Ejecutar benchmarks

Summary

Name	Description
RunBenchmark.fxml	Benchmarks execution view.
RunBenchmarkController	Run view controller.
BenchmarkSelectionListener	Benchmarks tree listener.
RunBenchmarkModel	Benchmarks execution model.
AlgorithmExecService	Service for the background execution of algorithms and benchmarks.
AlgorithmExecutor	Service which executes an algorithm.
Algorithm	Algorithm of implicational system basis computation. It can be found in *API Algoritmos* class diagram.

Details

RunBenchmark.fxml

Name	Value
Description	Benchmarks execution view.
Visibility	public
Stereotypes	viewpoint

Attributes

private btnRun : javafx.scene.control.Button			
Type	javafx.scene.control.Button		
Getter	false	Setter	false
Multiplicity	1		

private btnClear : javafx.scene.control.Button			
Type	javafx.scene.control.Button		
Getter	false	Setter	false
Multiplicity	1		

private chkTime : javafx.scene.control.CheckBox			
Description	Check for to enable / disable the Time mode.		
Type	javafx.scene.control.CheckBox		
Getter	false	Setter	false
Multiplicity	1		

private chkHistory : javafx.scene.control.CheckBox			
Description	Check for to enable / disable the Trace mode.		
Type	javafx.scene.control.CheckBox		
Getter	false	Setter	false
Multiplicity	1		

private chkStatistics : javafx.scene.control.CheckBox			
Description	Check for to enable / disable the Statistics mode.		
Type	javafx.scene.control.CheckBox		
Getter	false	Setter	false
Multiplicity	1		

private filterField : javafx.scene.control.TextField			
Description	Filter over the benchmarks tree.		
Type	javafx.scene.control.TextField		
Getter	false	Setter	false
Multiplicity	1		

private benchmarksTree : javafx.scene.control.TreeView			
Description	Two levels tree with the current workspace registered benchmarks at the first level, and its algorithms at the second level.		
Type	javafx.scene.control.TreeView		
Getter	false	Setter	false
Multiplicity	1		

private inputButton : javafx.scene.control.SplitMenuButton			
Description	Menu button which shows the dialog box for to select the input files. Contains two options: select the existent file or generate a random implicational system.		
Type	javafx.scene.control.SplitMenuButton		
Getter	false	Setter	false
Multiplicity	1		

private inputsList : javafx.scene.control.ListView			
Description	Iinput implicational system file paths list.		
Type	javafx.scene.control.ListView		
Getter	false	Setter	false
Multiplicity	1		
Leaf	false		

private txtOtput : javafx.scene.control.Button			
Description	Text field for the output directory generated by the benchmark execution.		
Type	javafx.scene.control.Button		
Getter	false	Setter	false
Multiplicity	1		

private tableStatistics : javafx.scene.control.TableView		
Description	Table which contains the sizes statistics if the Statistics mode is enabled.	
Type	javafx.scene.control.TableView	
Getter	false	Setter	false
Multiplicity	1	

private tableResults : javafx.scene.control.TreeTableView		
Description	Table which contains the results of the executed benchmark, grouped by benchmark and algorithm.	
Type	javafx.scene.control.TreeTableView	
Getter	false	Setter	false
Multiplicity	1	

RunBenchmarkController

Name	Value
Description	RunBenchmark view controller.
Visibility	public

Attributes

private model : RunBenchmarkModel		
Description	RunBenchmark view model.	
Type	RunBenchmarkModel	
Getter	false	Setter	false
Multiplicity	1	

private readerService : FileReaderService		
Description	Service which reads a file in background.	
Type	FileReaderService	
Getter	false	Setter	false
Multiplicity	1	

private inputsList : javafx.scene.control.ListView

Description	Input implicational system file paths list.		
Type	javafx.scene.control.ListView		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private lbSelectedFiles : javafx.scene.control.Label

Description	Input selected files selected count.		
Type	javafx.scene.control.Label		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private txtOutput : javafx.scene.control.TextField

Description	Output field.		
Type	javafx.scene.control.TextField		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private filterField : javafx.scene.control.TextField

