

Sappheiros: A query and retrieval framework for SNOMED CT encoded records - uk.nhs.cfh.dsp.srth-osgi
1.8-SNAPSHOT

2011-01-17



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1. Sappheiros: A query and retrieval framework for SNOWED

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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	<b>Comments</b>	Complexity
16,341	32.2% <b></b>	1.7
73 packages	7,757 comment lines	10.4 /class
269 classes		2,808 decision points
1,634 methods		

### **Dynamic Analysis**

0.5% duplicated lines

Code Coverage	<b>Test Success</b>
16.2%	100.0%
70 tests	0 failures
	0 errors

## Coding Rules Violations

Rules Co	mpliance	Violations	
96.5%		328	1

Violations by category		
Maintainability	163	
Reliability	131	
Efficiency	1	
Portability	0	
Usability	33	



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Most violated rules

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Magic Number	113
Redundant Throws	25
Unused Imports	23
Signature Declare Throws Exception	22
Unused Private Field	20

Most violated files	
QueryBasedDataGenerationEngineImpl	34
MySQLReportingQueryExecutionEn gineService	19
ConstraintPanel	15
QueryComponentExpressionPanel	14
DataGenerationPanel	11

Most complex files		
EHRImpl	97	
AbstractQueryBasedDataGeneratio nEngine	78	
AbstractSQLQueryEngineService	76	
MetaData	69	
MySQLReportingQueryExecutionEn gineService	65	

Most duplicated files	
SaveQueryToFileActionComponent	52
SaveQueryAsToFileActionCompone nt	52
PublishQueryResultsTask	43
ClinicalEntryTableModel	43

Rule	Magic Number
File	Line



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ConstraintPanel	120, 163 <sup>k</sup> , 167 <sup>s</sup> , 167 <sup>h, dss</sup> 168, 168, 191, 199 <sup>s</sup>
QueryAuthoringTreePanel	354, 354
QueryComponentExpressionPanel	226, 226, 351, 351
StyledQueryStatementTreeCellRenderer	81
SimpleCloseToUserExpressionPanel	166, 166
SaveQueryAsToFileActionComponent	54, 54, 65

Rule Redundant Throws	
File	Line
QueryExpressionDAOImpl	161
ExpressionMappingObjectDAOImpl	119, 143, 169, 222
ApplicationContextWrapper	27, 39, 43
Constraint	41
ApplicationContextWrapper	47
AbstractConstraint	149
ApplicationContextWrapper	67
AbstractTemporalConstraint	76
ApplicationContextWrapper	71
TemporalConstantConstraintImpl	85
ApplicationContextWrapper	79
TemporalConstantConstraintImpl	100
ApplicationContextWrapper	83, 111, 115

Rule Unused Imports	
File	Line
DataGeneratorUtils	16
TerminologyConstraintTableCellRenderer	4
TerminologyConstraintPanel	4, 5
PatientImpl	3, 10
PersonImpl	8, 9
EHR	3, 6
BoundClinicalEntry	8, 9
AbstractClinicalEntity	8, 9
AbstractClinicalObservationEntry	9, 10
ClinicalActivityEntry	10, 11
InterventionEventEntry	8
InvestigationEventEntry	8

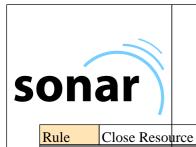


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uk.nhs.cfh.dsp.s

Rule Signature Declare Throws Exception	uk.nhs.cfh.ds
File	Line
LoadSavedQueryTask	76
NewQueryAction	69, 69
SaveQueryToFileAction	70, 70
SaveQueryToFileTask	64
ExecuteQueryTask	64
ExportResultTask	41
PublishQueryResultsFromResultSetTask	59
PublishQueryResultsTask	71
ResultsExplanationPanel	231, 231
TRUDLoginService	43
DataGeneratorTask	69
DeleteAllRecordsTask	46
RecreateDatabaseTask	31
PopulateTCTableAction	74, 74
PurgeExpressionRepositoryAction	109
PurgeTCTableTask	48

Rule Unused Private Field	
File	Line
AbstractQueryBasedDataGenerationEngine	79
ConstraintPanel	35, 59
QueryExpressionTreeTableModel	26
ReportingQueryStatementTreeCellRenderer	31
EHRViewPanel	31
PublishQueryResultsTask	27
QueryExpressionDAOImpl	42
ProcessExecutor	18
TRUDLoginService	22
ExpressionSubsumptionRelationshipDAOImpl	31, 37
PatientDAOImpl	31
AbstractPerson	48
DataGenerationPanel	77, 80
RecreateDatabaseTask	19
PurgeTCTableAction	29
ClinicalEntryDAOImpl	35
EhrDaoImpl	31



QueryStatisticsCollection

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173, 174

		1 311 3 3 7 1
File	Line	
DBConnectionVerifier	57	
AbstractSQLQueryEngineService	252, 3	67, 368, 479, 480
MySQLReportingQueryExecutionEngineService	118, 3	13, 421, 742

Rule Anon Inner Length	
File	Line
ConstraintPanel	128
QueryAuthoringTreePanel	173, 307
QueryComponentExpressionPanel	275, 352, 390, 439
QueryResultsPanel	173
QueryStatisticsCollectionPanel	165, 237
ResultsExplanationPanel	114

Rule Cyclomatic Complexity		
File	Line	
RandomSubtypeGeneratorImpl	165	
ConstraintPanel	218	
QueryAuthoringTreePanel	185	
PublishQueryResultsTask	70	
ClinicalEntryTableModel	107	
FileDownloader	94	
MySQLReportingQueryExecutionEngineService	364	
SubtypeGetterImpl	147	
AbstractQueryBasedDataGenerationEngine	166	
QueryBasedDataGenerationEngineImpl	124	

Rule Hidden Field	
File	Line
PatientPanel	165
ProcessExecutor	39
AbstractSQLQueryEngineService	617
QueryBasedDataGenerationEngineImpl	95, 113, 322, 355, 394, 408



