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gr.uom.java.xml.diff.UMLClassBaseDiff
29: Merge Attribute [operation1 : UMLOperation, operation2 : UMLOperation] to parentMapper : UMLOperationBodyMapper in class gr.uom.java.xml.decomposition.UMLOperationBodyMapper
30: Replace Variable With Attribute op2 : VariableDeclarationContainer to container2 : VariableDeclarationContainer in method public void mappedElements72CallingAddedOperationsAddedOperations (List<UMLOperation>) : set from class gr.uom.java.xml.decomposition.UMLOperationBodyMapper
31: Replace Variable With Attribute op2 : VariableDeclarationContainer to container2 : VariableDeclarationContainer in method private void mappedChildMatchingScore (comp1 : CompositeStatementObject, comp2 : CompositeStatementObject, mappings : Set<AbstractCodeMapping>) : removedOperations
32: Replace Variable With Attribute op1 : VariableDeclarationContainer to container1 : VariableDeclarationContainer in method public void mappedElements71CallingRemovedOperationsRemovedOperations (List<UMLOperation>) : set from class gr.uom.java.xml.decomposition.UMLOperationBodyMapper
33: Replace Variable With Attribute op1 : VariableDeclarationContainer to container1 : VariableDeclarationContainer in method private void mappedChildMatchingScore (comp1 : CompositeStatementObject, comp2 : CompositeStatementObject, mappings : Set<AbstractCodeMapping>) : removedOperations
34: Pull Up Method public void getVariableDeclarationContainer (String) : VariableDeclaration from class gr.uom.java.xml.UMLOperation to public void getVariableDeclarationContainer (String) : VariableDeclaration from class gr.uom.java.xml.VariableDeclarationContainer

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## Using Understand to analysis the CK Metrics

Kind	Name	CountClassCoupled	CountDeclMethodAll	CountDeclInstanceMethod	MaxInheritanceTree	PercentLackOfCohesion	CountClassDerived
Public Abstract Class	gr.uom.java.xml.UMLAbstractClass	24	48	48	1	85	2
Public Class	gr.uom.java.xml.UMLAttribute	22	45	45	1	90	1
Public Class	gr.uom.java.xml.UMLOperation	29	100	99	1	94	0
Public Interface	gr.uom.java.xml.VariableDeclarationContainer	9	14	12	1	0	2
Public Class	gr.uom.java.xml.decomposition.LeafMapping	19	43	7	2	0	0
Public Class	gr.uom.java.xml.decomposition.UMLOperationBodyMapper	88	134	132	1	93	0
Public Class	gr.uom.java.xml.decomposition.VariableReplacementAnalysis	70	67	62	1	91	0
Public Class	gr.uom.java.xml.diff.MergeClassRefactoring	18	17	17	1	41	0
Public Class	gr.uom.java.xml.diff.ReplaceAnonymousWithLambdaRefactoring	18	15	15	1	61	0
Public Class	gr.uom.java.xml.diff.ReplaceLoopWithPipelineRefactoring	15	14	14	1	58	0
Public Abstract Class	gr.uom.java.xml.diff.UMLClassBaseDiff	68	120	103	2	95	3
	Average	34.54545455	56.09090909	50.36363636	1.181818182	64.36363636	0.727272727

Above are CK metrics stats before the commit was made.

Below are CK metrics stats after the commit was made. (I have also added the same excel file in part2.zip)

Kind	Name	CountClassCoupled	CountDeclMethodAll	CountDeclInstanceMethod	MaxInheritanceTree	PercentLackOfCohesion	CountClassDerived
Public Abstract Class	gr.uom.java.xml.UMLAbstractClass	24	48	48	1	85	2
Public Class	gr.uom.java.xml.UMLAttribute	23	46	46	1	90	1
Public Class	gr.uom.java.xml.UMLOperation	29	99	98	1	94	0
Public Interface	gr.uom.java.xml.VariableDeclarationContainer	11	18	16	1	0	2
Public Class	gr.uom.java.xml.decomposition.LeafMapping	19	43	7	2	0	0
Public Class	gr.uom.java.xml.decomposition.UMLOperationBodyMapper	88	136	134	1	93	0
Public Class	gr.uom.java.xml.decomposition.VariableReplacementAnalysis	70	67	62	1	91	0
Public Class	gr.uom.java.xml.diff.MergeClassRefactoring	18	17	17	1	41	0
Public Class	gr.uom.java.xml.diff.ReplaceAnonymousWithLambdaRefactoring	17	14	14	1	66	0
Public Class	gr.uom.java.xml.diff.ReplaceLoopWithPipelineRefactoring	16	14	14	1	58	0
Public Abstract Class	gr.uom.java.xml.diff.UMLClassBaseDiff	69	120	103	2	95	3
	Average	34.90909091	56.54545455	50.81818182	1.181818182	64.81818182	0.727272727

I have taken average of each metrics for the following files mentioned in commit changes.

### CBO: "CountClassCoupled"

We see a slight increase in CBO value from before commit to after the commit.

### RFC: "CountDeclMethodAll"

We see a slight increase in RFC value from before commit to after the commit.

### WMC: "CountDeclInstanceMethod"

We see a slight increase in WMC value from before commit to after the commit.

### DIT: "MaxInheritanceTree"

We see no change in DIT value from before commit to after the commit.

### LCOM: "PercentageLackOfCohesion"

We see a slight increase in LCOM value from before commit to after the commit.

### NOC: "CountClassDerived"

We see no change in NOC value from before commit to after the commit.

Overall, due to this refactoring project quality has degraded very slightly as we can see from CK metrics values.