

Intention Recognition

Generated by Doxygen 1.7.4

Mon Sep 16 2013 19:17:50

Contents

1	Intention Recognition	1
2	Module Index	3
2.1	Modules	3
3	Namespace Index	5
3.1	Packages	5
4	Class Index	7
4.1	Class List	7
5	File Index	9
5.1	File List	9
6	Module Documentation	11
6.1	Graphical User Interface	11
6.2	Intention Structure	11
7	Namespace Documentation	13
7.1	Package gui	13
7.2	Package intention	13
7.3	Package main	13
7.4	Package ontology	14
7.5	Package orderingconstruct	14
7.5.1	Detailed Description	14
7.6	Package predicate	15
7.7	Package tools	15
7.7.1	Detailed Description	15

7.8	Package treecheckbox	16
7.8.1	Detailed Description	16
8	Class Documentation	17
8.1	orderingconstruct.AnyOrder Class Reference	17
8.1.1	Detailed Description	18
8.1.2	Constructor & Destructor Documentation	18
8.1.2.1	AnyOrder	18
8.1.3	Member Function Documentation	18
8.1.3.1	addCountToList	18
8.1.3.2	getCountList	19
8.1.3.3	getIndividual	19
8.1.3.4	getPosition	19
8.1.3.5	getTotalNumber	19
8.1.3.6	setIndividual	19
8.1.3.7	setPosition	20
8.1.3.8	setTotalNumber	20
8.1.4	Member Data Documentation	20
8.1.4.1	m_count_list	20
8.1.4.2	m_individual	20
8.1.4.3	m_position	20
8.1.4.4	m_total_number	20
8.2	gui.Chart Class Reference	20
8.2.1	Detailed Description	23
8.2.2	Constructor & Destructor Documentation	23
8.2.2.1	Chart	23
8.2.3	Member Function Documentation	23
8.2.3.1	createChart_likelihood	23
8.2.3.2	createChart_metrics	23
8.2.3.3	createLikelihoodDataset	23
8.2.3.4	createMetricsDataset	23
8.2.3.5	getChartTitle	23
8.2.3.6	getLegendItems	24
8.2.3.7	getMetricsChartTitle	24

8.2.3.8	setChartTitle	24
8.2.3.9	setMetricsChartTitle	24
8.2.3.10	updateChart_likelihood	24
8.2.3.11	updateChart_metrics	24
8.2.4	Member Data Documentation	24
8.2.4.1	m_colors	24
8.2.4.2	m_LH_Chart_Title	25
8.2.4.3	m_LH_chartPanel	25
8.2.4.4	m_LH_Dataset	25
8.2.4.5	m_Metric_Chart_Title	25
8.2.4.6	m_Metric_chartPanel	25
8.2.4.7	m_Metric_Dataset	25
8.2.4.8	m_tmp_LH_ChartPanel	25
8.2.4.9	m_tmp_Metric_ChartPanel	25
8.3	treecheckbox.CheckTreeCellRenderer Class Reference	26
8.3.1	Constructor & Destructor Documentation	27
8.3.1.1	CheckTreeCellRenderer	27
8.3.2	Member Function Documentation	27
8.3.2.1	getTreeCellRendererComponent	27
8.3.3	Member Data Documentation	27
8.3.3.1	checkBox	27
8.3.3.2	delegate	27
8.3.3.3	selectionModel	27
8.4	treecheckbox.CheckTreeManager Class Reference	27
8.4.1	Constructor & Destructor Documentation	28
8.4.1.1	CheckTreeManager	28
8.4.2	Member Function Documentation	28
8.4.2.1	addChildPaths	29
8.4.2.2	getAllCheckedPaths	29
8.4.2.3	getDescendants	29
8.4.2.4	getSelectionModel	29
8.4.2.5	mouseClicked	29
8.4.2.6	valueChanged	29
8.4.3	Member Data Documentation	29

8.4.3.1	hotspot	29
8.4.3.2	selectionModel	29
8.4.3.3	tree	29
8.5	treecheckbox.CheckTreeSelectionModel Class Reference	29
8.5.1	Constructor & Destructor Documentation	30
8.5.1.1	CheckTreeSelectionModel	30
8.5.2	Member Function Documentation	30
8.5.2.1	addSelectionPaths	30
8.5.2.2	areSiblingsSelected	31
8.5.2.3	isDescendant	31
8.5.2.4	isPartiallySelected	31
8.5.2.5	isPathSelected	31
8.5.2.6	removeSelectionPaths	31
8.5.2.7	setSelectionPaths	31
8.5.2.8	toggleRemoveSelection	31
8.5.3	Member Data Documentation	31
8.5.3.1	model	31
8.6	gui.CommonGUIComponents Class Reference	31
8.6.1	Detailed Description	33
8.6.2	Member Data Documentation	33
8.6.2.1	chartLeftPaneColor	33
8.6.2.2	chartPanelColor	33
8.6.2.3	intentionColor1	33
8.6.2.4	intentionColor10	33
8.6.2.5	intentionColor2	33
8.6.2.6	intentionColor3	33
8.6.2.7	intentionColor4	33
8.6.2.8	intentionColor5	34
8.6.2.9	intentionColor6	34
8.6.2.10	intentionColor7	34
8.6.2.11	intentionColor8	34
8.6.2.12	intentionColor9	34
8.6.2.13	JFreeChartBackground	34
8.6.2.14	JTabbedPaneColor	34

8.6.2.15	m_legendFont	34
8.6.2.16	m_part_green	34
8.6.2.17	m_part_orange	34
8.6.2.18	m_part_yellow	34
8.6.2.19	m_state	34
8.6.2.20	m_stateRelationFont	34
8.6.2.21	m_titleFont	34
8.6.2.22	menuBarColor	34
8.6.2.23	state_color	34
8.6.2.24	tabColor	35
8.7	tools.Configuration Class Reference	35
8.7.1	Detailed Description	35
8.7.2	Member Function Documentation	35
8.7.2.1	isMac	35
8.7.2.2	isUnix	35
8.7.2.3	isWindows	35
8.7.3	Member Data Documentation	35
8.7.3.1	m_OS	35
8.8	orderingconstruct.Count Class Reference	36
8.8.1	Detailed Description	37
8.8.2	Constructor & Destructor Documentation	37
8.8.2.1	Count	37
8.8.3	Member Function Documentation	37
8.8.3.1	getIndividual	37
8.8.3.2	getOccurence	37
8.8.3.3	getPredicate	38
8.8.3.4	setIndividual	38
8.8.3.5	setOccurrence	38
8.8.3.6	setPredicate	38
8.8.4	Member Data Documentation	38
8.8.4.1	m_individual	38
8.8.4.2	m_occurrence	39
8.8.4.3	m_predicate	39
8.9	gui.Chart.CustomRenderer Class Reference	39

8.9.1	Constructor & Destructor Documentation	40
8.9.1.1	CustomRenderer	40
8.9.2	Member Function Documentation	40
8.9.2.1	getItemPaint	40
8.9.3	Member Data Documentation	40
8.9.3.1	colors	41
8.9.3.2	serialVersionUID	41
8.10	gui.Chart.CustomRendererLine Class Reference	41
8.10.1	Constructor & Destructor Documentation	42
8.10.1.1	CustomRendererLine	42
8.10.2	Member Function Documentation	42
8.10.2.1	getItemPaint	42
8.10.3	Member Data Documentation	42
8.10.3.1	colors	42
8.10.3.2	serialVersionUID	42
8.11	gui.DemoPanel Class Reference	43
8.11.1	Constructor & Destructor Documentation	44
8.11.1.1	DemoPanel	44
8.11.2	Member Function Documentation	44
8.11.2.1	addChart	44
8.11.2.2	getCharts	44
8.11.3	Member Data Documentation	44
8.11.3.1	charts	44
8.12	gui.MainFrame.DisplayMetrics Class Reference	44
8.12.1	Detailed Description	45
8.12.2	Member Function Documentation	45
8.12.2.1	actionPerformed	45
8.13	DocumentFilter Class Reference	45
8.13.1	Detailed Description	45
8.14	gui.DrawStringPanel Class Reference	46
8.14.1	Constructor & Destructor Documentation	47
8.14.1.1	DrawStringPanel	47
8.14.2	Member Function Documentation	47
8.14.2.1	getFont	47

8.14.2.2	getPreferredSize	47
8.14.2.3	paintComponent	47
8.14.2.4	setAnchor	47
8.14.2.5	setAngle	47
8.14.2.6	setFont	47
8.14.2.7	setRotationAnchor	47
8.14.3	Member Data Documentation	47
8.14.3.1	anchor	48
8.14.3.2	angle	48
8.14.3.3	font	48
8.14.3.4	PREFERRED_SIZE	48
8.14.3.5	rotate	48
8.14.3.6	rotationAnchor	48
8.14.3.7	text	48
8.15	orderingconstruct.Exist Class Reference	48
8.15.1	Detailed Description	49
8.15.2	Constructor & Destructor Documentation	50
8.15.2.1	Exist	50
8.15.3	Member Function Documentation	50
8.15.3.1	getIndividual	50
8.15.3.2	getOccurrence	50
8.15.3.3	getPosition	50
8.15.3.4	getPredicate	50
8.15.3.5	getTotalNumber	50
8.15.3.6	setIndividual	50
8.15.3.7	setOccurrence	51
8.15.3.8	setPosition	51
8.15.3.9	setPredicate	51
8.15.3.10	setTotalNumber	51
8.15.4	Member Data Documentation	51
8.15.4.1	m_individual	51
8.15.4.2	m_occurrence	52
8.15.4.3	m_position	52
8.15.4.4	m_predicate	52

8.15.4.5	m_total_number	52
8.16	tools.FileOperator Class Reference	52
8.16.1	Detailed Description	52
8.16.2	Constructor & Destructor Documentation	53
8.16.2.1	FileOperator	53
8.16.3	Member Function Documentation	53
8.16.3.1	openFile	53
8.16.3.2	readLines	53
8.16.3.3	saveAllKitsData	53
8.16.3.4	translatePlanToStateRelation	53
8.17	intention.Intention Class Reference	53
8.17.1	Detailed Description	58
8.17.2	Constructor & Destructor Documentation	58
8.17.2.1	Intention	58
8.17.3	Member Function Documentation	58
8.17.3.1	builDetrimentalList	58
8.17.3.2	getDetrimentalList	58
8.17.3.3	getIndividual	58
8.17.3.4	getIntentionName	59
8.17.3.5	getM_am1	59
8.17.3.6	getM_am2	59
8.17.3.7	getM_am3	59
8.17.3.8	getM_am4	59
8.17.3.9	getM_am5	60
8.17.3.10	getM_built_kit	60
8.17.3.11	getM_found_detrimental_SR	60
8.17.3.12	getM_intention_number	60
8.17.3.13	getM_likelihood_observation	60
8.17.3.14	getM_map_SRirs	60
8.17.3.15	getM_mm1	61
8.17.3.16	getM_percentComplete_i_s	61
8.17.3.17	getM_percentProductive_i_s	61
8.17.3.18	getM_probability_kit_observation	61
8.17.3.19	getM_selected_plan	61