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		_
File	Line	
QueryService	78, 85	
QueryServiceImpl	32, 157, 166	
QueryExpressionXMLConverterImpl	61, 62, 63	



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# 2. srth-osgi - plugin configuration

## 2.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	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

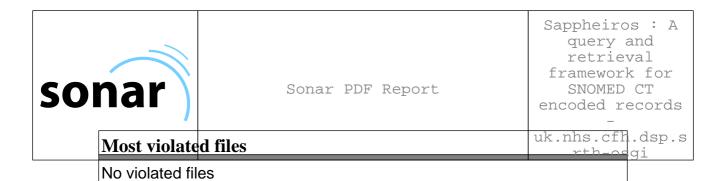
<b>Code Coverage</b>	<b>Test Success</b>
N/A	N/A
N/A tests	N/A failures
	N/A errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
N/A	0

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

Most violated rules	
No violated rules	



Most complex files

No complex files

Most duplicated files	
No duplications	



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3. srth-osgi - imported bundles

## 3.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	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

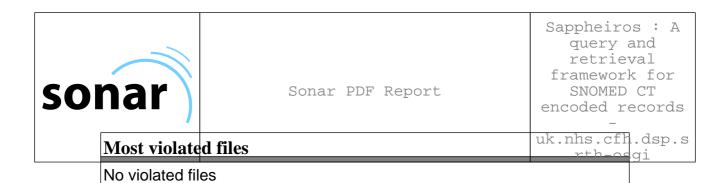
<b>Code Coverage</b>	<b>Test Success</b>
N/A	N/A
N/A tests	N/A failures
	N/A errors

## Coding Rules Violations

<b>Rules Compliance</b>	<b>Violations</b>	
N/A	0	

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

Most violated rules
No violated rules



Most complex files	
No complex files	

Most duplicated files
No duplications



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4. srth-osgi - Distribution

0.0% duplicated lines

4.1. Report Overview

# Static Analysis

## **Dynamic Analysis**

Code Coverage

0.0%

N/A

0 tests

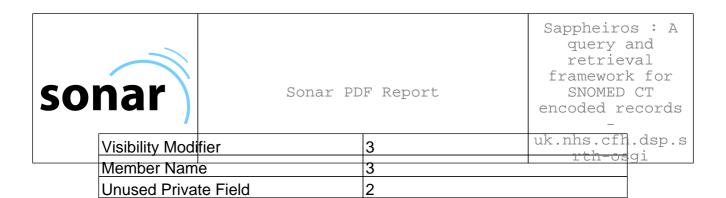
N/A failures

N/A errors

## Coding Rules Violations

Violations by category	
Maintainability	10
Reliability	10
Efficiency	0
Portability	0
Usability	9

Most violated rules	
Magic Number	8
Avoid Print Stack Trace	3



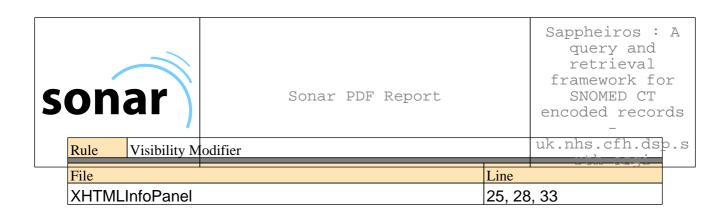
Most violated files		
FileDownloader	8	
ProcessExecutor	6	
XHTMLInfoPanel	6	
DBConnectionVerifier	3	
TRUDLoginService	2	

Most complex files		
FileDownloader	42	
XHTMLInfoPanel	16	
ConfigurationCheckListValidator	14	
DBConnectionVerifier	11	
JDBCConnectionValidator	11	

Most duplicated files	
No duplications	

Rule Magic Number		
File Line		
DBConnectionVerifier 82		
FileDownloader	59, 270, 299, 304	
ProcessExecutor	37, 45, 47	

Rule Avoid Print Stack Trace		
File Line		
XHTMLInfoPanel 79, 112, 159		79, 112, 159



Member Name		
File Line		
FileDownloader 28		
JDBCConnectionValidator	28	
ProcessExecutor	19	

Rule Unused Private Field		
File Line		
ProcessExecutor 18		
TRUDLoginService 22		

Rule Modifier Order		
File Line		
FileDownloader 30		
TRUDConnectionValidator 24		

Rule	Hidden Field	
File Line		
ProcessExecutor 39		39

Rule	Security - Array is stored directly	
File Line		
DBConnectionVerifier 109		109

Rule Signature Declare Throws Exception		
File Line		
TRUDLoginService 43		43

on	1	Sonar PDF Report	Sappheiros : A query and retrieval framework for SNOMED CT encoded records uk.nhs.cfh.dsp.s
Rule	Ncss Metho	d Count	uk.mis.cim.dsp.s
File		Line	
FileDow	vnloader	94	



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# 5. Sappheiros Demographics Bundle

## **5.1. Report Overview**

## Static Analysis

Lines of code	<b>Comments</b>	Complexity
528	44.3%	1.3
5 packages	420 comment lines	<b>7.9 /class</b>
14 classes		111 decision points
87 methods		
0.0% duplicated lines		

## **Dynamic Analysis**

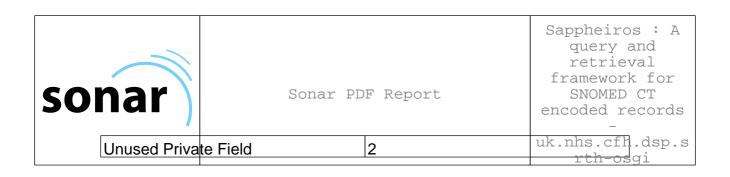
<b>Code Coverage</b>	<b>Test Success</b>
33.2%	100.0%
7 tests	0 failures
	0 errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
98.1%	10

