SNOMED-CT Object Model POM - uk.nhs.cfh.dsp.snomed 0.8-SNAPSHOT

2010-10-16
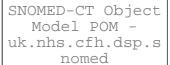
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SNOMED-CT Object
Model POM -
uk.nhs.cfh.dsp.s
nomed

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1. SNOMED-CT Object Model POM - uk.nhs.cfh.dsp.snomed

This chapter presents an overview of the project mesaures. This dashboard shows the most important measures related to project quality, and it provides a good starting point for identifying problems in source code.

1.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
8,131	**31.0%**	**2.2**
38 packages	3,646 comment lines	16.5 /class
111 classes		1,834 decision points
822 methods		
1.5% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
40.1%	**100.0%**
61 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
95.1%	**172**

1.2. Violations Analysis

Violations by category	
Maintainability	84
Reliability	70
Efficiency	3
Portability	0
Usability	15

Most violated rules

Magic Number	35
Close Resource	30
Cyclomatic Complexity	12
Visibility Modifier	11
Unused Private Field	11

Most violated files

SnomedConceptDatabaseDAO	36
AbstractExpressionWithFocusConcepts	10
AbstractExpressionComparator	10
ComponentStatus	9
SnomedXMLConverterImpl	8

Most complex files

NormalFormGeneratorImpl	148
UnidirectionalExpressionComparatorImpl	109
ConceptType	87
AbstractExpressionWithFocusConcepts	81
SnomedConceptDatabaseDAO	81

Most duplicated files

NormalFormGeneratorImpl	70
IntersectionExpressionImpl	38
UnionExpressionImpl	38
TransitiveClosureTableBasedHierarchyProvider	32
HierarchyProviderImpl	32

1.3. Violations Details

Rule	Magic Number	
File		Line
SnomedConceptDatabaseDAO		358, 411, 412, 413, 414, 415, 416, 454

AbstractExpressionComparator	343, 343
MRCMGeneratorImpl	56, 60, 63, 66, 93
MRCMServiceImpl	51
ComponentStatus	37, 38, 39, 40

Rule	Close Resource	
File		Line
SnomedConceptDatabaseDAO		197, 239, 324, 402, 466, 532, 573, 585, 607, 680
HierarchyProviderImpl		117, 148
TransitiveClosureTableBasedHierarchyProvider		133, 165, 197, 228, 278
SnomedConceptDBUtils		40, 70, 71

Rule	Cyclomatic Complexity	
File		Line
SnomedConceptDatabaseDAO		386
SituationExpressionGeneratorImpl		373
HeuristicBasedHumanReadableRenderImpl		135
AbstractExpressionComparator		175
ExpressionComparatorImpl		180
UnidirectionalExpressionComparatorImpl		113, 303, 408, 475
ComponentStatus		30
ConceptType		32
NormalFormGeneratorImpl		698

Rule	Visibility Modifier	
File		Line
AbstractExpressionWithFocusConcepts		35, 38, 41, 44, 47, 50
AbstractSituationExpression		39
AbstractExpressionComparator		30
AbstractNormalFormGenerator		33, 36, 39

Rule	Unused Private Field	
File		Line
SnomedConceptDatabaseDAO		69

SpringEnabledSnomedConceptDAO	38
HierarchyProviderImpl	40
TransitiveClosureTableBasedHierarchyProvider	52
SituationExpressionGeneratorImpl	94
AbstractSituationExpression	42
SnomedRoleGroupExpression	36
AbstractExpressionComparator	48
ExpressionComparatorImpl	34, 37
MRCMDaoImpl	31

Rule	Avoid Duplicate Literals
File	**Line**
SnomedConceptDatabaseDAO	709
HierarchyProviderImpl	83
TransitiveClosureTableBasedHierarchyProvider	86
HeuristicBasedHumanReadableRenderImpl	119
AbstractTerminologyConceptToXMLConverter	65
SnomedConceptToXMLRenderer	63
AbstractExpressionImpl	77
AbstractExpressionWithFocusConcepts	148
ExpressionComparatorImpl	212
SnomedConceptImpl	162