8.17.3.20	getM_Si	61
8.17.3.21	getM_SR_i_r_s	62
8.17.3.22	getM_SR_i_s	62
8.17.3.23	getM_SR_Total	62
8.17.3.24	getNumberStateRelation	62
8.17.3.25	getOrderedList	62
8.17.3.26	setDetrimentalList	62
8.17.3.27	setExist	63
8.17.3.28	setIndividual	63
8.17.3.29	setIntentionName	63
8.17.3.30	setM_am1	63
8.17.3.31	setM_am2	63
8.17.3.32	setM_am3	64
8.17.3.33	setM_am4	64
8.17.3.34	setM_am5	64
8.17.3.35	setM_built_kit	64
8.17.3.36	setM_found_detrimental_SR	64
8.17.3.37	setM_intention_number	65
8.17.3.38	setM_likelihood_observation	65
8.17.3.39	setM_map_SRirs	65
8.17.3.40	setM_mm1	65
8.17.3.41	setM_percentComplete_i_s	65
8.17.3.42	setM_percentProductive_i_s	66
8.17.3.43	setM_probability_kit_observation	66
8.17.3.44	setM_selected_plan	66
8.17.3.45	setM_Si	66
8.17.3.46	setM_SR_i_r_s	66
8.17.3.47	setM_SR_i_s	67
8.17.3.48	setM_SR_Total	67
8.17.3.49	setNumberStateRelation	67
8.17.3.50	setOrderedList	67
8.17.4	Member Data Documentation	67
8.17.4.1	m_am1	67
8.17.4.2	m_am2	68

8.17.4.3	m_am3	68
8.17.4.4	m_am4	69
8.17.4.5	m_am5	69
8.17.4.6	m_anyorder	70
8.17.4.7	m_built_kit	70
8.17.4.8	m_detrimental_list	70
8.17.4.9	m_exist	70
8.17.4.10	m_found_detrimental_SR	70
8.17.4.11	m_individual	70
8.17.4.12	m_intention_name	70
8.17.4.13	m_intention_number	70
8.17.4.14	m_intention_orderingConstruct_list	70
8.17.4.15	m_likelihood_observation	70
8.17.4.16	m_mm1	71
8.17.4.17	m_number_state_relation	71
8.17.4.18	m_orderedlist	71
8.17.4.19	m_percentComplete_i_s	71
8.17.4.20	m_percentProductive_i_s	71
8.17.4.21	m_probability_kit_observation	71
8.17.4.22	m_selected_plan	71
8.17.4.23	m_Si	72
8.17.4.24	m_SR_i_r_s	72
8.17.4.25	m_SR_i_s	72
8.17.4.26	m_SR_Total	72
8.17.4.27	m_SRirs	72
8.18	tools.IntFilter Class Reference	72
8.18.1	Member Function Documentation	73
8.18.1.1	insertString	73
8.18.1.2	remove	73
8.18.1.3	replace	73
8.18.1.4	test	73
8.19	main.Launcher Class Reference	74
8.19.1	Detailed Description	74
8.19.2	Constructor & Destructor Documentation	74

8.19.2.1 Launcher	74
8.19.3 Member Function Documentation	75
8.19.3.1 enabler	75
8.19.3.2 main	75
8.20 gui.MainFrame Class Reference	76
8.20.1 Constructor & Destructor Documentation	78
8.20.1.1 MainFrame	78
8.20.2 Member Function Documentation	78
8.20.2.1 actionPerformed	78
8.20.2.2 applyThemeToChart	78
8.20.2.3 attemptExit	78
8.20.2.4 buildLikelihoodPanel	78
8.20.2.5 buildMetricPanel	79
8.20.2.6 copyToClipboard	79
8.20.2.7 createContent	79
8.20.2.8 createLikelihoodChartPanel	79
8.20.2.9 createMenuBar	79
8.20.2.10 createMetricsChartPanel	79
8.20.2.11 exportToCSV	79
8.20.2.12 exportToPDF	79
8.20.2.13 lh_Button_ActionPerformed	79
8.20.2.14 saveToCSV	79
8.20.2.15 showErrorMessage	80
8.20.2.16 updateStateRelationPanel	80
8.20.3 Member Data Documentation	80
8.20.3.1 _sd	80
8.20.3.2 editorPane	80
8.20.3.3 EXIT_COMMAND	80
8.20.3.4 likelihood_bottomRightPane	80
8.20.3.5 likelihood_chartContainer	80
8.20.3.6 likelihood_displayPanel	80
8.20.3.7 likelihood_stateContainer	80
8.20.3.8 likelihoodLeft_JTextPane	80
8.20.3.9 m_csvitem	80

8.20.3.10	m_LH_Left_Panel	80
8.20.3.11	m_LH_ScrollPane	80
8.20.3.12	m_LH_Selection_Button	80
8.20.3.13	m_LH_SplitPane	80
8.20.3.14	m_likelihood_barchart	80
8.20.3.15	m_likelihoodCheckTreeManager	80
8.20.3.16	m_likelihoodTree	80
8.20.3.17	m_metricCheckTreeManager	81
8.20.3.18	m_metrics_barchart	81
8.20.3.19	m_metrics_jscrollpane	81
8.20.3.20	m_metricsSelectionButton	81
8.20.3.21	m_metricTree	81
8.20.3.22	metrics_chartContainer	81
8.20.3.23	metrics_jsplitpane	81
8.20.3.24	metrics_statePane	81
8.20.3.25	metricsLeft_JPanel	81
8.20.3.26	metricsLeft_JScrollPane	81
8.20.3.27	metricsLeft_JTextPane	81
8.20.3.28	serialVersionUID	81
8.21	intention.Metric Class Reference	81
8.21.1	Detailed Description	82
8.21.2	Member Function Documentation	82
8.21.2.1	get_AM1_Weight	82
8.21.2.2	get_AM2_Weight	83
8.21.2.3	get_AM3_Weight	83
8.21.2.4	get_AM4_Weight	83
8.21.2.5	get_AM5_Weight	83
8.21.2.6	get_MM1_Weight	83
8.21.2.7	set_AM1_Weight	83
8.21.2.8	set_AM2_Weight	84
8.21.2.9	set_AM3_Weight	84
8.21.2.10	set_AM4_Weight	84
8.21.2.11	set_AM5_Weight	84
8.21.2.12	set_MM1_Weight	84

8.21.3	Member Data Documentation	85
8.21.3.1	m_AM1_weight	85
8.21.3.2	m_AM2_weight	85
8.21.3.3	m_AM3_weight	85
8.21.3.4	m_AM4_weight	85
8.21.3.5	m_AM5_weight	85
8.21.3.6	m_MM1_weight	85
8.22	gui.OptionFrame.MouseHandler Class Reference	85
8.22.1	Constructor & Destructor Documentation	86
8.22.1.1	MouseHandler	86
8.22.2	Member Function Documentation	86
8.22.2.1	mousePressed	86
8.22.2.2	mouseReleased	86
8.22.3	Member Data Documentation	86
8.22.3.1	popupMenu	86
8.23	Ontology Class Reference	86
8.23.1	Detailed Description	86
8.24	ontology.Ontology Class Reference	87
8.24.1	Constructor & Destructor Documentation	91
8.24.1.1	Ontology	91
8.24.2	Member Function Documentation	92
8.24.2.1	buildIntentionList	92
8.24.2.2	buildIntentionMetricsTree	93
8.24.2.3	buildIntentionTree	93
8.24.2.4	buildObservationList	93
8.24.2.5	buildStates	93
8.24.2.6	choose	93
8.24.2.7	chooseTest	94
8.24.2.8	cleanDataPropertyInteger	94
8.24.2.9	cleanIRI	94
8.24.2.10	compute_SR_all_s	94
8.24.2.11	compute_SR_i_r_s	94
8.24.2.12	compute_sum_observation	94
8.24.2.13	compute_sum_part_type	95

8.24.2.14 computeLikelihood	95
8.24.2.15 computeMetricAM1	95
8.24.2.16 computeMetricAM2	96
8.24.2.17 computeMetricAM3	97
8.24.2.18 computeMetricAM4	97
8.24.2.19 computeMetricAM5	97
8.24.2.20 computeMetricMM1	98
8.24.2.21 computeMetricsInformation	98
8.24.2.22 computeObservationLikelihood	99
8.24.2.23 computePercentComplete	99
8.24.2.24 computePercentProductive	100
8.24.2.25 computeProbabilityFromObservation	100
8.24.2.26 computeProceduresForAM5	100
8.24.2.27 getForEachIntentionTheNumberOfPartsForEachType	100
8.24.2.28 getIndividualClass	100
8.24.2.29 getIndividualClassString	100
8.24.2.30 getIndividualClassString	100
8.24.2.31 getManager	100
8.24.2.32 getOntology	101
8.24.2.33 getOntologyPath	101
8.24.2.34 getPartColor	101
8.24.2.35 getPartType	101
8.24.2.36 getPath	101
8.24.2.37 getReferenceObjectClass	101
8.24.2.38 getRootClass	102
8.24.2.39 getSeparator	102
8.24.2.40 getStateRelation	102
8.24.2.41 getStringHead	102
8.24.2.42 getStringTail	102
8.24.2.43 getSubclasses	102
8.24.2.44 getTargetObjectClass	102
8.24.2.45 hasProperty	103
8.24.2.46 initializeList	103
8.24.2.47 input	103

8.24.2.48 loadFromFile	103
8.24.2.49 loadOntologyFromPath	103
8.24.2.50 matchDetrimentalStateRelationToIntention	103
8.24.2.51 matchStateRelationToIntention	103
8.24.2.52 parseIntention	104
8.24.2.53 printProperties	104
8.24.2.54 readForEachIntentionTheNumberOfPartsForEachType	104
8.24.2.55 readIntentionList	104
8.24.2.56 readObservationList	104
8.24.2.57 removeDuplicates	105
8.24.2.58 roundTwoDecimals	105
8.24.2.59 searchList	105
8.24.2.60 setDataFactory	105
8.24.2.61 setInstanceFilePath	105
8.24.2.62 setManager	105
8.24.2.63 setManager	105
8.24.2.64 setOntology	105
8.24.2.65 setPath	106
8.24.2.66 setReasoner	106
8.24.2.67 setRootClass	106
8.24.2.68 showDialogBox	106
8.24.2.69 sortIntentionList	106
8.24.2.70 updateForEachIntentionTheNumberOfPartsForEachType	106
8.24.2.71 updateMainFrame	107
8.24.2.72 updateObservationList	107
8.24.3 Member Data Documentation	107
8.24.3.1 m_datafactory	107
8.24.3.2 m_hasCount_Occurrence	107
8.24.3.3 m_hasIntention_Name	107
8.24.3.4 m_hasIntention_OrderingConstruct	107
8.24.3.5 m_hasOrderingConstruct_OrderingConstruct	107
8.24.3.6 m_hasOrderingConstruct_Position	107
8.24.3.7 m_hasOrderingConstruct_Predicate	107
8.24.3.8 m_hasPredicate_ReferenceObject	107