Violations by category			
Maintainability	6		
Reliability	4		
Efficiency	0		
Portability	0		
Usability	0		

Most violated rules			
Unused Imports	4		
Magic Number	4		



Most violated files		
PatientUtilsServiceImpl	4	
PersonImpl	2	
PatientImpl	2	
AbstractPerson	1	
PatientDAOImpl	1	

Most complex files			
PatientDAOImpl	29		
PatientUtilsServiceImpl	18		
Person	16		
PatientDAO	10		
PatientUtilsService	10		

Most duplicated files
No duplications

Rule Unused Imports		
File	Line	
PatientImpl	3, 10	
PersonImpl	8, 9	

Rule Magic Number			
File	Line		
PatientUtilsServiceImpl	72, 225, 234, 234		

Rule	Unused Private Field	
File		Line

sonar	Sonar PDF Report		Sappheiros : A query and retrieval framework for SNOMED CT encoded records
PatientDAOImpl	3	31	uk.nhs.cfh.dsp.s
AbstractPerson		48	1011 0591



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# 6. Sappheiros Information Model Component

6.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	Complexity
274	60.5%	1.1
4 packages	420 comment lines	<b>5.9 /class</b>
24 classes		142 decision points
131 methods		
0.0% duplicated lines		

## **Dynamic Analysis**

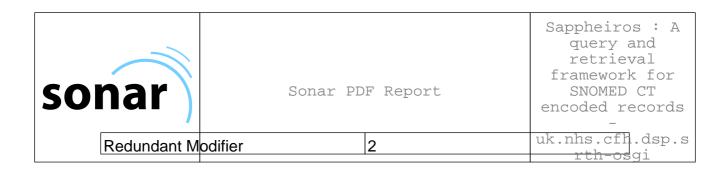
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
99.3%	8

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

Most violated rules	
Unused Imports	4
Unused Modifier	2



Most violated files	
ClinicalEvent	4
BoundClinicalEntry	2
EHR	2

Most complex files		
EHR	38	
ClinicalExpression	16	
Laterality	13	
ClinicalEntity	13	
ClinicalEntry	10	

Most duplicated files	
No duplications	

Rule Unused Imports		
File		Line
EHR		3, 6
BoundC	linicalEntry	8, 9

Rule	Rule Unused Modifier	
File Line		
ClinicalE	Event	30, 37

Redundant Modifier		
File		Line
ClinicalE	Event	30, 37



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7. Sappheiros Information Model Implementation Buthdlesgi

### 7.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	Complexity	
2,351	38.6%	1.7	
5 packages	1,478 comment lines	13.2 /class	
33 classes		437 decision points	
257 methods			
0.0% duplicated lines			

## **Dynamic Analysis**

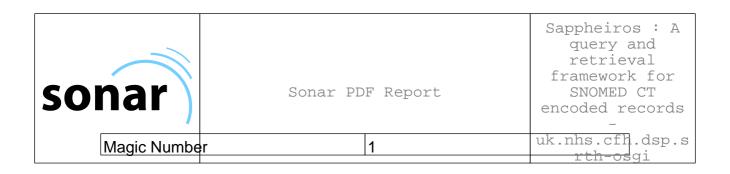
<b>Code Coverage</b>	<b>Test Success</b>
35.7%	100.0%
23 tests	0 failures
	0 errors

## Coding Rules Violations

<b>Rules Compliance</b>		<b>Violations</b>	
99.7%		12	Ŧ

Violations by category			
Maintainability	11		
Reliability	1		
Efficiency	0		
Portability	0		
Usability	0		

Most violated rules			
Unused Imports	9		
Unused Private Field	2		



Most violated files				
AbstractClinicalObservationEntry	2			
ClinicalActivityEntry	2			
AbstractClinicalEntity	2			
InterventionEventEntry	1			
InvestigationEventEntry	1			

Most complex files			
EHRImpl	97		
ClinicalEntityFactoryImpl	56		
ClinicalEntryFactoryImpl	52		
ClinicalEntryDAOImpl	27		
ClinicalEntryFactory	21		

Most duplicated files		
No duplications		

Rule Unused Imports				
File Line				
AbstractClinicalEntity	8, 9			
AbstractClinicalObservationEntry	9, 10			
ClinicalActivityEntry	10, 11			
InterventionEventEntry	8			
InvestigationEventEntry	8			
MedicationEventEntry	9			

Rule Unused Private Field		
File	Line	
ClinicalEntryDAOImpl	35	
EhrDaoImpl	31	

sonar		ar	Sonar PDF Report	Sappheiros : A query and retrieval framework for SNOMED CT encoded records
	Rule	Magic Num	per	uk.nhs.cfh.dsp.s
	File		Line	
	EHRImpl 36			



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# 8. Sappheiros Query Model

## 8.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	Complexity	
1,889	42.2%	1.2	
7 packages	1,379 comment lines	<b>7.1 /class</b>	
51 classes		362 decision points	
295 methods			
0.0% duplicated lines			

## **Dynamic Analysis**

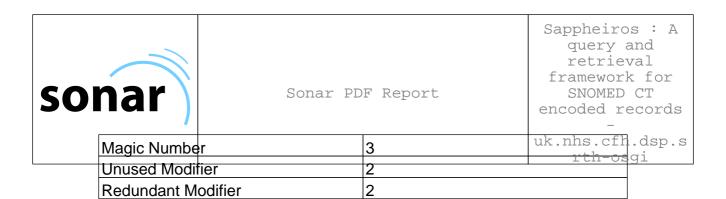
<b>Code Coverage</b>	<b>Test Success</b>	
31.1%	100.0%	
10 tests	0 failures	
	0 errors	

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
98.5%	22

Violations by category	
Maintainability	14
Reliability	3
Efficiency	0
Portability	0
Usability	5

