











## Summary

Name	Description
 AlgorithmInfo	Algorithm attributes.
 Benchmark	Benchmark.
 Benchmarks	Workspace benchmarks.
 AlgorithmResult	Algorithm result info.
 BenchmarkResult	Benchmark execution results.
 BenchmarkResultSet	Collection of benchmark results.
 Preference	User preference.
 Preferences	Contains the user preferences. These are serialized to properties file in the workspace.
 Workspace	Workspace.
 PreferencesNames	Preferences names.


## Details





### AlgorithmInfo


Name	Value
Description	Entity with an algorithm attributes.
Visibility	public

## Attributes

private name : String			
Description	Name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		


private shortName : String			
Description	Short name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private type : String			
Description	Algorithm implementation class name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private library : String			
Description	Library.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

## Operations

public AlgorithmInfo ()	
Description	Constructor.


public AlgorithmInfo (alg : Algorithm)		
Parameters	alg	
	Description	Algorithm.
	Multiplicity	1
	Type	 Algorithm
	Direction	inout
	Java Detail	N/A
Description	Constructs an AlgorithmInfo instance from an algorithm implementation.	





## Benchmark

Name	Value
Description	Benchmark.
Visibility	public


## Attributes

private workspace : String			
Description	Workspace.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private name : String			
Description	Name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	false
Multiplicity	1		

private inputsDir : String			
Description	Input implicational systems directory path.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private inputFiles : java.util.List			
Description	Input files which will be copied to input dir.		
Stereotypes	Property		
Type	java.util.List		
Getter	true	Setter	true
Multiplicity	1..*		

private algorithmsEntities : List<AlgorithmInfo>			
Stereotypes	Property		
Type	 AlgorithmInfo		
Getter	true	Setter	false
Multiplicity	1..*		

## Operations

public Benchmark ()	
Description	Constructor.

public Benchmark (name : String, algorithms : java.util.List)		
Parameters	name	
	Description	Name.
	Multiplicity	1
	Type	● String
	Direction	inout
	algorithms	
	Description	Algorithms.
	Multiplicity	1..*
	Type	java.util.List
	Direction	inout
Description	Constructor.	
Exceptions	IllegalArgumentException if name or algorithms list is empty.	

public getBenchmarkPath () : String	
Description	The benchmark path.
Return Type Description	Benchmark path.

public getOutputDir () : String	
Description	Path of output dir of benchmark.
Return Type Description	Path.



## Benchmarks


Name	Value
Description	Workspace benchmarks.
Visibility	public


## Attributes


private benchmarks : Benchmark			
Stereotypes	Property		
Type	Benchmark		
Getter	true	Setter	true
Multiplicity	1..*		

## Operations

public Benchmarks ()	
Description	Constructor.

public addBenchmark (bench : Benchmark) : void		
Parameters	bench	
	Description	Benchmark to add.
	Multiplicity	1
	Type	 Benchmark
	Direction	inout
Description	Adds a benchmark.	

public getBenchmark (name : String) : Benchmark		
Parameters	name	
	Description	Name of benchmark to search.
	Multiplicity	1
	Type	 String
	Direction	inout
Description	Returns the benchmark with the name passed as parameter.	
Return Type Description	Bechmark found. Null if benchnmark not found.	

public removeBenchmark (name : String) : void		
Parameters	name	
	Description	Name of benchmark to search.
	Multiplicity	1
	Type	 String
	Direction	inout
Description	Returns the benchmark with the name passed as parameter.	

public size () : int	
Description	Returns the benchmarks count.
Return Type Description	Benchmarks count.



## AlgorithmResult

Name	Value
Description	Algorithm result info.
Visibility	public

### Attributes


private inputFile : String			
Description	Implicational system input file.		
Stereotypes	Property		
Type	● String		
Getter	true	Setter	false
Multiplicity	1..*		


private outputFile : String			
Description	Implicational system output file.		
Stereotypes	Property		
Type	● String		
Getter	true	Setter	false
Multiplicity	1		


private logFile : String			
Description	Log file.		
Stereotypes	Property		
Type	● String		
Getter	true	Setter	true
Multiplicity	1		