8.24.3.9	m_hasPredicate_TargetObject	108
8.24.3.10	m_intention_list	108
8.24.3.11	m_kitToBuild	108
8.24.3.12	m_manager	108
8.24.3.13	m_observation_list	108
8.24.3.14	m_ontology	108
8.24.3.15	m_ontology_IRI	108
8.24.3.16	m_part_type_number_for_each_intention_list	108
8.24.3.17	m_path	108
8.24.3.18	m_planToBuild	108
8.24.3.19	m_progress_bar	108
8.24.3.20	m_progress_frame	108
8.24.3.21	m_reasoner	108
8.24.3.22	m_s_ontopath	108
8.24.3.23	m_s_rootClass	108
8.24.3.24	m_s_subClass	108
8.24.3.25	m_SEPARATOR	108
8.25	gui.OntologyChooser Class Reference	109
8.25.1	Detailed Description	110
8.25.2	Constructor & Destructor Documentation	110
8.25.2.1	OntologyChooser	110
8.25.3	Member Function Documentation	110
8.25.3.1	actionPerformed	110
8.25.3.2	createAndShowGUI	110
8.25.3.3	createImageIcon	110
8.25.4	Member Data Documentation	110
8.25.4.1	fc	110
8.25.4.2	log	111
8.25.4.3	newline	111
8.25.4.4	openButton	111
8.25.4.5	saveButton	111
8.26	gui.OptionFrame Class Reference	111
8.26.1	Constructor & Destructor Documentation	115
8.26.1.1	OptionFrame	115

8.26.2	Member Function Documentation	115
8.26.2.1	add	115
8.26.2.2	addComponentsToPane	115
8.26.2.3	createAndShowGUI	115
8.26.2.4	createAndUpdateConfigFile	115
8.26.2.5	createButtonFromTemplate	115
8.26.2.6	createPopupMenu	115
8.26.2.7	findFilesInDirectory	115
8.26.2.8	getKitList	115
8.26.2.9	getMetric	115
8.26.2.10	readConfigFile	115
8.26.2.11	setMetric	115
8.26.2.12	updateConfigFile	115
8.26.2.13	updateLabel	115
8.26.3	Member Data Documentation	115
8.26.3.1	allKitsButton	115
8.26.3.2	contentPane	116
8.26.3.3	CREATE_WINDOW	116
8.26.3.4	DEFAULT_ICON	116
8.26.3.5	FILE_ICON	116
8.26.3.6	LF_DECORATIONS	116
8.26.3.7	m_bool_allKits	116
8.26.3.8	m_browse_instance	116
8.26.3.9	m_browse_path	116
8.26.3.10	m_field_AM1	116
8.26.3.11	m_field_AM2	116
8.26.3.12	m_field_AM3	116
8.26.3.13	m_field_AM4	116
8.26.3.14	m_field_AM5	116
8.26.3.15	m_frame	116
8.26.3.16	m_instance_txt_field	116
8.26.3.17	m_kitComboBox	116
8.26.3.18	m_metric	116
8.26.3.19	m_planComboBox	116

8.26.3.20	m_planStrings	116
8.26.3.21	m_popupMenu	116
8.26.3.22	m_save_file_txt_field	116
8.26.3.23	m_subkitlist	117
8.26.3.24	m_textArea	117
8.26.3.25	m_validate	117
8.26.3.26	m_validate_button	117
8.26.3.27	NO_DECORATIONS	117
8.26.3.28	PAINT_ICON	117
8.26.3.29	picture	117
8.26.3.30	RIGHT_TO_LEFT	117
8.26.3.31	shouldFill	117
8.26.3.32	shouldWeightX	117
8.26.3.33	singleKitButton	117
8.26.3.34	WS_DECORATIONS	117
8.27	orderingconstruct.OrderedList Class Reference	117
8.27.1	Constructor & Destructor Documentation	118
8.27.1.1	OrderedList	118
8.27.2	Member Function Documentation	118
8.27.2.1	getAnyOrder	118
8.27.2.2	getExist	118
8.27.2.3	getIndividual	118
8.27.2.4	setAnyOrder	118
8.27.2.5	setExist	118
8.27.2.6	setIndividual	118
8.27.3	Member Data Documentation	118
8.27.3.1	m_anyorder	118
8.27.3.2	m_exist	118
8.27.3.3	m_individual	119
8.27.3.4	orderedlist_l	119
8.27.3.5	orderedlist_name	119
8.28	gui.PDFChartTransferable Class Reference	119
8.28.1	Constructor & Destructor Documentation	120
8.28.1.1	PDFChartTransferable	120

8.28.1.2	PDFChartTransferable	120
8.28.2	Member Function Documentation	120
8.28.2.1	getTransferData	120
8.28.2.2	getTransferDataFlavors	120
8.28.2.3	isDataFlavorSupported	120
8.28.2.4	writeChartAsPDF	120
8.28.3	Member Data Documentation	120
8.28.3.1	chart	121
8.28.3.2	height	121
8.28.3.3	pdfFlavor	121
8.28.3.4	width	121
8.29	gui.OptionFrame.PlanComboBoxListener Class Reference	121
8.29.1	Member Function Documentation	122
8.29.1.1	actionPerformed	122
8.30	predicate.Predicate Class Reference	122
8.30.1	Constructor & Destructor Documentation	123
8.30.1.1	Predicate	123
8.30.2	Member Function Documentation	123
8.30.2.1	getIndividual	123
8.30.2.2	getReference	123
8.30.2.3	getReferenceObjectClass	123
8.30.2.4	getStateRelation	123
8.30.2.5	getTarget	123
8.30.2.6	getTargetObjectClass	123
8.30.2.7	setIndividual	123
8.30.2.8	setReference	123
8.30.2.9	setReferenceObjectClass	123
8.30.2.10	setStateRelation	123
8.30.2.11	setTarget	123
8.30.2.12	setTargetObjectClass	123
8.30.3	Member Data Documentation	123
8.30.3.1	m_individual	124
8.30.3.2	m_reference	124
8.30.3.3	m_reference_class	124

8.30.3.4	m_staterelation	124
8.30.3.5	m_target	124
8.30.3.6	m_target_class	124
8.31	gui.ProgressBar Class Reference	124
8.31.1	Constructor & Destructor Documentation	125
8.31.1.1	ProgressBar	125
8.31.2	Member Function Documentation	125
8.31.2.1	updateBar	125
8.31.3	Member Data Documentation	125
8.31.3.1	MY_MAXIMUM	125
8.31.3.2	MY_MINIMUM	126
8.31.3.3	pbar	126
8.32	treecheckbox.TreeExample Class Reference	126
8.32.1	Constructor & Destructor Documentation	127
8.32.1.1	TreeExample	127
8.32.2	Member Data Documentation	127
8.32.2.1	scrollPane	127
8.32.2.2	serialVersionUID	127
8.32.2.3	topPanel	127
8.32.2.4	tree	127
8.33	treecheckbox.TristateCheckBox Class Reference	128
8.33.1	Detailed Description	129
8.33.2	Constructor & Destructor Documentation	129
8.33.2.1	TristateCheckBox	129
8.33.2.2	TristateCheckBox	129
8.33.2.3	TristateCheckBox	129
8.33.2.4	TristateCheckBox	129
8.33.3	Member Function Documentation	129
8.33.3.1	addMouseListener	129
8.33.3.2	getState	129
8.33.3.3	setState	130
8.33.4	Member Data Documentation	130
8.33.4.1	model	130
8.34	treecheckbox.TristateCheckBox.TristateDecorator Class Reference	130

8.34.1	Detailed Description	132
8.34.2	Constructor & Destructor Documentation	132
8.34.2.1	TriStateDecorator	132
8.34.3	Member Function Documentation	132
8.34.3.1	addActionListener	132
8.34.3.2	addChangeListener	132
8.34.3.3	addItemListener	132
8.34.3.4	getActionCommand	132
8.34.3.5	getMnemonic	132
8.34.3.6	getSelectedObjects	132
8.34.3.7	getState	132
8.34.3.8	isArmed	133
8.34.3.9	isEnabled	133
8.34.3.10	isFocusTraversable	133
8.34.3.11	isPressed	133
8.34.3.12	isRollover	133
8.34.3.13	isSelected	133
8.34.3.14	nextState	133
8.34.3.15	removeActionListener	133
8.34.3.16	removeChangeListener	133
8.34.3.17	removeItemListener	133
8.34.3.18	setActionCommand	133
8.34.3.19	setArmed	133
8.34.3.20	setEnabled	133
8.34.3.21	setGroup	133
8.34.3.22	setMnemonic	133
8.34.3.23	setPressed	133
8.34.3.24	setRollover	133
8.34.3.25	setSelected	134
8.34.3.26	setState	134
8.34.4	Member Data Documentation	134
8.34.4.1	other	134

9.1	src/gui/Chart.java File Reference	135
9.2	src/gui/CommonGUIComponents.java File Reference	135
9.3	src/gui/DemoPanel.java File Reference	135
9.4	src/gui/DrawStringPanel.java File Reference	136
9.5	src/gui/MainFrame.java File Reference	136
9.6	src/gui/OntologyChooser.java File Reference	136
9.7	src/gui/OptionFrame.java File Reference	137
9.8	src/gui/PDFChartTransferable.java File Reference	137
9.9	src/gui/ProgressBar.java File Reference	137
9.10	src/intention/Intention.java File Reference	137
9.11	src/intention/Metric.java File Reference	138
9.12	src/main/Launcher.java File Reference	138
9.12.1	Detailed Description	138
9.13	src/ontology/Ontology.java File Reference	139
9.14	src/orderingconstruct/AnyOrder.java File Reference	139
9.15	src/orderingconstruct/Count.java File Reference	139
9.16	src/orderingconstruct/Exist.java File Reference	140
9.17	src/orderingconstruct/OrderedList.java File Reference	140
9.18	src/orderingconstruct/package-info.java File Reference	140
9.19	src/tools/package-info.java File Reference	140
9.20	src/treecheckbox/package-info.java File Reference	141
9.21	src/predicate/Predicate.java File Reference	141
9.22	src/tools/Configuration.java File Reference	141
9.23	src/tools/FileOperator.java File Reference	141
9.24	src/tools/IntFilter.java File Reference	141
9.25	src/treecheckbox/CheckTreeCellRenderer.java File Reference	142
9.26	src/treecheckbox/CheckTreeManager.java File Reference	142
9.27	src/treecheckbox/CheckTreeSelectionModel.java File Reference	142
9.28	src/treecheckbox/TreeExample.java File Reference	143
9.29	src/treecheckbox/TristateCheckBox.java File Reference	143

Chapter 1

Intention Recognition

This tool is capable of reading a plan file to 'recognize' which kit is being built.