Most violated rules	
Redundant Throws	8
If Stmts Must Use Braces	5



Most violated files		
TerminologyConstraintImpl	7	
MetaData	4	
TemporalConstantConstraintImpl	2	
TemporalConstantConstraint	2	
AbstractConstraint	1	

Most complex files	
MetaData	69
TerminologyConstraintImpl	24
AbstractQueryExpression	16
QueryExpressionFactoryImpl	15
AbstractMetaData	15

Most duplicated files	
No duplications	

le Redundant Throws	
File	Line
Constraint	41
AbstractConstraint 149	
AbstractTemporalConstraint	76
TemporalConstantConstraintImpl	85, 100
TemporalConstantConstraint	32, 41
TemporalConstraint	33

Rule	If Stmts Must Use Braces	
File		Line



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TerminologyConstraintImpl 173, 174, 178, 179, 180 s

Rule Magic Number		
File	Line	
AbstractMetaData	37	
TerminologyConstraintImpl 192, 193		

Rule	Unused Modifier	
File		Line
MetaDa	ta	114, 117

Rule	Redundant Modifier	
File		Line
MetaDa	ta	114, 117

Rule Unused Imports	Unused Imports	
File Line		
MetaDataImpl	9	
QueryExpression 9		



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# 9. Sappheiros Query Transform Bundle

## 9.1. Report Overview

## Static Analysis

Lines of code

1,544

5 packages

13 classes

90 methods

0.0% duplicated lines

**Comments** 

24.5%

**502** comment lines

**Complexity** 

2.8

19.5 /class

253 decision points

## **Dynamic Analysis**

**Code Coverage** 

0.0%

0 tests

**Test Success** 

N/A

N/A failures N/A errors

## Coding Rules Violations

**Rules Compliance** 

**Violations** 

32

95.1%

4

Violations by category	
Maintainability	11
Reliability	20
Efficiency	0
Portability	0
Usability	1

Most violated rules	
Close Resource	11
Magic Number	8



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Avoid Duplica	te Literals	5	uk.nhs.cfh	.dsp.s
		_	rtn-os	191
Redundant Th	rows	2		
Cyclomatic Co	omplexity	2		

Most violated files		
MySQLReportingQueryExecutionEn gineService	19	
AbstractSQLQueryEngineService	8	
SQLQueryEngineService	2	
QueryStatisticsCollection	2	
SubtypeGetterImpl	1	

Most complex files		
AbstractSQLQueryEngineService	76	
MySQLReportingQueryExecutionEn gineService	65	
SubtypeGetterImpl	49	
ConstraintColumnNameProviderImp	19	
SQLQueryEngineService	17	

Most duplicated files	
No duplications	

ule Close Resource	
File	Line
AbstractSQLQueryEngineService 252, 367, 368, 479	
MySQLReportingQueryExecutionEngineService 118, 313, 421, 74	
QueryStatisticsCollection	173, 174

Rule Magic Number		
File		Line



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MySQLReportingQueryExecutionEngineService 342, 344, 345, 345, 348, 348, 348

Rule Avoid Duplicate Literals		
File		Line
MySQLI	ReportingQueryExecutionEngineService	103, 104, 105, 224, 312

Rule	Rule Redundant Throws	
File Line		
SQLQueryEngineService 108, 119		

Rule Cyclomatic Complexity	
File Line	
MySQLReportingQueryExecutionEngineService 364	
SubtypeGetterImpl 147	

Rule	Visibility Modifier	
File Line		
AbstractSQLQueryEngineService 46		46

Rule Ncss Method Count	
File	Line
MySQLReportingQueryExecutionEngineService 364	

Rule	Hidden Field	
File		Line
Abstract	tSQLQueryEngineService	617

Rule	Rule Constructor Calls Overridable Method	
File Line		
AbstractSQLQueryEngineService 95		95



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# 10. Sappherios Data Generator Bundle

10.1. Report Overview

## Static Analysis

Lines of code Comments Complexity
1,273 1 19.6% 2.9

6 packages

10 classes

79 methods

0.0% duplicated lines

2.0%

310 comment lines 23.3 /class 233 decision points

## **Dynamic Analysis**

Code Coverage Test Success

50.0% 100.0%

5 tests 0 failures 0 errors

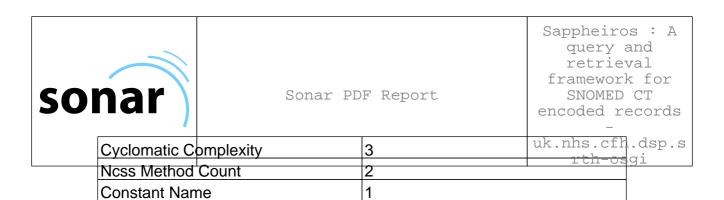
## Coding Rules Violations

**Rules Compliance** Violations

94.7% 43

Violations by category		
Maintainability	8	
Reliability	28	
Efficiency	0	
Portability	0	
Usability	7	

Most violated rules		
Magic Number	28	
Hidden Field	6	



Most violated files		
QueryBasedDataGenerationEngineImpl	34	
AbstractQueryBasedDataGenerationEngine	6	
RandomSubtypeGeneratorImpl	2	
DataGeneratorUtils	1	

Most complex files		
AbstractQueryBasedDataGeneratio nEngine	78	
RandomSubtypeGeneratorImpl	61	
QueryBasedDataGenerationEngineImpl	49	
DataGenerationEngine	21	
DataGenerationEngineFactoryImpl	9	

Most duplicated files	
No duplications	

Rule Magic Number		
File	Line	
AbstractQueryBasedDataGenerationEngine	62, 65, 678	
QueryBasedDataGenerationEngineImpl	156, 156, 167, 167, 167, 176, 176, 176, 180, 183, 185, 185, 185, 189, 192, 194, 194	

Rule	Hidden Field	
File		Line



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QueryBasedDataGenerationEngineImpl