Description	Filter over benchmarks tree.		
Type	javafx.scene.control.TextField		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private benchmarksTree : javafx.scene.control.javafx.scene.control.TreeView		
Description	Benchmarks and algorithms tree.	
Type	javafx.scene.control.javafx.scene.control.TreeView	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private btnRun : javafx.scene.control.Button		
Description	Run button.	
Type	javafx.scene.control.Button	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private rootPane : javafx.scene.layout.BorderPane		
Description	Root pane.	
Type	javafx.scene.layout.BorderPane	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private cbOutputType : javafx.scene.control.ChoiceBox		
Description	Output type dropdown.	
Type	javafx.scene.control.ChoiceBox	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private tableStatistics : javafx.scene.control.TableView		
Description	Table with statistics results.	
Type	javafx.scene.control.TableView	
Stereotypes	FXML	
Getter	false	Setter	false
Multiplicity	1	

private chkTime : javafx.scene.control.CheckBox		
Description	Time mode check.	
Type	javafx.scene.control.CheckBox	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private chkHistory : javafx.scene.control.CheckBox		
Description	Trace mode check.	
Type	javafx.scene.control.CheckBox	
Getter	false	Setter	false
Multiplicity	Unspecified	
Stereotypes	FXML	

private chkStatistics : javafx.scene.control.CheckBox		
Description	Statistics mode check.	
Type	javafx.scene.control.CheckBox	
Getter	false	Setter	false
Multiplicity	1	
Stereotypes	FXML	

private statsProgressInd : javafx.scene.control.ProgressIndicator			
Description	Statistics loading progress indicator.		
Type	javafx.scene.control.ProgressIndicator		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private execurtionIndicator : javafx.scene.control.ProgressIndicator			
Description	Execution progress indicator.		
Type	javafx.scene.control.ProgressIndicator		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private busyLayer : javafx.scene.layout.AnchorPane			
Description	Layer which contains progress indicators.		
Type	javafx.scene.layout.AnchorPane		
Getter	false	Setter	false
Multiplicity	1		

private tableResults : javafx.scene.control.TreeTableView			
Description	Execution results table.		
Type	javafx.scene.control.TreeTableView		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private nameColumn : javafx.scene.control.TreeTableColumn			
Description	Columns of execution results table.		
Type	javafx.scene.control.TreeTableColumn		
Getter	false	Setter	false
Multiplicity	1		

private timeColumn : javafx.scene.control.TreeTableColumn			
Description	Columns of execution results table.		
Type	javafx.scene.control.TreeTableColumn		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private inputColumn : javafx.scene.control.TreeTableColumn			
Description	Input file column of execution results table.		
Type	javafx.scene.control.TreeTableColumn		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

private outputColumn : javafx.scene.control.TreeTableColumn			
Description	Columns of execution results table.		
Type	javafx.scene.control.TreeTableColumn		
Getter	false	Setter	false
Multiplicity	1		
Stereotypes	FXML		

Operations

protected initModel () : void	
Description	Initializes the model loading the benchmarks into the tree.

protected initView () : void	
Description	Initializes the view.
Exceptions	IOException

protected initBinding () : void	
Description	Initializes the bindings between the components view and the model.

protected initListeners () : void
Description	Initializes the components view listeners.

protected initModelBinding () : void
Description	Initializes the bindings with the model.

public initialize (url : java.net.URL, rb : java.util.ResourceBundle) : void		
Parameters	**url**	
	Description	URL of the view.
	Multiplicity	1
	Type	java.net.URL
	Direction	inout
	rb	
	Description	Resource bundle.
	Multiplicity	1
	Type	java.util.ResourceBundle
	Direction	inout
Description	Initializes the controller.	

protected modelToView () : void
Description	The components that are not bound , will be updated with the model values.

private getData (benchResult : BenchmarkResult) : javafx.scene.control.javafx.scene.control.TreeItem		
Parameters	**benchResult**	
	Description	Benchmark results.
	Multiplicity	1
	Type	BenchmarkResult
	Direction	inout
Description	Loads the benchmark results into a TreeTableView hierarchy.	
Return Type Description	Benchmark result node.	

protected reload () : void	
Description	Reloads the view and model.

protected getRootPane () : javafx.scene.layout.Pane	
Description	Returns the root pane.
Return Type Description	Root pane.

protected clear () : void	
Description	Clears the model and the view.

public clearStatistics (event : javafx.event.ActionEvent) : void		
Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Clears the statistics table.	

public showLog () : void	
Description	Shows the algorithm result selected log.

protected execute () : void	
Description	Executes the algorithms or benchmark selected with AlgorithmExecService.

public handleBenchmarksChange (event : BenchmarksChangeEvent) : void		
Parameters	**event**	
	Description	Registered benchmarks change event.
	Multiplicity	1
	Type	BenchmarksChangeEvent
	Direction	inout
Description	Handles the event BenchmarksChangeEvent published by Eventbus, and reloads the view and the model.	