Rule	Unused Imports
File	**Line**
SpringEnabledSnomedConceptDAO	5, 6, 8, 15, 18
AbstractExpressionWithFocusConcepts	3, 4
PropertyExpression	8
MRCMDaoImpl	7

Rule	Redundant Throws
File	**Line**
UUIDUserType	84, 98, 114, 125, 145, 171, 188, 208

Rule	Useless Overriding Method

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File	Line
SnomedXMLConverterImpl	31, 31, 39, 39, 47, 47, 55, 55

Rule	Constructor Calls Overridable Method	
File		Line
SnomedConceptDatabaseDAO		85, 105
AbstractExpressionComparator		61, 80
NormalFormHierarchyProviderImpl		105

2. uk.nhs.cfh.dsp.snomed - plugin configuration

2.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
N/A	N/A	N/A
N/A packages	N/A comment lines	N/A /class
N/A classes		N/A decision points
N/A methods		
N/A duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
N/A	N/A
N/A tests	N/A failures
	N/A errors

Coding Rules Violations

Rules Compliance	**Violations**
N/A	0

2.2. Violations Analysis

Violations by category	
Maintainability	0
Reliability	0
Efficiency	0
Portability	0
Usability	0

Most violated rules
No violated rules

Most violated files

No violated files

Most complex files

No complex files

Most duplicated files

No duplications

2.3. Violations Details

3. uk.nhs.cfh.dsp.snomed - imported bundles

3.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
N/A	N/A	N/A
N/A packages	N/A comment lines	N/A /class
N/A classes		N/A decision points
N/A methods		
N/A duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
N/A	N/A
N/A tests	N/A failures
	N/A errors

Coding Rules Violations

Rules Compliance	**Violations**
N/A	0

3.2. Violations Analysis

Violations by category	
Maintainability	0
Reliability	0
Efficiency	0
Portability	0
Usability	0

Most violated rules
No violated rules

Most violated files

No violated files

Most complex files

No complex files

Most duplicated files

No duplications

3.3. Violations Details

4. SNOMED CT Object Model -

uk.nhs.cfh.dsp.snomed.objectmodel

4.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
1,181	**39.5%**	**1.8**
3 packages	770 comment lines	14.1 /class
22 classes		311 decision points
172 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
38.5%	**100.0%**
11 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
97.2%	**17**

4.2. Violations Analysis

Violations by category	
Maintainability	5
Reliability	8
Efficiency	0
Portability	0
Usability	4

Most violated rules	
Magic Number	8

Cyclomatic Complexity	2
Constant Name	1
Ncss Method Count	1
Naming - Suspicious constant field name	1

Most violated files

ComponentStatus	9
SnomedAttributeImpl	3
ConceptType	2
SnomedConceptImpl	2
SnomedDescriptionImpl	1

Most complex files

ConceptType	87
SnomedConcept	49
ComponentStatus	26
SnomedConceptImpl	23
SnomedRelationship	21

Most duplicated files

No duplications

4.3. Violations Details

Rule	Magic Number	
File		Line
ComponentStatus		37, 38, 39, 40, 41, 42, 43, 44

Rule	Cyclomatic Complexity	
File		Line
ComponentStatus		30
ConceptType		32

Rule	Constant Name	
File		Line
SnomedConceptImpl		35

Rule	Ncss Method Count	
File		Line
ConceptType		32

Rule	Naming - Suspicious constant field name	
File		Line
SnomedAttributeImpl		29

Rule	Member Name	
File		Line
SnomedAttributeImpl		29

Rule	Unused formal parameter	
File		Line
SnomedDescriptionImpl		69

Rule	Parameter Name	
File		Line
SnomedAttributeImpl		51

Rule	Avoid Duplicate Literals	
File		Line
SnomedConceptImpl		162

5. Normal Forms Module - uk.nhs.cfh.dsp.snomed.normaliser

5.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
1,166	**24.4%**	**3.1**
2 packages	377 comment lines	49.8 /class
5 classes		249 decision points
81 methods		
3.5% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
54.3%	**100.0%**
10 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
96.7%	**13**