95, 113, 322, 355, 394, sp. s

408

Rule Cyclomatic Complexity	
File	Line
RandomSubtypeGeneratorImpl	165
AbstractQueryBasedDataGenerationEngine 166	
QueryBasedDataGenerationEngineImpl 124	

Rule Ncss Method Count	
File	Line
QueryBasedDataGenerationEngineImpl	124
RandomSubtypeGeneratorImpl	165

Rule	Constant Name	
File		Line
QueryBa	asedDataGenerationEngineImpl	59

Rule	Unused Private Field	
File		Line
Abstract	QueryBasedDataGenerationEngine	79

Rule Unused private method		
File		Line
Abstract	tQueryBasedDataGenerationEngine	633

Rule	Unused Imports	
File		Line
DataGe	neratorUtils	16



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## 11. Sappheiros Query Service Bundle

## 11.1. Report Overview

## Static Analysis

Lines of code	<b>Comments</b>	Complexity
101	41.3%	1.6
2 packages	71 comment lines	8.7 /class
3 classes		26 decision points
16 methods		
0.0% duplicated lines		

## **Dynamic Analysis**

<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
85.1%	5

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

Most violated rules	
Loose coupling	5



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Most violated files

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QueryServiceImpl	3
QueryService	2

Most complex files		
QueryServiceImpl	16	
QueryService	9	
QueryServiceListener	1	

Most duplicated files	
No duplications	

Rule Loose coupling	
File	Line
QueryService	78, 85
QueryServiceImpl	32, 157, 166



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# 12. Sappheiros Query Creation Panel

#### 12.1. Report Overview

## Static Analysis

Lines of code

1,886

↓

25.0%

↓

2.2

5 packages

15 classes

15 classes

173 decision points

### **Dynamic Analysis**

0.0% duplicated lines

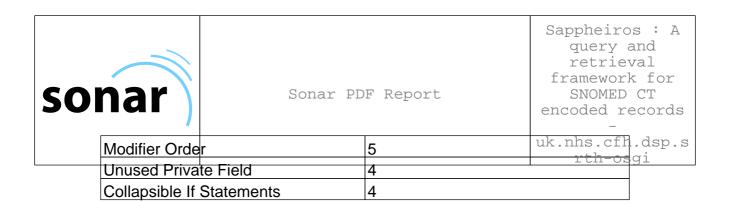
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

<b>Rules Compliance</b>	<b>Violations</b>
95.2%	52 <b>J</b>

Violations by category	
Maintainability	25
Reliability	20
Efficiency	0
Portability	0
Usability	7

Most violated rules	
Magic Number	17
Anon Inner Length	7

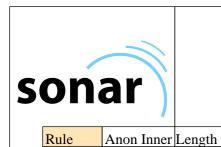


Most violated files	
ConstraintPanel	15
QueryComponentExpressionPanel	14
QueryAuthoringTreePanel	7
SimpleCloseToUserExpressionPan el	5
TerminologyConstraintPanel	4

Most complex files	
QueryAuthoringTreePanel	43
QueryComponentExpressionPanel	39
ConstraintPanel	36
ConstraintTableModel	26
ReportingQueryStatementTreeMod el	22

Most duplicated files	
No duplications	

Rule Magic Number	
File	Line
ConstraintPanel	120, 163, 167, 167, 168, 168, 191, 199
QueryAuthoringTreePanel	354, 354
QueryComponentExpressionPanel	226, 226, 351, 351
StyledQueryStatementTreeCellRenderer	81
SimpleCloseToUserExpressionPanel	166, 166



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File	Line
ConstraintPanel	128
QueryAuthoringTreePanel	173, 307
QueryComponentExpressionPanel	275, 352, 390, 439

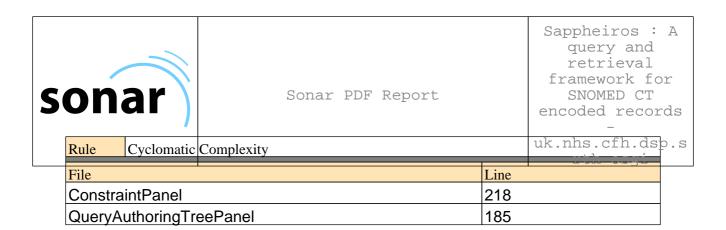
Rule Modifier Order		
File	Line	
QueryComponentExpressionPanel 93, 96		
SimpleCloseToUserExpressionPanel 72		
TerminologyConstraintPanel	63, 66	

Rule Unused Private Field	
File	Line
ConstraintPanel 35, 59	
QueryExpressionTreeTableModel 26	
ReportingQueryStatementTreeCellRenderer 31	

Rule Collapsible If Statements		
File	Line	
QueryComponentExpressionPanel 361, 361		
SimpleCloseToUserExpressionPanel 229, 229		

Rule Unused Imports		
File	Line	
TerminologyConstraintTableCellRenderer 4		
TerminologyConstraintPanel	4, 5	

Rule Parameter Assignment		
File		Line
ReportingQueryStatementTreeModel 181		181
QueryExpressionTreeTableModel 163		



Rule Singular Field		
File	Line	
ConstraintPanel 59		
QueryAuthoringTreePanel	70	

Rule	Compare Objects With Equals	
File Line		
QueryComponentExpressionPanel 551, 556		



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# 13. Sappheiros Query CRUD Module

#### 13.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
<b>5</b> 92	31.4%	1.3
3 packages	271 comment lines	4.8 /class
13 classes		<b>62 decision points</b>
46 methods		
8.4% duplicated lines		

# **Dynamic Analysis**

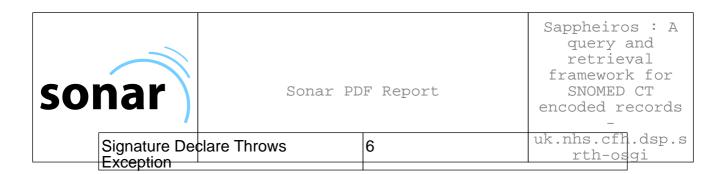
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