Stereotypes	FXML

public handleClearAll (event : javafx.event.ActionEvent) : void

Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	ActionEvent handler of Run button. Clear all traces.	
Stereotypes	FXML	

public handleRunAction (event : javafx.event.ActionEvent) : void

Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Handles the event thrown when Run button is pressed. Runs the selected benchmark / algorithm.	
Stereotypes	FXML	

public handleSelectInputAction (event : javafx.event.ActionEvent) : void

Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Shows a dialog box for select the input of algorithm.	

public handleSystemSaved (event : SystemSaved) : void		
Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	SystemSaved
	Direction	inout
Description	Handles the SystemSaved event, copying the path of system into input field.	

public handleGenerateSystem (event : javafx.event.ActionEvent) : void		
Parameters	**event**	
	Description	Action event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Shows the generator window for generate a random system.	
Stereotypes	FXML	

public handleSelectOutputAction (event : javafx.event.ActionEvent) : void		
Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Shows the dialog box for select the target of algorithm results.	
Stereotypes	FXML	

public handleBenchamrksChange (event : BenchmarksChangeEvent) : void		
Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	BenchmarksChangeEvent
	Direction	inout
Description	Handles the event BenchmarksChangeEvent published by Eventbus, and reloads view and model.	

protected loadInputFiles (benchmark : String) : void		
Parameters	**benchmark**	
	Description	Benchmark's name.
	Multiplicity	1
	Type	String
	Direction	inout
Description	Loads the input files defined for the selected benchmark.	

protected handleDeleteInputAction (event : javafx.event.ActionEvent) : void		
Parameters	**event**	
	Description	Event.
	Multiplicity	1
	Type	javafx.event.ActionEvent
	Direction	inout
Description	Removes the selected items from the list.	
Stereotypes	FXML	

protected finishAlgExecution (result : BenchmarkResult, ex : Throwable) : void		
Parameters	**result**	
	Description	Benchmark result.
	Multiplicity	1
	Type	BenchmarkResult
	Direction	inout
	ex	
	Description	Exception if the execution is failed. Null otherwise.
	Multiplicity	1
	Type	Throwable
	Direction	inout
Description	Shows the results and statistics.	

protected showStatistics (statisticsFile : String) : void		
Parameters	**statisticsFile**	
	Description	Statistics file path.
	Multiplicity	1
	Type	String
	Direction	inout
Description	Loads the result statistics into a table.	

RunBenchmarkModel

Name	Value
Description	Benchmarks execution model.
Visibility	public

Attributes

private historyChecked : javafx.beans.property.BooleanProperty			
Description	Trace mode checked binding property.		
Type	javafx.beans.property.BooleanProperty		
Getter	false	Setter	false
Multiplicity	1		

private timeChecked : javafx.beans.property.BooleanProperty			
Description	Time mode checked binding property.		
Type	javafx.beans.property.BooleanProperty		
Getter	false	Setter	false
Multiplicity	1		

private statisticsChecked : javafx.beans.property.BooleanProperty			
Description	Statistics mode checked binding property.		
Type	javafx.beans.property.BooleanProperty		
Getter	false	Setter	false
Multiplicity	1		

private benchmarks : java.util.List<Benchmark>			
Description	Available benchmarks.		
Stereotypes	Property		
Type	java.util.List<Benchmark>		
Getter	true	Setter	true
Multiplicity	0..*		

private selectedBenchmark : Benchmark			
Description	Selected benchmark.		
Stereotypes	Property		
Type	Benchmark		
Getter	true	Setter	true
Multiplicity	1		

private selectedInputFilesListProperty : javafx.beans.property.ListProperty

Description	Input files list binding property.		
Type	javafx.beans.property.ListProperty		
Getter	false	Setter	false
Multiplicity	1		

private outputDirProperty : javafx.beans.property.StringProperty

Description	Output file path binding property.		
Type	javafx.beans.property.StringProperty		
Getter	false	Setter	false
Multiplicity	1		

private outputTypeProperty : javafx.beans.property.IntegerProperty

Description	Output file type selected binding property.		
Type	javafx.beans.property.IntegerProperty		
Getter	false	Setter	false
Multiplicity	1		

private selectedAlgorithm : AlgorithmInfo

Description	When the selection is an algorithm, the selected algorithm info.		
Stereotypes	Property		
Type	AlgorithmInfo		
Getter	true	Setter	true
Multiplicity	1		

private lastExecutionResult : BenchmarkResult

Description	Last execution result.		
Stereotypes	Property		
Type	BenchmarkResult		
Getter	true	Setter	true
Multiplicity	1		