5.2. Violations Analysis

Violations by category	
Maintainability	7
Reliability	6
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Close Resource	5
Visibility Modifier	3

Ncss Method Count	1
Unused formal parameter	1
Cyclomatic Complexity	1

Most violated files

NormalFormHierarchyProviderImpl	6
NormalFormGeneratorImpl	4
AbstractNormalFormGenerator	3

Most complex files

NormalFormGeneratorImpl	148
NormalFormHierarchyProviderImpl	55
AbstractNormalFormGenerator	28
NormalFormGenerator	12
NormalFormHierarchyProvider	6

Most duplicated files

NormalFormGeneratorImpl	70

5.3. Violations Details

Rule	Close Resource	
File		Line
NormalFormHierarchyProviderImpl		159, 196, 241, 279, 318

Rule	Visibility Modifier	
File		Line
AbstractNormalFormGenerator		33, 36, 39

Rule	Ncss Method Count	
File		Line
NormalFormGeneratorImpl		698

Rule	Unused formal parameter	
File		Line
NormalFormGeneratorImpl		698

Rule	Cyclomatic Complexity	
File		Line
NormalFormGeneratorImpl		698

Rule	Boolean Expression Complexity	
File		Line
NormalFormGeneratorImpl		802

Rule	Constructor Calls Overridable Method	
File		Line
NormalFormHierarchyProviderImpl		105

6. SNOMED CT Objects Persistence Module - uk.nhs.cfh.dsp.snomed.persistence

6.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
107	36.7%	2.5
2 packages	62 comment lines	5.0 /class
3 classes		15 decision points
6 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
0.0%	N/A
0 tests	N/A failures
	N/A errors

Coding Rules Violations

Rules Compliance	**Violations**
92.5%	4

6.2. Violations Analysis

Violations by category	
Maintainability	0
Reliability	4
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Close Resource	2

Magic Number	2

Most violated files

PersistentSnomedObjectsGenerator	4

Most complex files

PersistentSnomedObjectsGenerator	9
PersistenceUtils	6

Most duplicated files

No duplications

6.3. Violations Details

Rule	Close Resource	
File		Line
PersistentSnomedObjectsGenerator		73, 74

Rule	Magic Number	
File		Line
PersistentSnomedObjectsGenerator		87, 94

7. Data Access Objects - uk.nhs.cfh.dsp.snomed.dao

7.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
688	26.4%	2.8
4 packages	247 comment lines	19.9 /class
7 classes		139 decision points
49 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
60.0%	100.0%
11 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
86.0%	49

7.2. Violations Analysis

Violations by category	
Maintainability	14
Reliability	29
Efficiency	1
Portability	0
Usability	5

Most violated rules	
Magic Number	17
Close Resource	10

Unused Imports	5
System Println	3
Constructor Calls Overridable Method	2

Most violated files

SnomedConceptDatabaseDAO	36
SpringEnabledSnomedConceptDAO	6
TerminologyDaoActivator	5
TerminologyConceptUtils	2

Most complex files

SnomedConceptDatabaseDAO	81
SpringEnabledSnomedConceptDAO	21
SnomedExpressionDAOImpl	17
TerminologyConceptUtils	7
TerminologyConceptDAO	7

Most duplicated files

No duplications

7.3. Violations Details

Rule	Magic Number	
File		Line
SnomedConceptDatabaseDAO		358, 411, 412, 413, 414, 415, 416, 454, 244, 245, 246, 251, 332, 333, 338, 339, 340

Rule	Close Resource	
File		Line

| SnomedConceptDatabaseDAO | 197, 239, 324, 402, 466, 532, 573, 585, 607, 680 |

Rule	Unused Imports	
File		**Line**
SpringEnabledSnomedConceptDAO		5, 6, 8, 15, 18