Chapter 2

Module Index

2.1 Modules

Here is a list of all modules:

Graphical User Interface	11
Intention Structure	11

Chapter 3

Namespace Index

3.1 Packages

Here are the packages with brief descriptions (if available):

gui	13
intention	13
main	13
ontology	14
orderingconstruct (Formal mechanism to allow an ordering of state relationships to represent an intention)	14
predicate	15
tools	15
treecheckbox	16

Chapter 4

Class Index

4.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

orderingconstruct.AnyOrder (A set of state relationships that must all occur in any order)	17
gui.Chart (Chart display for metrics and likelihoods)	20
treecheckbox.CheckTreeCellRenderer	26
treecheckbox.CheckTreeManager	27
treecheckbox.CheckTreeSelectionModel	29
gui.CommonGUIComponents (Common GUI components used across different files of the project)	31
tools.Configuration	35
orderingconstruct.Count (A state relationship that must be present multiple times)	36
gui.Chart.CustomRenderer	39
gui.Chart.CustomRendererLine	41
gui.DemoPanel	43
gui.MainFrame.DisplayMetrics	44
DocumentFilter (Force a GUI component to contain a certain type of data (text, Integer, Double, etc))	45
gui.DrawStringPanel	46
orderingconstruct.Exist (A state relationship that must exist)	48
tools.FileOperator	52
intention.Intention (Representation of intentions from their definition in the ontology)	53
tools.IntFilter	72
main.Launcher (Main class of the tool)	74
gui.MainFrame	76
intention.Metric (Definition of additive and multiplicative metrics)	81
gui.OptionFrame.MouseHandler	85
Ontology (Class for the ontology)	86
ontology.Ontology	87

gui.OntologyChooser	109
gui.OptionFrame	111
orderingconstruct.OrderedList	117
gui.PDFChartTransferable	119
gui.OptionFrame.PlanComboBoxListener	121
predicate.Predicate	122
gui.ProgressBar	124
treecheckbox.TreeExample	126
treecheckbox.TristateCheckBox	128
treecheckbox.TristateCheckBox.TristateDecorator	130

Chapter 5

File Index

5.1 File List

Here is a list of all files with brief descriptions:

src/gui/Chart.java	135
src/gui/CommonGUIComponents.java	135
src/gui/DemoPanel.java	135
src/gui/DrawStringPanel.java	136
src/gui/MainFrame.java	136
src/gui/OntologyChooser.java	136
src/gui/OptionFrame.java	137
src/gui/PDFChartTransferable.java	137
src/gui/ProgressBar.java	137
src/intention/Intention.java	137
src/intention/Metric.java	138
src/main/Launcher.java (Contains the main of the program)	138
src/ontology/Ontology.java	139
src/orderingconstruct/AnyOrder.java	139
src/orderingconstruct/Count.java	139
src/orderingconstruct/Exist.java	140
src/orderingconstruct/OrderedList.java	140
src/orderingconstruct/package-info.java	140
src/predicate/Predicate.java	141
src/tools/Configuration.java	141
src/tools/FileOperator.java	141
src/tools/IntFilter.java	141
src/tools/package-info.java	140
src/treecheckbox/CheckTreeCellRenderer.java	142
src/treecheckbox/CheckTreeManager.java	142
src/treecheckbox/CheckTreeSelectionModel.java	142
src/treecheckbox/package-info.java	141
src/treecheckbox/TreeExample.java	143
src/treecheckbox/TristateCheckBox.java	143

Chapter 6

Module Documentation

6.1 Graphical User Interface

Classes

- class [gui.Chart](#)
Chart display for metrics and likelihoods.
- class [gui.CommonGUIComponents](#)
Common GUI components used across different files of the project.

6.2 Intention Structure

Classes

- class [intention.Intention](#)
Representation of intentions from their definition in the ontology.
- class [intention.Metric](#)
Definition of additive and multiplicative metrics.

Chapter 7

Namespace Documentation

7.1 Package gui

Classes

- class [Chart](#)
Chart display for metrics and likelihoods.
- class [CommonGUIComponents](#)
Common GUI components used across different files of the project.
- class [DemoPanel](#)
- class [DrawStringPanel](#)
- class [MainFrame](#)
- class [OntologyChooser](#)
- class [OptionFrame](#)
- class [PDFChartTransferable](#)
- class [ProgressBar](#)

7.2 Package intention

Classes

- class [Intention](#)
Representation of intentions from their definition in the ontology.
- class [Metric](#)
Definition of additive and multiplicative metrics.

7.3 Package main

Classes

- class [Launcher](#)
Main class of the tool.

7.4 Package ontology

Classes

- class [Ontology](#)

7.5 Package orderingconstruct

Formal mechanism to allow an ordering of state relationships to represent an intention.

Classes

- class [AnyOrder](#)
A set of state relationships that must all occur in any order.
- class [Count](#)
A state relationship that must be present multiple times.
- class [Exist](#)
A state relationship that must exist.
- class [OrderedList](#)

7.5.1 Detailed Description

Formal mechanism to allow an ordering of state relationships to represent an intention. In this work, an ordering of state relationships represents an intention. As such, we need we need a formal mechanism to allow for this ordering. To do this, we borrow some concepts that are described in OWL-S (Web [Ontology](#) Language – Services) (Martin, 2004). OWL-S is described on the Website (<http://www.w3.org/Submission/OWL-S/>) as an ontology of services enabling a user and software agents to discover, invoke, compose and monitor Web resources offering particular services and having particular properties.

Though intended for web-based services, many of the same ordering constructs are equally applicable to the representation of the sequencing of states. OWL-S defines eight control constructs. Only four of them are used in this project.

- Perform: execution of an action
- Sequence: a list of control constructs to be done in order

- Any-Order: process components (specified as a bag) to be executed in some unspecified order but not concurrently. All components must be executed.
- Iterate: makes no assumption about how many iterations are made or when to initiate, terminate, or resume. The initiation, termination or maintenance condition could be specified with a whileCondition or an untilCondition.

We adapt some of the these control constructs to represent the ordering of states by changing their name and definition as shown in Table 7.1

Table 7.1: Initial State Representation Ordering Constructs.

OWL-S Control Construct	State Representation Ordering Construct	State Representation Definition
Perform	Exist	A state relationship must exist
Sequence	OrderedList	A set of state relationships that must occur in a specific order
Any-Order	Any-Order	A set of state relationships that must all occur in any order
Iterate	Count	A state relationship that must be present multiple times. This often involves multiple instances of a specific object that holds a predefined spatial relationship with one or more instances of another object.

7.6 Package predicate

Classes

- class [Predicate](#)

7.7 Package tools

Classes

- class [Configuration](#)
- class [FileOperator](#)
- class [IntFilter](#)

7.7.1 Detailed Description

This package provides all the necessary tools needed by the project.

7.8 Package treecheckbox

Classes

- class [CheckTreeCellRenderer](#)
- class [CheckTreeManager](#)
- class [CheckTreeSelectionModel](#)
- class [TreeExample](#)
- class [TristateCheckBox](#)

7.8.1 Detailed Description

This package provides all the functions that allow trees rendering and manipulation.

The particularity of these trees is that the root and leaves are selectable via Java check boxes (CheckBox).

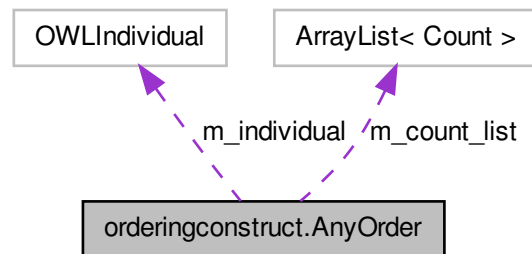
Chapter 8

Class Documentation

8.1 orderingconstruct.AnyOrder Class Reference

A set of state relationships that must all occur in any order.

Collaboration diagram for orderingconstruct.AnyOrder:



Public Member Functions

- `AnyOrder ()`
Class constructor.
- `void addCountToList (Count count_)`
Add an element of type `Count` to a list.
- `ArrayList< Count > getCountList ()`
Return the list that contains elements of type `Count`.
- `OWLIndividual getIndividual ()`

Return an element of [AnyOrder](#) that is an [OWLIndividual](#).

- int [getPosition](#) ()

Return the position of an element of type [AnyOrder](#) within the structure of an intention.

- int [getTotalNumber](#) ()

Return the total number of elements within an [AnyOrder](#) element.

- void [setIndividual](#) ([OWLIndividual](#) individual_)

Set an [AnyOrder](#) element as an [OWLIndividual](#).

- void [setPosition](#) (int position_)

Set the position of an [AnyOrder](#) element within the structure of an intention.

- void [setTotalNumber](#) (int total_number_)

Set the total number of elements within an [AnyOrder](#) element.

Private Attributes

- ArrayList< [Count](#) > [m_count_list](#)

A List of "Count" elements.

- [OWLIndividual](#) [m_individual](#)

Instance of [AnyOrder](#) as an [OWLIndividual](#).

- int [m_position](#)

Position of an element in an [AnyOrder](#) list.

- int [m_total_number](#)

Total number of elements in an [AnyOrder](#) list.

8.1.1 Detailed Description

A set of state relationships that must all occur in any order.

Author

[Zeid Kootbally](#) zeid.kootbally@nist.gov

8.1.2 Constructor & Destructor Documentation

8.1.2.1 orderingconstruct.AnyOrder.AnyOrder ()

Class constructor.

Initialize the list [AnyOrder.m_count_list](#)

8.1.3 Member Function Documentation

8.1.3.1 void orderingconstruct.AnyOrder.addCountToList ([Count](#) count_)

Add an element of type [Count](#) to a list.

Parameters

<code>count_</code>	The Count element to add to the list AnyOrder.m_count_list
---------------------	--

8.1.3.2 `ArrayList<Count> orderingconstruct.AnyOrder.getCountList ()`

Return the list that contains elements of type [Count](#).

Returns

[AnyOrder.m_count_list](#)

8.1.3.3 `OWLIndividual orderingconstruct.AnyOrder.getIndividual ()`

Return an element of [AnyOrder](#) that is an `OWLIndividual`.

Returns

[AnyOrder.m_individual](#)

8.1.3.4 `int orderingconstruct.AnyOrder.getPosition ()`

Return the position of an element of type [AnyOrder](#) within the structure of an intention.

Returns

[AnyOrder.m_position](#)

8.1.3.5 `int orderingconstruct.AnyOrder.getTotalNumber ()`

Return the total number of elements within an [AnyOrder](#) element.

[AnyOrder](#) usually consists of multiple [Count](#) elements

Returns

[AnyOrder.m_total_number](#)

8.1.3.6 `void orderingconstruct.AnyOrder.setIndividual (OWLIndividual individual_)`

Set an [AnyOrder](#) element as an `OWLIndividual`.

Parameters

<code>individual_</code>	<code>OWLIndividual</code> to set to AnyOrder.m_individual
--------------------------	--

8.1.3.7 void orderingconstruct.AnyOrder.setPosition (int *position_*)

Set the position of an [AnyOrder](#) element within the structure of an intention.

Parameters

<i>position_</i>	Position to set to AnyOrder.m_position
------------------	--

8.1.3.8 void orderingconstruct.AnyOrder.setTotalNumber (int *total_number_*)

Set the total number of elements within an [AnyOrder](#) element.

Parameters

<i>total_ - number_</i>	Total number to set to AnyOrder.m_total_number
-----------------------------	--

8.1.4 Member Data Documentation

8.1.4.1 ArrayList<Count> orderingconstruct.AnyOrder.m_count_list [private]

A List of "Count" elements.

8.1.4.2 OWLIndividual orderingconstruct.AnyOrder.m_individual [private]

Instance of [AnyOrder](#) as an OWLIndividual.

8.1.4.3 int orderingconstruct.AnyOrder.m_position [private]

Position of an element in an [AnyOrder](#) list.

8.1.4.4 int orderingconstruct.AnyOrder.m_total_number [private]

Total number of elements in an [AnyOrder](#) list.

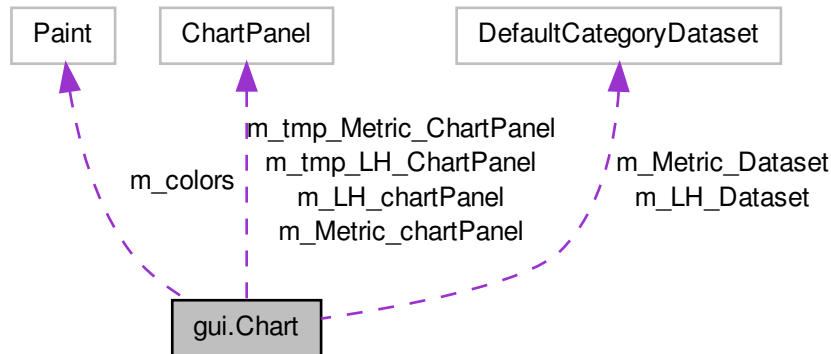
The documentation for this class was generated from the following file:

- [src/orderingconstruct/AnyOrder.java](#)

8.2 gui.Chart Class Reference

[Chart](#) display for metrics and likelihoods.