Operations

public RunBenchmarkModel ()	
Description	Constructor.

public getSelectedAlgorithms () : java.util.List<AlgorithmInfo>	
Description	Selected algorithms.
Return Type Description	List of selected algorithms info.

public historyCheckedProperty () : javafx.beans.property.BooleanProperty	
Description	Trace checked binding property.
Return Type Description	The trace checked binding property.

public isHistoryChecked () : boolean	
Description	If the trace mode is checked.
Return Type Description	`true` if the history mode is checked, `false` otherwise.

public isStatisticsChecked () : boolean	
Description	If the statistics mode is checked.
Return Type Description	`true` if the statistics mode is checked, `false` otherwise.

public isTimeChecked () : boolean	
Description	If the time mode is checked.
Return Type Description	`true` if the Time mode is checked, `false` otherwise.

public statisticsCheckedProperty () : javafx.beans.property.BooleanProperty	
Description	Statistics checked binding property.
Return Type Description	The statistics checked binding property.

public timeCheckedProperty () : javafx.beans.property.BooleanProperty	
Description	Time checked binding property.
Return Type Description	The time checked binding property.

public selectedInputFilesListProperty () : javafx.beans.property.ListProperty	
Description	Path input files binding property.
Return Type Description	The Path input files binding property.

public getSelectedInputFiles () : java.util.List<String>	
Description	Gets the selected input files paths from the selectedInputFilesListProperty.
Return Type Description	The selected input files paths.

public outputDirProperty () : javafx.beans.property.StringProperty	
Description	Path output directory binding property.
Return Type Description	The Path output directory property.

public getOutputDir () : String	
Description	Returns the output directory path.
Return Type Description	The output directory path.

public outputTypeProperty () : javafx.beans.property.IntegerProperty	
Description	Output type binding property.
Return Type Description	The Output type binding property.

public getOutputType () : Integer	
Description	Gets the output file type from the outputTypeProperty.
Return Type Description	The output type.

public getOutputFileType () : String	
Description	Returns the file type of the selected output type.
Return Type Description	File Type.

RunBenchmarkController.**BenchmarkSelectionListener**

Name	Value
Description	Benchmarks tree listener.
Visibility	protected
Stereotypes	listener

Operations

public changed (observable : ObservableValue, oldItem : javafx.scene.control.TreeItem, newItem : javafx.scene.control.TreeItem)	
Parameters	**observable**
	Multiplicity	1
	Type	ObservableValue
	Direction	inout
	oldItem
	Multiplicity	1
	Type	javafx.scene.control.TreeItem
	Direction	inout
	newItem
	Multiplicity	1
	Type	javafx.scene.control.TreeItem
	Direction	inout
Description	This method is invoked when the selection on the benchmarks tree is changed. - When a benchmark is selected, the output field is initialized with the benchmark output directory and is disabled. - In this case, the mode checks and console outputs are disabled too. - If the selection is an algorithm, the output field is enabled and initialized with the path of algorithm default output file. - If the selection is more than one algorithm, the output field is cleared and disabled. - If the selection contains benchmarks and algorithms the output field is cleared ant the Run button disabled.

▤ AlgorithmExecService

Name	Value
Description	Service for the background execution of algorithms and benchmarks.
Visibility	public

Attributes

private algorithms : java.util.List<Algorithm>			
Description	Algorithms to execute.		
Type	java.utilList<Algorithm>		
Getter	false	Setter	false
Multiplicity	1..*		

private model : RunBenchmarkModel			
Description	Model.		
Type	▤ RunBenchmarkModel		
Getter	false	Setter	false
Multiplicity	1		

Operations

protected createTask () : javafx.concurrent.Task
Description	Task for execute algorithms and benchmarks. If the Statistics mode is enabled, prints the results into a CSV file.

protected instanceAlgorithms () : void	
Description	Creates the instances of the benchmark algorithms.

protected getOptions () : AlgorithmOptions	
Description	Establishes the algorithm options from the model.
Return Type Description	Algorithm execution options.

public setOnFinished (handler : javafx.event.EventHandler) : void		
Parameters	**handler**	
	Description	Handler.
	Multiplicity	1
	Type	javafx.event.EventHandler
	Direction	inout
Description	The onFinish event handler is called whenever the Task state transitions to the finished state: CANCELLED, FAILED or SUCCEEDED.	

protected failed () : void	
Description	This method is executed when the background task is completed with errors.

protected succeeded () : void	
Description	Publishes a message event when the task is finished successfully.