private size : Integer			
Description	Implicational System size.		
Stereotypes	Property		
Type	Integer		
Getter	true	Setter	false
Multiplicity	1		

private cardinality : Integer			
Description	Implicational System cardinality.		
Stereotypes	Property		
Type	Integer		
Getter	true	Setter	false
Multiplicity	1		

private executionTime : double			
Description	Execution time.		
Stereotypes	Property		
Type	 double		
Getter	true	Setter	true
Multiplicity	1		

private algorithmInfo : AlgorithmInfo			
Description	Info of the executed algorithm.		
Stereotypes	Property		
Type	 AlgorithmInfo		
Getter	true	Setter	false
Multiplicity	1		

private resultSystem : ImplicationalSystem			
Stereotypes	Property		
Type	 ImplicationalSystem		
Getter	true	Setter	false
Multiplicity	1		


## Operations

public AlgorithmResult ()	
Description	Constructor.
Leaf	false



public AlgorithmResult (inputFile : String, outputFile : String, algorithmInfo : AlgorithmInfo)		
Parameters	inputFile	
	Description	Input system file.
	Multiplicity	1
	Type	● String
	Direction	inout
	outputFile	
	Description	Output system file.
	Multiplicity	1
	Type	● String
	Direction	inout
	outputFile	
	Description	Output system file.
	Multiplicity	1
	Type	● String
	Direction	inout
Description	Constructor.	


public AlgorithmResult (inputFile : String, outputFile : String, algorithm : Algorithm)		
Parameters	inputFile	
	Description	Input system file.
	Multiplicity	1
	Type	● String
	Direction	inout
	outputFile	
	Description	Output system file.
	Multiplicity	1
	Type	● String
	Direction	inout
	algorithm	
	Description	Algorithm.

public AlgorithmResult (inputFile : String, outputFile : String, algorithm : Algorithm)		
	Multiplicity	1
	Type	 Algorithm
	Direction	inout
Description	Constructor.	


## BenchmarkResult

Name	Value
Description	Benchmark execution results.
Visibility	public

### Attributes


private benchmarkName : String			
Description	Benchmark name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	Unspecified		

private date : java.util.Date			
Description	Execution date/time.		
Stereotypes	Property		
Type	java.util.Date		
Getter	true	Setter	true
Multiplicity	1		

private algorithmResults : List<AlgorithmResult>			
Description	Algorithm results.		
Stereotypes	Property		
Type	 AlgorithmResult		
Getter	true	Setter	true
Multiplicity	0..*		

## Operations

public BenchmarkResult ()	
Description	Constructor.

public BenchmarkResult (benchmarkName : String, algorithmResults : List, timestamp : Date)		
Parameters	benchmarkName	
	Multiplicity	1
	Type	 String
	Direction	inout
	algorithmResults	
	Multiplicity	1
	Type	List
	Direction	inout
	timestamp	
	Multiplicity	1
	Type	Date
	Direction	inout
Description	Constructor.	

public groupByAlgorithm () : java.util.Map	
Description	Groups the results by algorithm.
Return Type Description	Results indexed by algorithms.

public getOutputDir () : String	
Description	Returns the path dir of results.
Return Type Description	Path output dir.


public getStatisticsFileName () : String	
Description	Returns the statistics file name.
Return Type Description.	Statistics file name.




## BenchmarkResultSet

Name	Value
Description	Collection of benchmark results.
Visibility	public

### Attributes

private name : String			
Description	Benchmark name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private results : BenchmarkResult			
Description	Benchmark results.		
Stereotypes	Property		
Type	 BenchmarkResult		
Getter	true	Setter	true
Multiplicity	*		

### Operations


public BenchmarkResultSet ()	
Description	Constructor.