Collaboration diagram for gui.Chart:



Classes

- class [CustomRenderer](#)
- class [CustomRendererLine](#)

Public Member Functions

- [Chart](#) ()
Class constructor.
- LegendItemCollection [getLegendItems](#) (CombinedDomainCategoryPlot combined-domaincategoryplot)
Returns a collection of legend items for one of the subplot of a CombinedDomainCategoryPlot.
- ChartPanel [updateChart_metrics](#) (DefaultCategoryDataset metricsDataset)

Static Public Member Functions

- static void [setChartTitle](#) (String title_)
Set the title for the chart displaying intention likelihoods.
- static String [getChartTitle](#) ()
Get the title for the chart displaying intention likelihoods.
- static void [setMetricsChartTitle](#) (String title_)
Set the title for the chart displaying intention metrics.
- static String [getMetricsChartTitle](#) ()

Get the title for the chart displaying intention metrics.

- static ChartPanel [createChart_metrics](#) ()
- static void [createLikelihoodDataset](#) (double _likelihood, [Intention](#) _intention, int _state)
- static void [createMetricsDataset](#) ([Intention](#) _intention, int _state)

Create a data set for metrics.

Public Attributes

- ChartPanel [m_LH_chartPanel](#) = [createChart_likelihood](#)()
- ChartPanel [m_Metric_chartPanel](#) = [createChart_metrics](#)()
- ChartPanel [m_tmp_Metric_ChartPanel](#)
- ChartPanel [m_tmp_LH_ChartPanel](#)

Static Public Attributes

- static DefaultCategoryDataset [m_LH_Dataset](#) = new DefaultCategoryDataset()
Data set for likelihoods.
- static DefaultCategoryDataset [m_Metric_Dataset](#) = new DefaultCategoryDataset()

Data set for metrics.

Package Functions

- ChartPanel [updateChart_likelihood](#) (DefaultCategoryDataset dataset)

Static Package Attributes

- static Paint[] [m_colors](#)
Array of colors.

Private Member Functions

- ChartPanel [createChart_likelihood](#) ()

Static Private Attributes

- static String [m_LH_Chart_Title](#)
Title of the chart window.
- static String [m_Metric_Chart_Title](#)
Title of the metrics chart.

8.2.1 Detailed Description

[Chart](#) display for metrics and likelihoods.

This class consists of components that allow the display and selection of metrics and likelihoods

Author

[Zeid Kootbally](#) zeid.kootbally@nist.gov

Date

September 2013

8.2.2 Constructor & Destructor Documentation

8.2.2.1 `gui.Chart.Chart ()`

Class constructor.

- Allow the use of the mouse wheel to zoom in and out on the charts
- Allow the use of autoscroll on the charts

8.2.3 Member Function Documentation

8.2.3.1 `ChartPanel gui.Chart.createChart_likelihood ()` `[private]`

8.2.3.2 `static ChartPanel gui.Chart.createChart_metrics ()` `[static]`

8.2.3.3 `static void gui.Chart.createLikelihoodDataset (double _likelihood, Intention _intention, int _state)` `[static]`

8.2.3.4 `static void gui.Chart.createMetricsDataset (Intention _intention, int _state)` `[static]`

Create a data set for metrics.

Parameters

<code>_intention</code>	The intention from which we will retrieve the metrics
<code>_state</code>	The current state

8.2.3.5 `static String gui.Chart.getChartTitle ()` `[static]`

Get the title for the chart displaying intention likelihoods.

8.2.3.6 `LegendItemCollection` `gui.Chart.getLegendItems (CombinedDomainCategoryPlot combineddomaincategoryplot)`

Returns a collection of legend items for one of the subplot of a `CombinedDomainCategoryPlot`.

Parameters

<i>combined-domaincategoryplot</i>	Instance of <code>CombinedDomainCategoryPlot</code>
------------------------------------	---

Returns

The legend items.

8.2.3.7 `static String` `gui.Chart.getMetricsChartTitle () [static]`

Get the title for the chart displaying intention metrics.

8.2.3.8 `static void` `gui.Chart.setChartTitle (String title_) [static]`

Set the title for the chart displaying intention likelihoods.

Parameters

<i>title_</i>	Title of the Likelihood chart
---------------	-------------------------------

8.2.3.9 `static void` `gui.Chart.setMetricsChartTitle (String title_) [static]`

Set the title for the chart displaying intention metrics.

Parameters

<i>title_</i>	Title of the Metrics chart
---------------	----------------------------

8.2.3.10 `ChartPanel` `gui.Chart.updateChart_likelihood (DefaultCategoryDataset dataset) [package]`

8.2.3.11 `ChartPanel` `gui.Chart.updateChart_metrics (DefaultCategoryDataset metricsDataset)`

8.2.4 Member Data Documentation

8.2.4.1 `Paint[]` `gui.Chart.m_colors [static, package]`

Initial value:


```
new Paint[] { CommonGUIComponents.intentionColor9,  
              CommonGUIComponents.intentionColor2, CommonGUIComponents.intentionColor3,  
              CommonGUIComponents.intentionColor10,  
              CommonGUIComponents.intentionColor1, CommonGUIComponents.intentionColor6,  
              CommonGUIComponents.intentionColor7,  
              CommonGUIComponents.intentionColor8 }
```

Array of colors.

8.2.4.2 String gui.Chart.m_LH_Chart_Title [static, private]

Title of the chart window.

8.2.4.3 ChartPanel gui.Chart.m_LH_chartPanel = createChart.likelihood()

8.2.4.4 DefaultCategoryDataset gui.Chart.m_LH_Dataset = new DefaultCategoryDataset() [static]

Data set for likelihoods.

8.2.4.5 String gui.Chart.m_Metric_Chart_Title [static, private]

Title of the metrics chart.

8.2.4.6 ChartPanel gui.Chart.m_Metric_chartPanel = createChart_metrics()

8.2.4.7 DefaultCategoryDataset gui.Chart.m_Metric_Dataset = new DefaultCategoryDataset() [static]

Data set for metrics.

8.2.4.8 ChartPanel gui.Chart.m_tmp_LH_ChartPanel

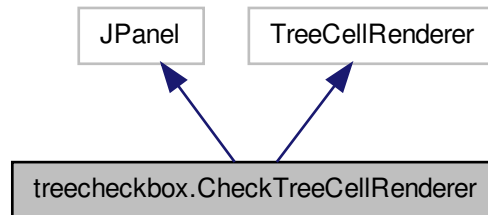
8.2.4.9 ChartPanel gui.Chart.m_tmp_Metric_ChartPanel

The documentation for this class was generated from the following file:

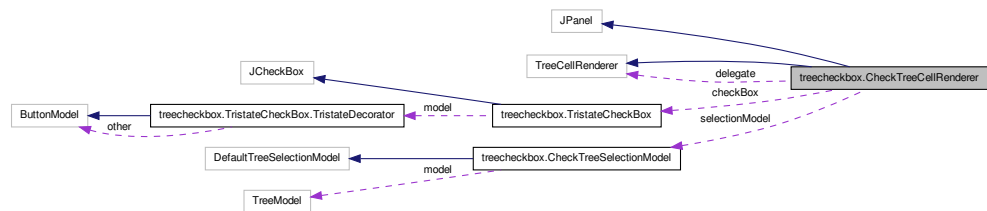
- src/gui/[Chart.java](#)

8.3 treecheckbox.CheckTreeCellRenderer Class Reference

Inheritance diagram for treecheckbox.CheckTreeCellRenderer:



Collaboration diagram for treecheckbox.CheckTreeCellRenderer:



Public Member Functions

- [CheckTreeCellRenderer](#) ([TreeCellRenderer](#) `delegate`, [CheckTreeSelectionModel](#) `selectionModel`)
- Component [getTreeCellRendererComponent](#) ([JTree](#) `tree`, `Object` `value`, `boolean` `selected`, `boolean` `expanded`, `boolean` `leaf`, `int` `row`, `boolean` `hasFocus`)

Private Attributes

- [CheckTreeSelectionModel](#) `selectionModel`
- `TreeCellRenderer` `delegate`
- [TristateCheckBox](#) `checkBox` = new [TristateCheckBox](#)()

8.3.1 Constructor & Destructor Documentation

8.3.1.1 `treecheckbox.CheckTreeCellRenderer.CheckTreeCellRenderer (TreeCellRenderer delegate, CheckTreeSelectionModel selectionModel)`

8.3.2 Member Function Documentation

8.3.2.1 Component `treecheckbox.CheckTreeCellRenderer.getTreeCellRendererComponent (JTree tree, Object value, boolean selected, boolean expanded, boolean leaf, int row, boolean hasFocus)`

8.3.3 Member Data Documentation

8.3.3.1 `TristateCheckBox treecheckbox.CheckTreeCellRenderer.checkBox = new TristateCheckBox() [private]`

8.3.3.2 `TreeCellRenderer treecheckbox.CheckTreeCellRenderer.delegate [private]`

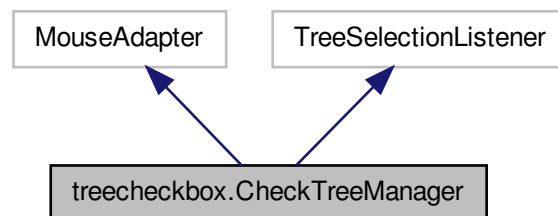
8.3.3.3 `CheckTreeSelectionModel treecheckbox.CheckTreeCellRenderer.selectionModel [private]`

The documentation for this class was generated from the following file:

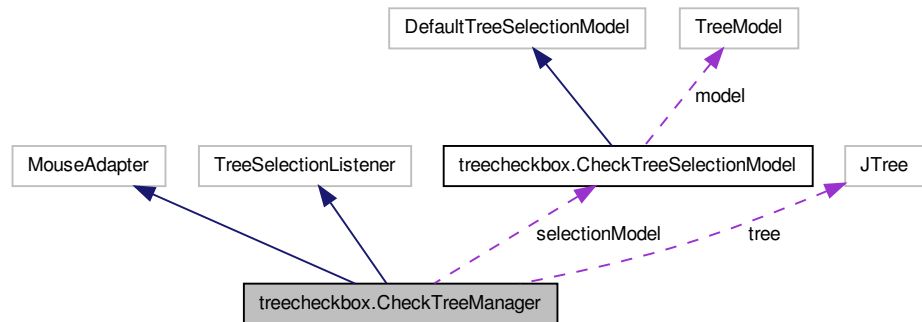
- `src/treecheckbox/CheckTreeCellRenderer.java`

8.4 treecheckbox.CheckTreeManager Class Reference

Inheritance diagram for `treecheckbox.CheckTreeManager`:



Collaboration diagram for `treecheckbox.CheckTreeManager`:



Public Member Functions

- [CheckTreeManager](#) ([JTree tree](#))
- void [addChildPaths](#) ([TreePath path](#), [TreeModel model](#), [List result](#))
- [ArrayList](#) [getDescendants](#) ([TreePath paths\[\]](#), [TreeModel model](#))
- [ArrayList< Object >](#) [getAllCheckedPaths](#) ([CheckTreeManager manager](#), [JTree tree](#))
- void [mouseClicked](#) ([MouseEvent me](#))
- [CheckTreeSelectionModel](#) [getSelectionModel](#) ()
- void [valueChanged](#) ([TreeSelectionEvent e](#))