Rule	System Println	
File		**Line**
TerminologyDaoActivator		26, 27, 38

Rule	Constructor Calls Overridable Method	
File		**Line**
SnomedConceptDatabaseDAO		85, 105

Rule	Unused Private Field	
File		**Line**
SnomedConceptDatabaseDAO		69
SpringEnabledSnomedConceptDAO		38

Rule	Signature Declare Throws Exception	
File		**Line**
TerminologyDaoActivator		23, 36

Rule	Unused private method	
File		**Line**
SnomedConceptDatabaseDAO		568

Rule	Hide Utility Class Constructor	
File		**Line**

TerminologyConceptUtils	19

Rule	Ncss Method Count	
File		Line
SnomedConceptDatabaseDAO		386

8. Hierarchy Provider -

uk.nhs.cfh.dsp.snomed.hierarchyprovider

8.1. Report Overview

Static Analysis

Lines of code	Comments	Complexity
384	**22.0%**	**3.3**
2 packages	108 comment lines	31.0 /class
3 classes		93 decision points
28 methods		
10.0% duplicated lines		

Dynamic Analysis

Code Coverage	Test Success
40.2%	**100.0%**
5 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	Violations
91.4%	**11**

8.2. Violations Analysis

Violations by category	
Maintainability	4
Reliability	7
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Close Resource	7

Unused Private Field	2
Avoid Duplicate Literals	2

Most violated files

TransitiveClosureTableBasedHierarchyProvider	7
HierarchyProviderImpl	4

Most complex files

TransitiveClosureTableBasedHierarchyProvider	45
HierarchyProviderImpl	42
HierarchyProvider	6

Most duplicated files

TransitiveClosureTableBasedHierarchyProvider	32
HierarchyProviderImpl	32

8.3. Violations Details

Rule	Close Resource	
File		Line
HierarchyProviderImpl		117, 148
TransitiveClosureTableBasedHierarchyProvider		133, 165, 197, 228, 278

Rule	Unused Private Field	
File		Line
HierarchyProviderImpl		40
TransitiveClosureTableBasedHierarchyProvider		52

Rule	Avoid Duplicate Literals	
File		Line

HierarchyProviderImpl	83
TransitiveClosureTableBasedHierarchyProvider	86

9. Expression Generator -

uk.nhs.cfh.dsp.snomed.expressiongenerator

9.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
348	29.7%	2.2
2 packages	147 comment lines	38.5 /class
2 classes		77 decision points
35 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
55.9%	100.0%
7 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
98.0%	3

9.2. Violations Analysis

Violations by category	
Maintainability	3
Reliability	0
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Singular Field	1

Unused Private Field	1
Cyclomatic Complexity	1

Most violated files

SituationExpressionGeneratorImpl	3

Most complex files

SituationExpressionGeneratorImpl	65
SituationExpressionGenerator	12

Most duplicated files

No duplications

9.3. Violations Details

Rule	Singular Field	
File		Line
SituationExpressionGeneratorImpl		94

Rule	Unused Private Field	
File		Line
SituationExpressionGeneratorImpl		94

Rule	Cyclomatic Complexity	
File		Line
SituationExpressionGeneratorImpl		373

10. SNOMED CT Converters - uk.nhs.cfh.dsp.snomed.converters

10.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
1,410	**30.8%**	**2.3**
12 packages	626 comment lines	11.4 /class
24 classes		273 decision points
120 methods		
1.4% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
48.6%	**100.0%**
9 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	**Violations**
95.3%	**22**

10.2. Violations Analysis

Violations by category	
Maintainability	15
Reliability	3
Efficiency	1
Portability	0
Usability	3

Most violated rules	
Useless Overriding Method	8

Close Resource	3
Avoid Duplicate Literals	3
Hidden Field	2
Hide Utility Class Constructor	1

Most violated files	
SnomedXMLConverterImpl	8
SnomedConceptDBUtils	4
RefinableNormalFormExpressionTreeFormProviderImpl	4
SnomedConceptTreeExpressionProviderImpl	2
HeuristicBasedHumanReadableRenderImpl	2