Rules Compliance		Violation	S
95.6%	<b></b>	14	Ŧ

Violations by category		
Maintainability	6	
Reliability	8	
Efficiency	0	
Portability	0	
Usability	0	

Most violated rules	
Magic Number	8



Most violated files		
SaveQueryAsToFileActionCompone nt	4	
SaveQueryToFileActionComponent	4	
SaveQueryToFileAction	2	
NewQueryAction	2	
SaveQueryToFileTask	1	

Most complex files		
XMLLoader	13	
LoadSavedQueryTask	9	
SaveQueryToFileTask	8	
SaveQueryToFileAction	6	
NewQueryAction	6	

Most duplicated files	
SaveQueryToFileActionComponent	52
SaveQueryAsToFileActionCompone nt	52

Rule Magic Number		
File	Line	
SaveQueryAsToFileActionComponent 54, 54, 65, 65		
SaveQueryToFileActionComponent	54, 54, 65, 65	

Rule Signature Declare Throws Exception	
File	Line
LoadSavedQueryTask	76
NewQueryAction	69, 69
SaveQueryToFileAction	70, 70





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14. Sappheiros Query Results View Component

14.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
1,354	28.2%	1.9
4 packages	532 comment lines	9.2 /class
19 classes		174 decision points
92 methods		
3.3% duplicated lines		

# **Dynamic Analysis**

<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
96.0%	28

Violations by category	
Maintainability	12
Reliability	13
Efficiency	1
Portability	0
Usability	2

Most violated rules	
Magic Number	12



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Signature Dec	clare Throws	4	uk.nhs.cfh. rth-osc	
Lxception				
Cyclomatic Co	omplexity	2		
Collapsible If	Statements	2		
<b>Unused Priva</b>	te Field	2		

Most violated files	
QueryResultsPanel	7
PatientPanel	5
PublishQueryResultsTask	3
ExportResultsActionComponent	2
ExecuteActiveQueryActionComponent	2

Most complex files		
QueryResultsPanel	25	
ResultSetTableModel	24	
ClinicalEntryTableModel	19	
ExportResultTask	13	
PublishQueryResultsTask	12	

Most duplicated files		
PublishQueryResultsTask	43	
ClinicalEntryTableModel	43	

Rule Magic Number				
File	Line			
ExportResultTask	107			
ExecuteActiveQueryActionComponent	53, 64			
ExportResultsActionComponent	55, 66			
PatientPanel	77, 77, 77			
QueryResultsPanel	78, 249, 271, 271			



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Rule Signature Declare Throws Exception	uk.nhs.cfh.dsp.s	
File	Line	
ExecuteQueryTask		
ExportResultTask	41	
PublishQueryResultsFromResultSetTask 59		
PublishQueryResultsTask 71		

Rule Cyclomatic Complexity		
File	Line	
PublishQueryResultsTask 70		
ClinicalEntryTableModel 107		

Rule	Rule Collapsible If Statements		
File Line			
QueryResultsPanel 182, 182			

Rule Unused Private Field		
File	Line	
EHRViewPanel	31	
PublishQueryResultsTask	27	

Rule	Constructor Calls Overridable Method	
File Line		
ResultSetTableModel 40		

Rule	Hidden Field	
File		Line
PatientPanel		165

Rule	ule Ncss Method Count		
File Line			
PatientPanel 75		75	

S	oń	ar	Sonar PDF Report		Sappheiros: A query and retrieval framework for SNOMED CT encoded records
	Rule	Constant Na	me		uk.nhs.cfh.dsp.s
	File Line		2011 000		
	ClinicalEntryTableModel 26				

Rule	Use Index Of Char	
File		Line
ResultS	etTableModel	96



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# 15. Sappheiros Query Repository

# 15.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
183	35.6%	1.4
2 packages	101 comment lines	12.5 /class
4 classes		50 decision points
36 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

Code Coverage	<b>Test Success</b>
67.1%	100.0%
4 tests	0 failures
	0 errors

# Coding Rules Violations

<b>Rules Compliance</b>	Violations
97.8%	2

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

Most violated rules	
Redundant Throws	1
Unused Private Field	1



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QueryExpressionDAOImpl	2	

Most complex files	
QueryExpressionDAOImpl	24
QueryRepositoryServiceImpl	12
QueryRepositoryService	7
QueryExpressionDAO	7

Most duplicated files	
No duplications	

Rule	Redundant Throws	
File		Line
QueryExpressionDAOImpl 161		161

Rule	Unused Private Field		
File		Line	
QueryEx	xpressionDAOImpl	42	



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16. Sappheiros Results Explanation View Component theosgi

16.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
534	28.7%	1.9
3 packages	215 comment lines	12.3 /class
6 classes		74 decision points
40 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

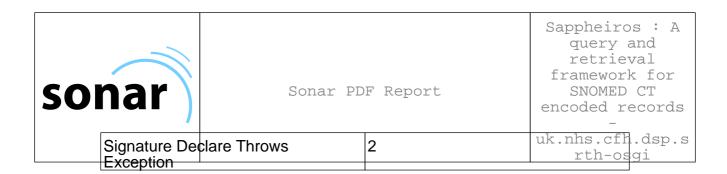
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

<b>Rules Compliance</b>	Violations
95.1%	16

Violations by category		
Maintainability	5	
Reliability	11	
Efficiency	0	
Portability	0	
Usability	0	

Most violated rules	
Magic Number	11
Anon Inner Length	3



Most violated files	
QueryStatisticsCollectionPanel	9
ResultsExplanationPanel	5
SQLResultsExplanationTreeCellRe nderer	1
ReportingEngineExplanationTreeTa bleModel	1