Package Attributes

- int [hotspot](#) = new [JCheckBox\(\)](#).getPreferredSize().width

Private Attributes

- [CheckTreeSelectionModel](#) [selectionModel](#)
- [JTree](#) [tree](#) = new [JTree\(\)](#)

8.4.1 Constructor & Destructor Documentation

8.4.1.1 `treecheckbox.CheckTreeManager.CheckTreeManager (JTree tree)`

8.4.2 Member Function Documentation

- 8.4.2.1 void treecheckbox.CheckTreeManager.addChildPaths (*TreePath path*, *TreeModel model*, *List result*)
- 8.4.2.2 ArrayList<Object> treecheckbox.CheckTreeManager.getAllCheckedPaths (*CheckTreeManager manager*, *JTree tree*)
- 8.4.2.3 ArrayList treecheckbox.CheckTreeManager.getDescendants (*TreePath paths[]*, *TreeModel model*)
- 8.4.2.4 CheckTreeSelectionModel treecheckbox.CheckTreeManager.getSelectionModel ()
- 8.4.2.5 void treecheckbox.CheckTreeManager.mouseClicked (*MouseEvent me*)
- 8.4.2.6 void treecheckbox.CheckTreeManager.valueChanged (*TreeSelectionEvent e*)

8.4.3 Member Data Documentation

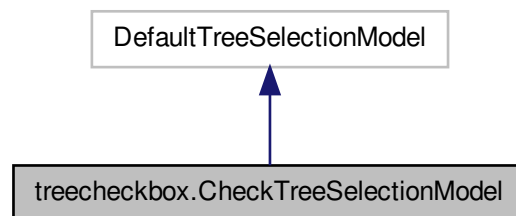
- 8.4.3.1 int treecheckbox.CheckTreeManager.hotspot = new JCheckBox().getPreferredSize().width [package]
- 8.4.3.2 CheckTreeSelectionModel treecheckbox.CheckTreeManager.selectionModel [private]
- 8.4.3.3 JTree treecheckbox.CheckTreeManager.tree = new JTree() [private]

The documentation for this class was generated from the following file:

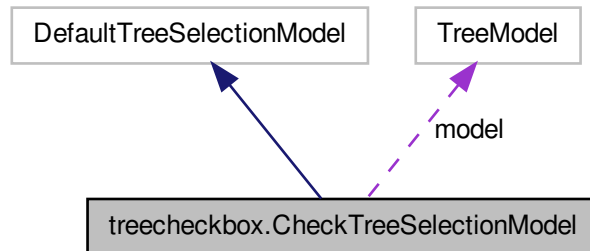
- src/treecheckbox/[CheckTreeManager.java](#)

8.5 treecheckbox.CheckTreeSelectionModel Class Reference

Inheritance diagram for treecheckbox.CheckTreeSelectionModel:



Collaboration diagram for treecheckbox.CheckTreeSelectionModel:



Public Member Functions

- [CheckTreeSelectionModel](#) (TreeModel [model](#))
- boolean [isPartiallySelected](#) (TreePath path)
- boolean [isPathSelected](#) (TreePath path, boolean dig)
- void [setSelectionPaths](#) (TreePath[] pPaths)
- void [addSelectionPaths](#) (TreePath[] paths)
- void [removeSelectionPaths](#) (TreePath[] paths)

Private Member Functions

- boolean [isDescendant](#) (TreePath path1, TreePath path2)
- boolean [areSiblingsSelected](#) (TreePath path)
- void [toggleRemoveSelection](#) (TreePath path)

Private Attributes

- TreeModel [model](#)

8.5.1 Constructor & Destructor Documentation

8.5.1.1 `treecheckbox.CheckTreeSelectionModel.CheckTreeSelectionModel (TreeModel model)`

8.5.2 Member Function Documentation

8.5.2.1 `void treecheckbox.CheckTreeSelectionModel.addSelectionPaths (TreePath[] paths)`

- 8.5.2.2 `boolean treecheckbox.CheckTreeSelectionModel.areSiblingsSelected (TreePath path)`
[private]
- 8.5.2.3 `boolean treecheckbox.CheckTreeSelectionModel.isDescendant (TreePath path1,
TreePath path2)` [private]
- 8.5.2.4 `boolean treecheckbox.CheckTreeSelectionModel.isPartiallySelected (TreePath path)`
- 8.5.2.5 `boolean treecheckbox.CheckTreeSelectionModel.isPathSelected (TreePath path,
boolean dig)`
- 8.5.2.6 `void treecheckbox.CheckTreeSelectionModel.removeSelectionPaths (TreePath[] paths)`
- 8.5.2.7 `void treecheckbox.CheckTreeSelectionModel.setSelectionPaths (TreePath[] pPaths)`
- 8.5.2.8 `void treecheckbox.CheckTreeSelectionModel.toggleRemoveSelection (TreePath path)`
[private]

8.5.3 Member Data Documentation

- 8.5.3.1 `TreeModel treecheckbox.CheckTreeSelectionModel.model` [private]

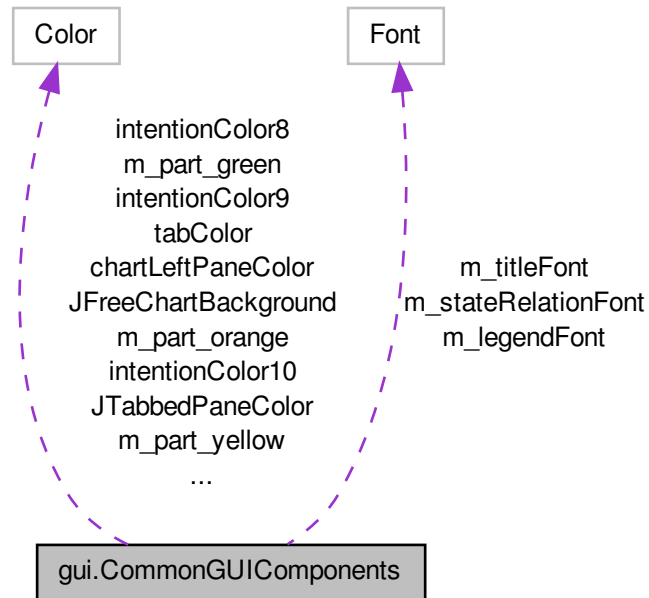
The documentation for this class was generated from the following file:

- `src/treecheckbox/CheckTreeSelectionModel.java`

8.6 gui.CommonGUIComponents Class Reference

Common GUI components used across different files of the project.

Collaboration diagram for gui.CommonGUIComponents:



Static Public Attributes

- static Color `chartPanelColor` = new Color(160, 188, 136)
- static Color `menuBarColor` = new Color(75, 148, 48)
- static Color `tabColor` = new Color(255, 255, 255)
- static Color `chartLeftPaneColor` = new Color(255, 255, 255)
- static Color `intentionColor1` = new Color(255, 0, 200)
- static Color `intentionColor2` = new Color(255, 145, 0)
- static Color `intentionColor3` = new Color(118, 175, 60)
- static Color `intentionColor6` = new Color(255, 255, 255)
- static Color `intentionColor7` = new Color(255, 111, 0)
- static Color `intentionColor8` = new Color(0, 255, 34)
- static Color `intentionColor9` = new Color(0, 137, 255)
- static Color `intentionColor10` = new Color(64, 73, 81)
- static Color `state_color` = new Color(255, 0, 0)
- static Color `JTabbedPaneColor` = new Color(255, 145, 0)
- static Color `JFreeChartBackground` = new Color(214, 224, 219)
- static Color `m_part_orange` = new Color(233, 148, 0)

- static Color `m_part_green` = new Color(71, 144, 30)
- static Color `m_part_yellow` = new Color(236, 236, 43)
- static Color `m_state` = new Color(129, 129, 120)
- static Font `m_titleFont` = new Font("Times",Font.PLAIN, 18)
- static Font `m_legendFont` = new Font("Times",Font.PLAIN, 13)
- static Font `m_stateRelationFont` = new Font("Times",Font.PLAIN, 14)

Static Private Attributes

- static Color `intentionColor4` = new Color(50, 75, 156)
- static Color `intentionColor5` = new Color(242, 9, 9)

8.6.1 Detailed Description

Common GUI components used across different files of the project.

This class defines colors and fonts that are used in multiple source files.

Author

Zeid Kootbally zeid.kootbally@nist.gov

Date

September 2013

8.6.2 Member Data Documentation

- 8.6.2.1 Color `gui.CommonGUIComponents.chartLeftPaneColor` = new Color(255, 255, 255) [static]
- 8.6.2.2 Color `gui.CommonGUIComponents.chartPanelColor` = new Color(160, 188, 136) [static]
- 8.6.2.3 Color `gui.CommonGUIComponents.intentionColor1` = new Color(255, 0, 200) [static]
- 8.6.2.4 Color `gui.CommonGUIComponents.intentionColor10` = new Color(64, 73, 81) [static]
- 8.6.2.5 Color `gui.CommonGUIComponents.intentionColor2` = new Color(255, 145, 0) [static]
- 8.6.2.6 Color `gui.CommonGUIComponents.intentionColor3` = new Color(118, 175, 60) [static]
- 8.6.2.7 Color `gui.CommonGUIComponents.intentionColor4` = new Color(50, 75, 156) [static, private]

- 8.6.2.8 **Color** `gui.CommonGUIComponents.intentionColor5 = new Color(242, 9, 9)`
[static, private]
- 8.6.2.9 **Color** `gui.CommonGUIComponents.intentionColor6 = new Color(255, 255, 255)`
[static]
- 8.6.2.10 **Color** `gui.CommonGUIComponents.intentionColor7 = new Color(255, 111, 0)`
[static]
- 8.6.2.11 **Color** `gui.CommonGUIComponents.intentionColor8 = new Color(0, 255, 34)`
[static]
- 8.6.2.12 **Color** `gui.CommonGUIComponents.intentionColor9 = new Color(0, 137, 255)`
[static]
- 8.6.2.13 **Color** `gui.CommonGUIComponents.JFreeChartBackground = new Color(214,224,219)` [static]
- 8.6.2.14 **Color** `gui.CommonGUIComponents.JTabbedPaneColor = new Color(255, 145, 0)` [static]
- 8.6.2.15 **Font** `gui.CommonGUIComponents.m_legendFont = new Font("Times",Font.PLAIN, 13)` [static]
- 8.6.2.16 **Color** `gui.CommonGUIComponents.m_part_green = new Color(71, 144, 30)`
[static]
- 8.6.2.17 **Color** `gui.CommonGUIComponents.m_part_orange = new Color(233, 148, 0)`
[static]
- 8.6.2.18 **Color** `gui.CommonGUIComponents.m_part_yellow = new Color(236, 236, 43)`
[static]
- 8.6.2.19 **Color** `gui.CommonGUIComponents.m_state = new Color(129, 129, 120)`
[static]
- 8.6.2.20 **Font** `gui.CommonGUIComponents.m_stateRelationFont = new Font("Times",Font.PLAIN, 14)` [static]
- 8.6.2.21 **Font** `gui.CommonGUIComponents.m_titleFont = new Font("Times",Font.PLAIN, 18)` [static]
- 8.6.2.22 **Color** `gui.CommonGUIComponents.menuBarColor = new Color(75, 148, 48)`
[static]
- 8.6.2.23 **Color** `gui.CommonGUIComponents.state_color = new Color(255, 0, 0)`
[static]