## Preference

Name	Value
Description	User preference.
Visibility	public

### Attributes

private name : String			
Description	Name.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private value : String			
Description	Value.		
Stereotypes	Property		
Type	 String		
Allow Empty Name	false		
Getter	true	Setter	true
Multiplicity	1		

### Operations

public Preference ()	
Description	Constructor.

public Preference (name : String, value : String)		
Parameters	name	
	Description	Name.
	Multiplicity	1
	Type	String
	Direction	inout
	value	
	Description	Value.
	Multiplicity	1
	Type	String
	Direction	inout
Description	Constructor.	
Upper	1	
Ordered	false	
Unique	true	
Query	false	



## Preferences

Name	Value
Description	Contains the user preferences. These are serialized to properties file in the workspace.
Visibility	public

## Attributes

private preferencesList : Preference			
Description	Preferences list.		
Stereotypes	Property		
Type	Preference		
Getter	true	Setter	false
Multiplicity	0..*		

<b>private <u>LOGGER</u> : org.slf4j.Logger</b>			
Description	Logger.		
Initial Value	LoggerFactory.getLogger(Preferences.class)		
Type	org.slf4j.Logger		
Getter	false	Setter	false
Multiplicity	Unspecified		

## Operations

<b>public Preferences ()</b>	
Description	Constructor.

<b>public Preferences (p : java.nio.file.Path)</b>		
Parameters	<b>p</b>	
	Description	Preferences file absol
	Multiplicity	Unspecified
	Type	java.nio.file.Path
	Direction	inout
Description	Builds an instance based on an existent preferences file.	

<b>public getPreference (preference : String) : String</b>		
Parameters	<b>preference</b>	
	Description	Preference name.
	Multiplicity	Unspecified
	Type	● String
	Direction	inout
Description	Value of a preference.	
Return Type Description	Value of a preference.	

public put (name : Object, value : Object) : Object		
Parameters	name	
	Description	Name.
	Multiplicity	1
	Type	Object
	Direction	inout
	value	
	Description	Value.
	Multiplicity	1
	Type	Object
	Direction	inout
Description	Creates or modify a preference.	
Return Type Description	Previous value of modified preference.	
Query	false	

public setPreference (name : String, value : String) : String		
Parameters	name	
	Description	Name of preference.
	Multiplicity	Unspecified
	Type	● String
	Direction	inout
	Java Detail	N/A
	value	
	Description	Value.
	Multiplicity	Unspecified
	Type	● String
	Direction	inout
	Java Detail	N/A
Description	Sets the value of a preference. If value is null, remove the preference if exists.	



public setIfNotExist (name : String, value : String) : String		
Parameters	name	
	Description	Name of preference.
	Multiplicity	1
	Type	● String
	Direction	inout
	value	
	Description	Value.
	Multiplicity	1
	Type	● String
	Direction	inout
Description	Sets the value of a preference if no exists. If value is null, remove the preference if exists.	





## Workspace

Name	Value
Description	Workspace.
Visibility	public



## Attributes

private name : String			
Description	Name.		
Stereotypes	Property		
Type	● String		
Getter	true	Setter	true
Multiplicity	1		

private location : String			
Description	Location.		
Stereotypes	Property		
Type	 String		
Getter	true	Setter	true
Multiplicity	1		

private preferences : Preferences			
Description	Preferences.		
Stereotypes	Property		
Type	 Preferences		
Getter	true	Setter	true
Multiplicity	1		

## Operations

public Workspace (name : String, location : String)		
Parameters	name	
	Multiplicity	1
	Type	 String
	Direction	inout
	location	
	Multiplicity	1
	Type	 String
	Direction	inout
	Description	Constructor.


public Workspace ()	
Description	Constructor.





## PreferencesNames


Name	Value
Description	Preferences names.
Visibility	public
Stereotypes	Interface


### Attributes

public LANGUAGE : String			
Description	Language preference name.		
Initial Value	"language"		
Type	 String		
Getter	false	Setter	false
Derived	false		
Multiplicity	1		

public ALGORITHMS_FILE : String			
Description	Language preference name.		
Initial Value	"algorithms.file"		
Type	 String		
Getter	false	Setter	false
Multiplicity	1		

public DEFAULT_OUTPUT_DIR : String			
Description	Default output dir.		
Initial Value	"output.dir.default"		
Type	 String		
Getter	false	Setter	false
Multiplicity	1		

public DEFAULT_INPUT_DIR : String			
Description	Default input dir.		
Initial Value	"input.dir.default"		
Type	 String		
Getter	false	Setter	false
Multiplicity	1		

public ALGORITHMS_PATH : String			
Description	Algorihtms libraries path.		
Initial Value	"algorithms.path"		
Type	 String		
Getter	false	Setter	false
Multiplicity	1		