public AlgorithmExecService (algs : java.util.List<Algorithm>)		
Parameters	**algs**	
	Description	Algorithms to execute.
	Multiplicity	1
	Type	java.util.List<Algorithm>
	Direction	inout
Description	Constructor.	

public AlgorithmExecService (model : RunBenchmarkModel)		
Parameters	**model**	
	Description	Model.
	Multiplicity	1
	Type	RunBenchmarkModel
	Direction	inout
Description	Constructor.	

protected instanceAlgorithm (algorithm : AlgorithmInfo) : Algorithm		
Parameters	**algorithm**	
	Description	Algorithm info.
	Multiplicity	1
	Type	AlgorithmInfo
	Direction	inout
Description	Instances the algorithm of type of algorithm parameter.	
Return Type Description	Algorithm instance.	

protected printResults (result : BenchmarkResult) : void		
Parameters	**result**	
	Description	Results.
	Multiplicity	1
	Type	BenchmarkResult
	Direction	inout
Description	Prints the results into a CSV file.	
Exceptions	IOException when a read /write error occur.	

AlgorithmExecutor

Name	Value
Description	Service which executes an algorithm.
Visibility	public

Attributes

private algorithm : Algorithm			
Description	Algorithm to execute.		
Type	Algorithm		
Getter	false	Setter	false
Multiplicity	1		

private options : AlgorithmOptions			
Description	Execution options.		
Type	📄 AlgorithmOptions		
Getter	false	Setter	false
Multiplicity	1		

protected messages : AlgMessages			
Description	I18n messages.		
Type	📄 AlgMessages		
Getter	false	Setter	false
Multiplicity	1		

private inputs : String			
Description	Paths of inputs system.		
Type	🟢 String		
Getter	false	Setter	false
Multiplicity	0..*		

Operations

public AlgorithmExecutor ()	
Description	Constructor.

protected AlgorithmExecutor (algorithm : Algorithm)		
Parameters	**algorithm**	
	Description	Algorithm to execute.
	Multiplicity	Unspecified
	Type	📄 Algorithm
	Direction	inout
Description	Protected constructor. For testing purpose only.	

public execute (alg : Algorithm) : java.util.List

Parameters	alg	
	Description	Algorithm.
	Multiplicity	1
	Type	Algorithm
	Direction	inout
Description	Executes an algorithm.	
Return Type Description	Algorithm results.	

protected execute () : java.util.List<AlgorithmResult>

Description	Executes an algorithm in three stages: initialization, execution and finalization.
Return Type Description	Execution results.

protected init () : void

Description	Initializes the algorithm execution.

protected run () : java.util.List<AlgorithmResult>

Description	Executes the algorith with the inputs and options stablished.
Return Type Description	Algorithm results.
Exceptions	• java.io.IOException if IO error occur. • java.lang.IllegalArgumentException if the algorithm is null.

public output (file : String) : AlgorithmExecutor

Parameters	file	
	Description	Path of the output.
	Multiplicity	Unspecified
	Type	String
	Direction	inout
Description	Sets the output path of the result execution.	
Return Type Description	AlgorithmExecutor with output system established.	

protected getOutput () : String	
Description	Returns the output path.
Return Type Description	Output path.

public options (options : AlgorithmOptions) : AlgorithmExecutor		
Parameters	**options**	
	Description	Execution options.
	Multiplicity	Unspecified
	Type	AlgorithmOptions
	Direction	inout
Description	Sets an execution options.	
Return Type Description	AlgorithmExecutor with an execution option established.	

public inputs (fileNames : String) : AlgorithmExecutor		
Parameters	**fileNames**	
	Description	Additional inputs.
	Multiplicity	0..*
	Type Modifier	...
	Type	String
	Direction	inout
Description	Sets the path of the inputs system.	
Return Type Description	AlgorithmExecutor with inputs system setted.	

protected getInputs () : String	
Description	Returns the inputs path.
Return Type Description	Inputs path.

protected run (input : String, outputDir : String, logger : AlgorithmLogger) : AlgorithmResult		
	input	
	Description	Input implicational system.
	Multiplicity	Unspecified
	Type	🟢 String
	Direction	inout
	outputDir	
	Description	Output dir.
	Multiplicity	Unspecified
	Type	🟢 String
	Direction	inout
	logger	
	Description	Logger.
	Multiplicity	Unspecified
	Type	📄 AlgorithmLogger
	Direction	inout
Description	Executes the algorithm with an input and output dir.	
Return Type Description	Algorithm result.	