8.6.2.24 `Color gui.CommonGUIComponents.tabColor = new Color(255, 255, 255)`
[static]

The documentation for this class was generated from the following file:

- [src/gui/CommonGUIComponents.java](#)

8.7 tools.Configuration Class Reference

Static Public Member Functions

- static boolean [isWindows](#) ()
- static boolean [isMac](#) ()
- static boolean [isUnix](#) ()

Static Public Attributes

- static String [m_OS](#) = System.getProperty("os.name").toLowerCase()

8.7.1 Detailed Description

Author

zeid

8.7.2 Member Function Documentation

8.7.2.1 static boolean [tools.Configuration.isMac](#) () [static]

8.7.2.2 static boolean [tools.Configuration.isUnix](#) () [static]

8.7.2.3 static boolean [tools.Configuration.isWindows](#) () [static]

8.7.3 Member Data Documentation

8.7.3.1 String [tools.Configuration.m_OS](#) = System.getProperty("os.name").toLowerCase()
[static]

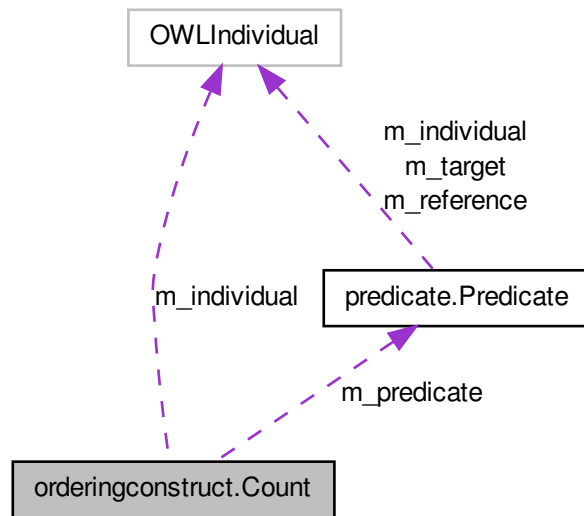
The documentation for this class was generated from the following file:

- [src/tools/Configuration.java](#)

8.8 orderingconstruct.Count Class Reference

A state relationship that must be present multiple times.

Collaboration diagram for orderingconstruct.Count:



Public Member Functions

- [Count](#) ()
Class constructor.
- [Predicate](#) [getPredicate](#) ()
Return the predicate for the [Count](#) element.
- OWLIndividual [getIndividual](#) ()
Return the [Count](#) element of type OWLIndividual.
- Integer [getOccurence](#) ()
Return the occurrence associated to a [Count](#) element.
- void [setPredicate](#) ([Predicate](#) predicate_)
Set a predicate to a [Count](#) element.
- void [setIndividual](#) (OWLIndividual individual_)
Set a [Count](#) element as an OWLIndividual.
- void [setOccurence](#) (Integer occurrence_)
Set an occurrence to a [Count](#) element.

Private Attributes

- Predicate `m_predicate`
Predicate element that constitutes the `Count` element.
- Integer `m_occurrence`
Occurence associated to a `Count` element.
- OWLIndividual `m_individual`
A `Count` element of type OWLIndividual.

8.8.1 Detailed Description

A state relationship that must be present multiple times.

This often involves multiple instances of a specific object that holds a predefined spatial relationship with one or more instances of another object.

Author

`Zeid Kootbally` `zeid.kootbally@nist.gov`

8.8.2 Constructor & Destructor Documentation

8.8.2.1 `orderingconstruct.Count.Count ()`

Class constructor.

8.8.3 Member Function Documentation

8.8.3.1 `OWLIndividual orderingconstruct.Count.getIndividual ()`

Return the `Count` element of type OWLIndividual.

Returns

`Count.m_individual`

8.8.3.2 `Integer orderingconstruct.Count.getOccurence ()`

Return the occurrence associated to a `Count` element.

Returns

`Count.m_occurrence`

8.8.3.3 Predicate orderingconstruct.Count.getPredicate ()

Return the predicate for the [Count](#) element.

In the ontology, a [Count](#) OWL individual has a predicate.

This is defined by the OWL object property *hasOrderingConstruct_Predicate* where the domain is [Count](#) and the range is Predicate.

Returns

[Count.m_predicate](#)

8.8.3.4 void orderingconstruct.Count.setIndividual (OWLIndividual *individual_*)

Set a [Count](#) element as an OWLIndividual.

Parameters

<i>individual_</i>	OWLIndividual to set to Count.m_individual
--------------------	--

8.8.3.5 void orderingconstruct.Count.setOccurrence (Integer *occurrence_*)

Set an occurrence to a [Count](#) element.

Parameters

<i>occurrence_</i>	Occurrence to set to a Count element
--------------------	--

8.8.3.6 void orderingconstruct.Count.setPredicate (Predicate *predicate_*)

Set a predicate to a [Count](#) element.

Parameters

<i>predicate_</i>	predicate.Predicate element to set to Count.m_predicate
-------------------	---

8.8.4 Member Data Documentation

8.8.4.1 OWLIndividual orderingconstruct.Count.m_individual [private]

A [Count](#) element of type OWLIndividual.

8.8.4.2 Integer orderingconstruct.Count.m_occurrence [private]

Occurence associated to a [Count](#) element.

In the ontology, the occurrence specifies the number of parts of a certain type that constitute a kit.

For instance, for the kit *kit_{a2b3c3d1e1}*, the occurrence of parts of type "a" is 2.

This is represented in the ontology with the OWL data property *hasCount_Occurrence*, where the domain is [Count](#) and the range is integer.

8.8.4.3 Predicate orderingconstruct.Count.m_predicate [private]

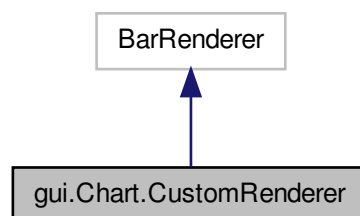
Predicate element that constitutes the [Count](#) element.

The documentation for this class was generated from the following file:

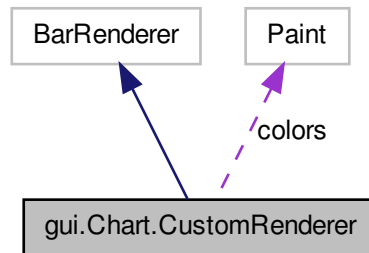
- [src/orderingconstruct/Count.java](#)

8.9 gui.Chart.CustomRenderer Class Reference

Inheritance diagram for gui.Chart.CustomRenderer:



Collaboration diagram for gui.Chart.CustomRenderer:



Public Member Functions

- [CustomRenderer](#) ()
Read an array of colors and select each color in order they are in the array.
- Paint [getItemPaint](#) (final int row, final int column)

Private Attributes

- Paint[] [colors](#)

Static Private Attributes

- static final long [serialVersionUID](#) = 1L

8.9.1 Constructor & Destructor Documentation

8.9.1.1 gui.Chart.CustomRenderer.CustomRenderer ()

Read an array of colors and select each color in order they are in the array.

8.9.2 Member Function Documentation

8.9.2.1 Paint gui.Chart.CustomRenderer.getItemPaint (final int row, final int column)

8.9.3 Member Data Documentation

8.9.3.1 `Paint [] gui.Chart.CustomRenderer.colors` `[private]`

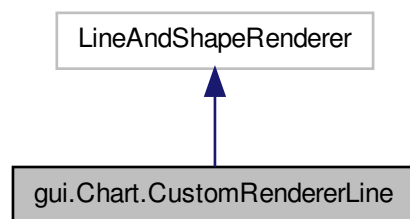
8.9.3.2 `final long gui.Chart.CustomRenderer.serialVersionUID = 1L` `[static, private]`

The documentation for this class was generated from the following file:

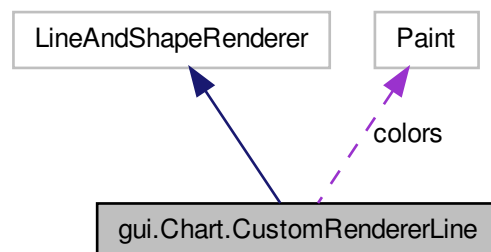
- [src/gui/Chart.java](#)

8.10 gui.Chart.CustomRendererLine Class Reference

Inheritance diagram for gui.Chart.CustomRendererLine:



Collaboration diagram for gui.Chart.CustomRendererLine:



Public Member Functions

- [CustomRendererLine](#) ()
- Paint [getItemPaint](#) (final int row, final int column)

Private Attributes

- Paint[] [colors](#)

Static Private Attributes

- static final long [serialVersionUID](#) = 1L

8.10.1 Constructor & Destructor Documentation

8.10.1.1 `gui.Chart.CustomRendererLine.CustomRendererLine ()`

8.10.2 Member Function Documentation

8.10.2.1 Paint `gui.Chart.CustomRendererLine.getItemPaint (final int row, final int column)`

8.10.3 Member Data Documentation

8.10.3.1 Paint [] `gui.Chart.CustomRendererLine.colors` [private]

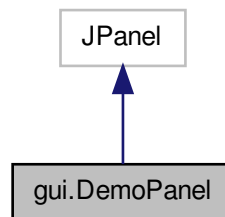
8.10.3.2 final long `gui.Chart.CustomRendererLine.serialVersionUID = 1L`
[static, private]

The documentation for this class was generated from the following file:

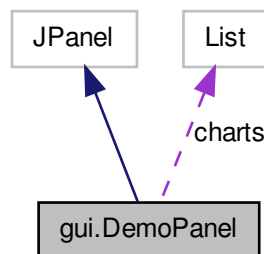
- `src/gui/Chart.java`

8.11 gui.DemoPanel Class Reference

Inheritance diagram for gui.DemoPanel:



Collaboration diagram for gui.DemoPanel:



Public Member Functions

- [DemoPanel](#) (java.awt.LayoutManager layoutManager)
- void [addChart](#) (JFreeChart jfreechart)
- JFreeChart[] [getCharts](#) ()

Package Attributes

- List [charts](#)

8.11.1 Constructor & Destructor Documentation

8.11.1.1 `gui.DemoPanel.DemoPanel (java.awt.LayoutManager layoutmanager)`

8.11.2 Member Function Documentation

8.11.2.1 `void gui.DemoPanel.addChart (JFreeChart jfreechart)`

8.11.2.2 `JFreeChart [] gui.DemoPanel.getCharts ()`

8.11.3 Member Data Documentation

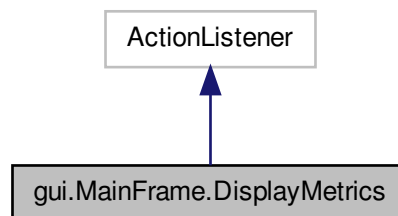
8.11.3.1 `List gui.DemoPanel.charts` [package]

The documentation for this class was generated from the following file:

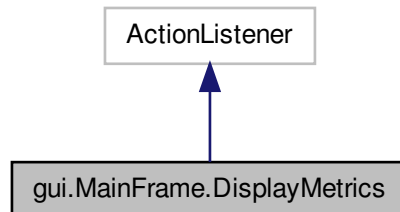
- `src/gui/DemoPanel.java`

8.12 gui.MainFrame.DisplayMetrics Class Reference

Inheritance diagram for `gui.MainFrame.DisplayMetrics`:



Collaboration diagram for gui.MainFrame.DisplayMetrics:



Public Member Functions

- void [actionPerformed](#) (ActionEvent e)

8.12.1 Detailed Description

Listener for the metrics selection in the JTree of checkboxes

8.12.2 Member Function Documentation

8.12.2.1 void `gui.MainFrame.DisplayMetrics.actionPerformed` (ActionEvent *e*)

The documentation for this class was generated from the following file:

- [src/gui/MainFrame.java](#)

8.13 DocumentFilter Class Reference

Force a GUI component to contain a certain type of data (text, Integer, Double, etc)

8.13.1 Detailed Description

Force a GUI component to contain a certain type of data (text, Integer, Double, etc)

The user will not be able to enter any type of data other than the one specified. For instance, if the GUI component can contain only Integer and the user wants to type 3.14, the "." will not be enabled.

