demeter (method chain calls)         | 3 | 174     |
| LocalVariableCouldBeFinal  | Local variable 'constraints' could be declared final               | 3 | 177     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 178     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 179     |
| LocalVariableCouldBeFinal  | Local variable 'pCons' could be declared final                     | 3 | 185     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 185     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 186     |
| LawOfDemeter               | Potential violation of Law of Demeter (object not created locally) | 3 | 187     |

# jpass/util/StringUtils.java

| Rule                           | Violation   | Priority | Line  |
|--------------------------------|---|----------|-------|
| CyclomaticComplexity           | The method 'stripNonValidXMLCharacters(String)' has a cyclomatic complexity of 13.            | 3        | 52–70 |
| ShortVariable                  | Avoid variables with short names like in  | 3        | 52    |
| CyclomaticComplexity           | The method 'stripNonValidXMLCharacters(String)' has a cyclomatic complexity of 13.            | 3        | 52–70 |
| AvoidPrefixingMethodParameters | Avoid prefixing parameters by in, out or inOut. Uses Javadoc to document this behavior.       | 4        | 52    |
| OnlyOneReturn                  | A method should have only one exit point, and that should be the last statement in the method | 3        | 54    |
| LocalVariableCouldBeFinal      | Local variable 'out' could be declared final  | 3        | 56    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UnnecessaryParentheses         | Useless parentheses.  | 4        | 60    |
| UnnecessaryParentheses         | Useless parentheses.  | 4        | 60    |
| UnnecessaryParentheses         | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 60    |
| UselessParentheses             | Useless parentheses.  | 4        | 61    |
| UselessParentheses             | Useless parentheses.  | 4        | 61    |
| UnnecessaryParentheses         | Useless parentheses.  | 4        | 61    |
| UnnecessaryParentheses         | Useless parentheses.  | 4        | 61    |
| UselessParentheses             | Useless parentheses.  | 4        | 61    |
| UselessParentheses             | Useless parentheses.  | 4        | 61    |
|                                |   |          |       |

| UselessParentheses         | Useless parentheses.   | 4 | 61    |
|----------------------------|--|---|-------|
| UselessParentheses         | Useless parentheses.   | 4 | 61    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 61    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 62    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 62    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 63    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 63    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| UnnecessaryParentheses     | Useless parentheses.   | 4 | 63    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| UselessParentheses         | Useless parentheses.   | 4 | 63    |
| CommentRequired            | Public method and constructor comments are required            | 3 | 72–74 |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final   | 3 | 72    |
| MethodArgumentCouldBeFinal | Parameter 'length' is not assigned and could be declared final | 3 | 76    |
| MethodArgumentCouldBeFinal | Parameter 'text' is not assigned and could be declared final   | 3 | 76    |
| CommentRequired            | Public method and constructor comments are required            | 3 | 76–82 |
| DataflowAnomalyAnalysis    | Found 'DD'-anomaly for variable 'result' (lines '77'-'79').    | 5 | 77–79 |
|                            |  |   |       |

## jpass/xml/bind/Entries.java

| Rule                       | Violation   | Priority | Line  |
|----------------------------|---|----------|-------|
| AtLeastOneConstructor      | Each class should declare at least one constructor                          | 3        | 28–59 |
| CommentRequired            | Field comments are required   | 3        | 30    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide | 3        | 30    |
|                            | accessors.  |          |       |

## jpass/xml/bind/Entry.java

| Rule                       | Violation   | Priority | Line   |
|----------------------------|---|----------|--------|
| DataClass                  | The class 'Entry' is suspected to be a Data Class (WOC=0.000%, NOPA=0, NOAM=13, WMC=14) | 3        | 40–175 |
| CommentRequired            | Field comments are required   | 3        | 42     |
| CommentRequired            | Field comments are required   | 3        | 43     |
| CommentRequired            | Field comments are required   | 3        | 44     |
| CommentRequired            | Field comments are required   | 3        | 45     |
| CommentRequired            | Field comments are required   | 3        | 46     |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors.  | 3        | 47     |
| CommentRequired            | Field comments are required   | 3        | 47     |
| CommentRequired            | Field comments are required   | 3        | 48     |
| CommentRequired            | Public method and constructor comments are required                                     | 3        | 50–56  |
| LocalVariableCouldBeFinal  | Local variable 'now' could be declared final  | 3        | 51–53  |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final                           | 3        | 72     |

| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final | 3 | 90  |
|----------------------------|---|---|-----|
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final | 3 | 108 |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final | 3 | 126 |
| MethodArgumentCouldBeFinal | Parameter 'value' is not assigned and could be declared final | 3 | 144 |
| MethodArgumentCouldBeFinal | Parameter 'date' is not assigned and could be declared final  | 3 | 162 |

## jpass/xml/converter/XmlConverter.java

| Rule                       | Violation  | Priority | Line  |
|----------------------------|--|----------|-------|
| CommentRequired            | Field comments are required  | 3        | 48    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 48    |
| CommentRequired            | Field comments are required  | 3        | 49    |
| BeanMembersShouldSerialize | Found non-transient, non-static member. Please mark as transient or provide accessors. | 3        | 49    |
| CommentRequired            | Public method and constructor comments are required                                    | 3        | 51–58 |
| MethodArgumentCouldBeFinal | Parameter 'documentClass' is not assigned and could be declared final                  | 3        | 51    |
| LocalVariableCouldBeFinal  | Local variable 'module' could be declared final  | 3        | 53    |
| MethodArgumentCouldBeFinal | Parameter 'outputStream' is not assigned and could be declared final                   | 3        | 67    |
| MethodArgumentCouldBeFinal | Parameter 'document' is not assigned and could be declared final                       | 3        | 67    |
| MethodArgumentCouldBeFinal | Parameter 'inputStream' is not assigned and could be declared final                    | 3        | 78    |