Most complex files	
HeuristicBasedHumanReadableRenderImpl	48
AbstractHumanReadableRenderer	42
SnomedConceptTreeExpressionProviderImpl	28
HumanReadableRendererImpl	22
ExpressionCompositionalGrammarConverterImpl	17

Most duplicated files	
AbstractXSBasedSnomedXMLConverter	19
ExpressionXMLConverterImpl	19

10.3. Violations Details

Rule	Useless Overriding Method	
File		**Line**
SnomedXMLConverterImpl		31, 31, 39, 39, 47, 47, 55, 55

Rule	Close Resource	
File		Line
SnomedConceptDBUtils		40, 70, 71

Rule	Avoid Duplicate Literals	
File		Line
HeuristicBasedHumanReadableRenderImpl		119
AbstractTerminologyConceptToXMLConverter		65
SnomedConceptToXMLRenderer		63

Rule	Hidden Field	
File		Line
SnomedConceptTreeExpressionProviderImpl		165, 290

Rule	Hide Utility Class Constructor	
File		Line
SnomedConceptDBUtils		19

Rule	Parameter Assignment	
File		Line
RefinableNormalFormExpressionTreeFormProviderImpl		50

Rule	Unused formal parameter	
File		Line
RefinableNormalFormExpressionTreeFormProviderImpl		66

Rule	Unused local variable	
File		Line
RefinableNormalFormExpressionTreeFormProviderImpl		57

Rule	Unused private method	
File		Line
RefinableNormalFormExpressionTreeFormProviderImpl		66

Rule	Cyclomatic Complexity	
File		Line
HeuristicBasedHumanReadableRenderImpl		135

11. Expression Model - uk.nhs.cfh.dsp.snomed.expression.model

11.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
1,588	**33.1%**	**1.6**
3 packages	786 comment lines	11.5 /class
31 classes		355 decision points
221 methods		
2.1% duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
0.0%	**N/A**
0 tests	N/A failures
	N/A errors

Coding Rules Violations

Rules Compliance	**Violations**
96.7%	**26**

11.2. Violations Analysis

Violations by category	
Maintainability	22
Reliability	0
Efficiency	1
Portability	0
Usability	3

Most violated rules	
Redundant Throws	8
Visibility Modifier	7

Hidden Field	3
Unused Imports	3
Unused Private Field	2

Most violated files

AbstractExpressionWithFocusConcepts	10
UUIDUserType	8
SnomedRelationshipPropertyExpression	3
AbstractSituationExpression	2
AbstractExpressionImpl	1

Most complex files

AbstractExpressionWithFocusConcepts	81
UUIDUserType	30
AbstractExpressionImpl	28
SnomedRelationshipPropertyExpression	25
AbstractSituationExpression	23

Most duplicated files

IntersectionExpressionImpl	38
UnionExpressionImpl	38

11.3. Violations Details

Rule	Redundant Throws	
File		Line
UUIDUserType		84, 98, 114, 125, 145, 171, 188, 208

Rule	Visibility Modifier	
File		Line

AbstractExpressionWithFocusConcepts	35, 38, 41, 44, 47, 50
AbstractSituationExpression	39

Rule	Hidden Field	
File		Line
AbstractExpressionWithFocusConcepts		590
SnomedRelationshipPropertyExpression		69, 92

Rule	Unused Imports	
File		Line
AbstractExpressionWithFocusConcepts		3, 4
PropertyExpression		8

Rule	Unused Private Field	
File		Line
AbstractSituationExpression		42
SnomedRoleGroupExpression		36

Rule	Avoid Duplicate Literals	
File		Line
AbstractExpressionImpl		77
AbstractExpressionWithFocusConcepts		148