Most complex files	
ReportingEngineExplanationTreeTa bleModel	28
ResultsExplanationPanel	22
QueryStatisticsCollectionPanel	16
SQLResultsExplanationTreeCellRe nderer	4
ResultExplanationViewComponent	4

Most duplicated files	
No duplications	

Rule Magic Number	
File	Line
ReportingEngineExplanationTreeTableModel	61
QueryStatisticsCollectionPanel	96, 96, 96, 96, 135, 135, 200
SQLResultsExplanationTreeCellRenderer	46
ResultsExplanationPanel	158, 158

Rule	Anon Inner Length	
File		Line



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QueryStatisticsColle	ctionPanel	165, 2	37k.nhs.cfh.ds	0.S
ResultsExplanationP	anel	114	rtn-osgi	

Rule	Signature Declare Throws Exception	
File		Line
Results	ExplanationPanel	231, 231



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# 17. Sappheiros Query Renderer View Component

#### 17.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
84	35.4%	1.0
1 packages	46 comment lines	3.5 /class
2 classes		7 decision points
7 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

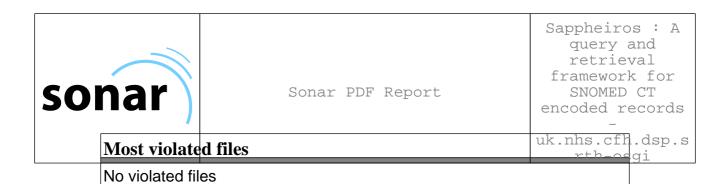
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

<b>Rules Compliance</b>	Violations
100.0%	0

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

Most violated rules	
No violated rules	



Most complex files	
QueryHTMLRendererViewCompone nt	4
QueryHTMLRendererPanel	3

Most duplicated files	
No duplications	



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18. Sappheiros Query Converters

18.1. Report Overview

## Static Analysis

Lines of code

822

8 packages

14 classes 69 methods

0.0% duplicated lines

**Comments** 

33.4%

413 comment lines

**Complexity** 

2.7

13.1 /class

184 decision points

### **Dynamic Analysis**

**Code Coverage** 

15.3%

6 tests

**Test Success** 

100.0%

0 failures

0 errors

## Coding Rules Violations

**Rules Compliance** 

**Violations** 3

98.9%

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

Most violated rules	
Loose coupling	3



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Most violated files

QueryExpressionXMLConverterImpl 3

Most complex files	
QueryExpressionHTMLRendererIm pl	44
QueryExpressionXMLRendererImpl	33
XMLToQueryExpressionTransforme rlmpl	26
QueryExpressionPlainTextRenderer Impl	24
QueryExpressionXMLConverterImpl	20

Most duplicated files	
No duplications	

Rule	Loose coupling	
File		Line
QueryEx	xpressionXMLConverterImpl	61, 62, 63



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19. Sappheiros Normal Form Expression Repository \*\* th-osgi

#### 19.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
619	37.5%	1.4
4 packages	371 comment lines	12.3 /class
10 classes		123 decision points
88 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

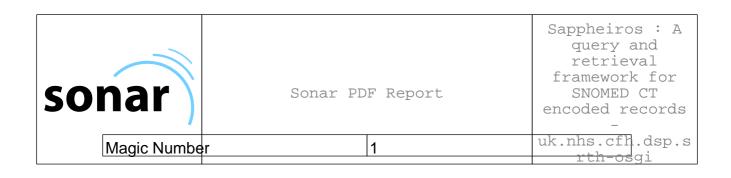
<b>Code Coverage</b>	<b>Test Success</b>
69.4%	100.0%
15 tests	0 failures
	0 errors

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
98.2%	7

Violations by category		
Maintainability	6	
Reliability	1	
Efficiency	0	
Portability	0	
Usability	0	

Most violated rules		
Redundant Throws	4	
Unused Private Field	2	



Most violated files	
ExpressionMappingObjectDAOImpl	4
ExpressionSubsumptionRelationshi pDAOImpl	3

Most complex files		
ExpressionMappingObjectDAOImpl	36	
ExpressionSubsumptionRelationshi pDAOImpl	22	
ExpressionTransitiveClosureTableG eneratorImpl	18	
ExpressionMappingObjectDAO	14	
ExpressionMappingObject	12	

Most duplicated files	
No duplications	

Rule	Redundant Throws	
File		Line
Express	sionMappingObjectDAOImpl	119, 143, 169, 222

Rule	Unused Private Field	
File		Line
Express	ionSubsumptionRelationshipDAOImpl	31, 37

Rule	Magic Number	
File		Line
Express	sionSubsumptionRelationshipDAOImpl	40



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# 20. Simulator ViewComponent

20.1. Report Overview

## Static Analysis

N/A errors

### **Dynamic Analysis**

0.0% duplicated lines

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

# Coding Rules Violations

Rules Compliance Violations
93.3% 
23

Violations by category		
Maintainability	12	
Reliability	9	
Efficiency	0	
Portability	0	
Usability	2	

Most violated rules	
Magic Number	9
Singular Field	3



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Signature Declare Throws Exception	3	uk.nhs.cfh rth-os	-
Unused Private Field	3		
Unused formal parameter	2		

Most violated files		
DataGenerationPanel	11	
DataGeneratorTask	4	
RecreateDatabaseTask	3	
DeleteAllRecordsAction	1	
RecreateDatabaseAction	1	

Most complex files		
DataGenerationPanel	20	
DataGeneratorTask	8	
RecreateDatabaseTask	5	
DeleteAllRecordsActionComponent	4	
RecreateDatabaseActionComponen t	4	

Most duplicated files	
No duplications	

Rule Magic Number	
File	Line
DataGeneratorTask	118
DeleteAllRecordsAction	54
RecreateDatabaseAction	52
DataGenerationPanel	68, 71, 74, 183, 200, 224