Rule	Use Index Of Char	
File		Line
SnomedRelationshipPropertyExpression		175

12. Expression Comparator - uk.nhs.cfh.dsp.snomed.expression.comparator

12.1. Report Overview

Static Analysis

Lines of code	Comments	Complexity
777	**22.3%**	**5.6**
2 packages	223 comment lines	44.6 /class
5 classes		223 decision points
40 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	Test Success
10.9%	**100.0%**
2 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	Violations
93.2%	**19**

12.2. Violations Analysis

Violations by category	
Maintainability	12
Reliability	7
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Cyclomatic Complexity	6

Close Resource	3
Unused Private Field	3
Constructor Calls Overridable Method	2
Magic Number	2

Most violated files

AbstractExpressionComparator	10
ExpressionComparatorImpl	5
UnidirectionalExpressionComparatorImpl	4

Most complex files

UnidirectionalExpressionComparatorImpl	109
ExpressionComparatorImpl	62
AbstractExpressionComparator	46
ExpressionComparator	6

Most duplicated files

No duplications

12.3. Violations Details

Rule	Cyclomatic Complexity	
File		**Line**
AbstractExpressionComparator		175
ExpressionComparatorImpl		180
UnidirectionalExpressionComparatorImpl		113, 303, 408, 475

Rule	Close Resource	
File		**Line**
AbstractExpressionComparator		231, 247, 337

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Rule	Unused Private Field	
File		Line
AbstractExpressionComparator		48
ExpressionComparatorImpl		34, 37

Rule	Constructor Calls Overridable Method	
File		Line
AbstractExpressionComparator		61, 80

Rule	Magic Number	
File		Line
AbstractExpressionComparator		343, 343

Rule	Visibility Modifier	
File		Line
AbstractExpressionComparator		30

Rule	Ncss Method Count	
File		Line
ExpressionComparatorImpl		180

Rule	Avoid Duplicate Literals	
File		Line
ExpressionComparatorImpl		212

13. DAO Integration Test Bundle -

uk.nhs.cfh.dsp.snomed.dao.test

13.1. Report Overview

Static Analysis

Lines of code	**Comments**	**Complexity**
N/A	N/A	N/A
N/A packages	N/A comment lines	N/A /class
N/A classes		N/A decision points
N/A methods		
N/A duplicated lines		

Dynamic Analysis

Code Coverage	**Test Success**
N/A	N/A
0 tests	N/A failures
	N/A errors

Coding Rules Violations

Rules Compliance	**Violations**
N/A	0

13.2. Violations Analysis

Violations by category	
Maintainability	0
Reliability	0
Efficiency	0
Portability	0
Usability	0

Most violated rules
No violated rules

Most violated files

No violated files

Most complex files

No complex files

Most duplicated files

No duplications

13.3. Violations Details

14. MRCM bundle - uk.nhs.cfh.dsp.snomed.mrcm

14.1. Report Overview

Static Analysis

Lines of code	Comments	Complexity
482	**38.4%**	**1.4**
6 packages	300 comment lines	11.0 /class
9 classes		99 decision points
70 methods		
0.0% duplicated lines		

Dynamic Analysis

Code Coverage	Test Success
70.5%	**100.0%**
6 tests	0 failures
	0 errors

Coding Rules Violations

Rules Compliance	Violations
98.1%	**8**

14.2. Violations Analysis

Violations by category	
Maintainability	2
Reliability	6
Efficiency	0
Portability	0
Usability	0

Most violated rules	
Magic Number	6
Unused Private Field	1

Unused Imports	1

Most violated files

MRCMGeneratorImpl	5
MRCMDaoImpl	2
MRCMServiceImpl	1

Most complex files

MRCMServiceImpl	31
MRCMConstraint	18
MRCMDaoImpl	18
MRCMService	11
MRCMGeneratorImpl	8

Most duplicated files

No duplications

14.3. Violations Details

Rule	Magic Number
File	**Line**
MRCMGeneratorImpl	56, 60, 63, 66, 93
MRCMServiceImpl	51

Rule	Unused Private Field
File	**Line**
MRCMDaoImpl	31

Rule	Unused Imports
File	**Line**
MRCMDaoImpl	7