Rule	Singular Field	
File		Line



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DataGenerationPa	inel	44,	47	uk.nhs.cfh.ds	o.s
Daaraata Databaa	Tools	10		101-0891	
∣RecreateDatabase	erask	19			

Rule Signature Declare Throws Exception		
File Line		
DataGeneratorTask 69		
DeleteAllRecordsTask 46		
RecreateDatabaseTask 31		

Rule	Unused Private Field		
File Line			
DataGenerationPanel 77, 80		77, 80	
RecreateDatabaseTask 19		19	

Rule Unused formal parameter		
File Line		
DeleteAllRecordsActionComponent 44		
RecreateDatabaseActionComponent 42		

Rule Ncss Method Count		
File		Line
DataGenerationPanel 127		

Rule Static Variable Name			
File Line			
DataGe	DataGeneratorTask 37		

Rule	Naming - Suspicious constant field name	
File		Line
DataGeneratorTask		37



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21. Sappheiros Expression Repository Actions Modufeth-osgi

## 21.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
345	30.6%	1.1
2 packages	152 comment lines	3.8 /class
9 classes		34 decision points
30 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

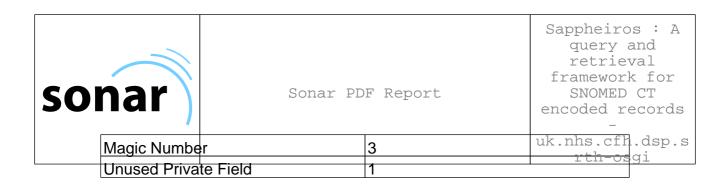
Code Coverage	<b>Test Success</b>	
0.0%	N/A	
0 tests	N/A failures	
	N/A errors	

## Coding Rules Violations

<b>Rules Compliance</b>	Violations
94.8%	8

Violations by category		
Maintainability	5	
Reliability	3	
Efficiency	0	
Portability	0	
Usability	0	

Most violated rules	
Signature Declare Throws Exception	4



Most violated files			
PopulateTCTableAction	3		
PurgeTCTableAction	2		
PurgeExpressionRepositoryAction	2		
PurgeTCTableTask	1		

Most complex files	
PurgeExpressionRepositoryAction	8
PopulateTCTableAction	7
PurgeExpressionRepositoryActionComponent	4
PurgeTCTableActionComponent	4
PurgeTCTableTask	4

Most duplicated files	
No duplications	

Rule Signature Declare Throws Exception			
File Line			
PopulateTCTableAction	74, 74		
PurgeExpressionRepositoryAction	109		
PurgeTCTableTask	48		

Rule Magic Number			
File Line			
PopulateTCTableAction	59		
PurgeExpressionRepositoryAction	67		
PurgeTCTableAction 55			

S	oń	ar	Sonar PDF Report	Sappheiros : A query and retrieval framework for SNOMED CT encoded records
	Rule	Unused Priv	ate Field	uk.nhs.cfh.dsp.s
	File		Line	
	PurgeT	CTableActi	on 29	



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# 22. Query Repository ViewComponent

# 22.1. Report Overview

# Static Analysis

Lines of code	<b>Comments</b>	Complexity
124	26.6%	1.2
2 packages	45 comment lines	4.0 /class
3 classes		12 decision points
10 methods		
0.0% duplicated lines		

# **Dynamic Analysis**

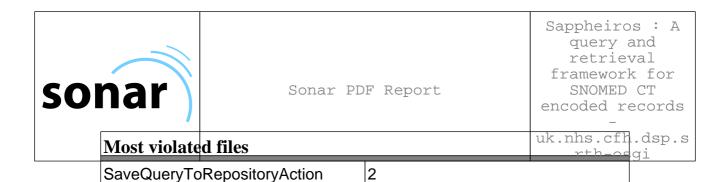
<b>Code Coverage</b>	<b>Test Success</b>
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

<b>Rules Compliance</b>	Violations
95.2%	2

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

Most violated rules	
Signature Declare Throws Exception	2



Most complex files	
SaveQueryToRepositoryAction	8
SaveQueryToRepositoryActionComponent	4

Most duplicated files	
No duplications	

Rule Signature Declare Throws Exception		
File		Line
SaveQu	ueryToRepositoryAction	73, 73



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23. Snofyre Scripting Bundle -

# uk.nhs.cfh.dsp.srth.desktop.modules.scripting

23.1. Report Overview

#### Static Analysis

Lines of code	<b>Comments</b>	Complexity
200	9.5%	1.2
2 packages	21 comment lines	11.5 /class
4 classes		46 decision points
39 methods		
0.0% duplicated lines		

#### **Dynamic Analysis**

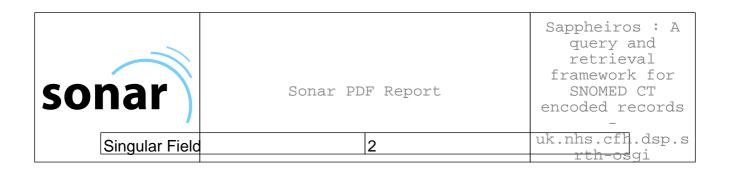
Code Coverage	Test Success
0.0%	N/A
0 tests	N/A failures
	N/A errors

# Coding Rules Violations

Rules Compliance	Violations
94.0%	12

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

Most violated rules	
Redundant Throws	10



Most violated files		
ApplicationContextWrapper	10	
AbstractGroovyService	1	
GroovyConsoleServiceImpl	1	

Most complex files	
ApplicationContextWrapper	23
AbstractGroovyService	12
GroovyConsoleServiceImpl	7
GroovyConsoleService	4

Most duplicated files
No duplications

Rule Redundant Throws	
File	Line
ApplicationContextWrapper	27, 39, 43, 47, 67, 71, 79, 83, 111, 115

Rule Singular Field	
File	Line
AbstractGroovyService	25
GroovyConsoleServiceImpl	19