Author

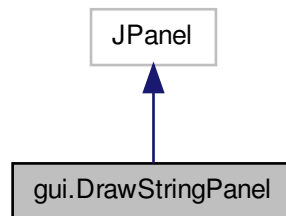
Zeid Kootbally zeid.kootbally@nist.gov

The documentation for this class was generated from the following file:

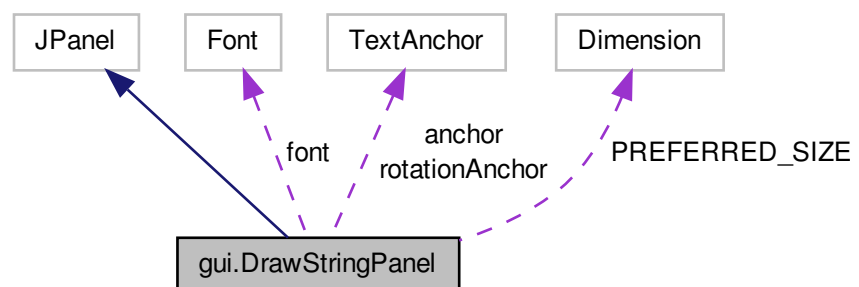
- [src/tools/IntFilter.java](#)

8.14 gui.DrawStringPanel Class Reference

Inheritance diagram for gui.DrawStringPanel:



Collaboration diagram for gui.DrawStringPanel:



Public Member Functions

- [DrawStringPanel](#) (String s, boolean flag)
- Dimension [getPreferredSize](#) ()
- void [setAnchor](#) (TextAnchor textanchor)
- void [setRotationAnchor](#) (TextAnchor textanchor)
- void [setAngle](#) (double d)
- Font [getFont](#) ()
- void [setFont](#) (Font font1)
- void [paintComponent](#) (Graphics g)

Private Attributes

- boolean [rotate](#)
- String [text](#)
- TextAnchor [anchor](#)
- TextAnchor [rotationAnchor](#)
- Font [font](#)
- double [angle](#)

Static Private Attributes

- static final Dimension [PREFERRED_SIZE](#) = new Dimension(500, 300)

8.14.1 Constructor & Destructor Documentation

8.14.1.1 `gui.DrawStringPanel.DrawStringPanel (String s, boolean flag)`

8.14.2 Member Function Documentation

8.14.2.1 `Font gui.DrawStringPanel.getFont ()`

8.14.2.2 `Dimension gui.DrawStringPanel.getPreferredSize ()`

8.14.2.3 `void gui.DrawStringPanel.paintComponent (Graphics g)`

8.14.2.4 `void gui.DrawStringPanel.setAnchor (TextAnchor textanchor)`

8.14.2.5 `void gui.DrawStringPanel.setAngle (double d)`

8.14.2.6 `void gui.DrawStringPanel.setFont (Font font1)`

8.14.2.7 `void gui.DrawStringPanel.setRotationAnchor (TextAnchor textanchor)`

8.14.3 Member Data Documentation

- 8.14.3.1 `TextAnchor gui.DrawStringPanel.anchor` [private]
- 8.14.3.2 `double gui.DrawStringPanel.angle` [private]
- 8.14.3.3 `Font gui.DrawStringPanel.font` [private]
- 8.14.3.4 `final Dimension gui.DrawStringPanel.PREFERRED_SIZE = new Dimension(500, 300)` [static, private]
- 8.14.3.5 `boolean gui.DrawStringPanel.rotate` [private]
- 8.14.3.6 `TextAnchor gui.DrawStringPanel.rotationAnchor` [private]
- 8.14.3.7 `String gui.DrawStringPanel.text` [private]

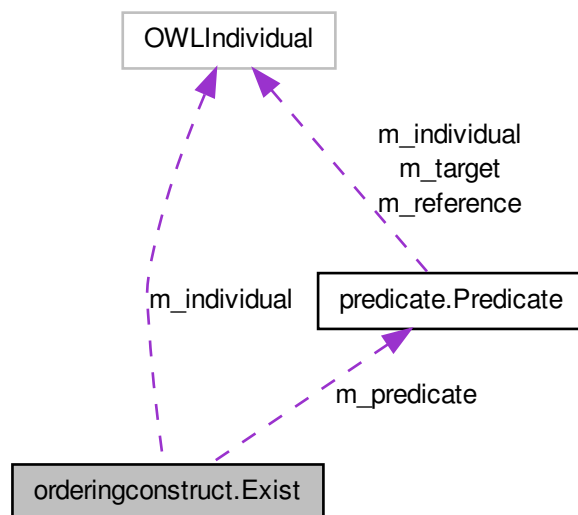
The documentation for this class was generated from the following file:

- [src/gui/DrawStringPanel.java](#)

8.15 orderingconstruct.Exist Class Reference

A state relationship that must exist.

Collaboration diagram for orderingconstruct.Exist:



Public Member Functions

- [Exist](#) ()
- int [getTotalNumber](#) ()
- void [setTotalNumber](#) (int total_number_)
Set the total number [Exist](#) elements to an intention.
- OWLIndividual [getIndividual](#) ()
Return the [Exist](#) element that is an OWLIndividual.
- void [setIndividual](#) (OWLIndividual individual_)
Set an [Exist](#) element as an OWLIndividual.
- int [getOccurrence](#) ()
Return the occurrence that an [Exist](#) element appears in an intention.
- void [setOccurrence](#) (int occurrence_)
Set the occurrence an [Exist](#) element appears in an intention.
- int [getPosition](#) ()
Return the position of an [Exist](#) element in the definition of an intention.
- void [setPosition](#) (int position_)
Set the position of an [Exist](#) element within an intention.
- Predicate [getPredicate](#) ()
Return the predicate for an [Exist](#) element.
- void [setPredicate](#) (Predicate predicate_)
Set a predicate for an [Exist](#) element.

Private Attributes

- int [m_occurrence](#)
Occurrence of an [Exist](#) element in an intention.
- OWLIndividual [m_individual](#)
The OWLIndividual for an [Exist](#) element from the ontology.
- int [m_position](#)
Position of an [Exist](#) element within an [OrderedList](#) element.
- int [m_total_number](#)
Total number of [Exist](#) element within an intention.
- Predicate [m_predicate](#)
Predicate element for an [Exist](#) element.

8.15.1 Detailed Description

A state relationship that must exist.

Author

[Zeid Kootbally](#) zeid.kootbally@nist.gov

8.15.2 Constructor & Destructor Documentation

8.15.2.1 `orderingconstruct.Exist.Exist ()`

Class constructor

8.15.3 Member Function Documentation

8.15.3.1 `OWLIndividual orderingconstruct.Exist.getIndividual ()`

Return the [Exist](#) element that is an OWLIndividual.

Returns

[Exist.m_individual](#)

8.15.3.2 `int orderingconstruct.Exist.getOccurrence ()`

Return the occurrence that an [Exist](#) element appears in an intention.

Returns

[Exist.m_occurrence](#)

8.15.3.3 `int orderingconstruct.Exist.getPosition ()`

Return the position of an [Exist](#) element in the definition of an intention.

Returns

[Exist.m_position](#)

8.15.3.4 `Predicate orderingconstruct.Exist.getPredicate ()`

Return the predicate for an [Exist](#) element.

Returns

[Exist.m_predicate](#)

8.15.3.5 `int orderingconstruct.Exist.getTotalNumber ()`

8.15.3.6 `void orderingconstruct.Exist.setIndividual (OWLIndividual individual_)`

Set an [Exist](#) element as an OWLIndividual.

Parameters

<i>individual_</i>	OWLIndividual to set to Exist.m_individual
--------------------	--

8.15.3.7 void orderingconstruct.Exist.setOccurrence (int *occurrence_*)

Set the occurrence an [Exist](#) element appears in an intention.

Parameters

<i>occurrence_</i> -	Occurrence to set to Exist.m_occurrence
----------------------	---

8.15.3.8 void orderingconstruct.Exist.setPosition (int *position_*)

Set the position of an [Exist](#) element within an intention.

Parameters

<i>position_</i>	Position to set to Exist.m_position_
------------------	--

8.15.3.9 void orderingconstruct.Exist.setPredicate (Predicate *predicate_*)

Set a predicate for an [Exist](#) element.

Parameters

<i>predicate_</i>	Predicate to set to Exist.m_predicate
-------------------	---

8.15.3.10 void orderingconstruct.Exist.setTotalNumber (int *total.number_*)

Set the total number [Exist](#) elements to an intention.

Parameters

<i>total_ - number_</i>	Number of Exist elements to set to Exist.m_total_number
-----------------------------	---

8.15.4 Member Data Documentation

8.15.4.1 OWLIndividual orderingconstruct.Exist.m_individual [private]

The OWLIndividual for an [Exist](#) element from the ontology.

8.15.4.2 `int orderingconstruct.Exist.m_occurrence` [private]

Occurrence of an [Exist](#) element in an intention.

8.15.4.3 `int orderingconstruct.Exist.m_position` [private]

Position of an [Exist](#) element within an [OrderedList](#) element.

8.15.4.4 `Predicate orderingconstruct.Exist.m_predicate` [private]

Predicate element for an [Exist](#) element.

8.15.4.5 `int orderingconstruct.Exist.m_total_number` [private]

Total number of [Exist](#) element within an intention.

The documentation for this class was generated from the following file:

- `src/orderingconstruct/Exist.java`

8.16 `tools.FileOperator` Class Reference

Public Member Functions

- [FileOperator](#) ()
- `String[] openFile` (String path) throws `IOException`
- `int readLines` (String path) throws `IOException`
- `ArrayList< ArrayList< ArrayList< String > > >` [translatePlanToStateRelation](#) (String[] plan)

Static Public Member Functions

- static void [saveAllKitsData](#) (String file_path_, `FileWriter` writer, String kit_, String plan_) throws `IOException`

8.16.1 Detailed Description

Author

zeid

8.16.2 Constructor & Destructor Documentation

8.16.2.1 `tools.FileOperator.FileOperator ()`

8.16.3 Member Function Documentation

8.16.3.1 `String [] tools.FileOperator.openFile (String path)` throws `IOException`

8.16.3.2 `int tools.FileOperator.readLines (String path)` throws `IOException`

8.16.3.3 `static void tools.FileOperator.saveAllKitsData (String file_path_, FileWriter writer, String kit_, String plan_)` throws `IOException` `[static]`

8.16.3.4 `ArrayList<ArrayList<ArrayList<String> > >`
`tools.FileOperator.translatePlanToStateRelation (String[] plan)`

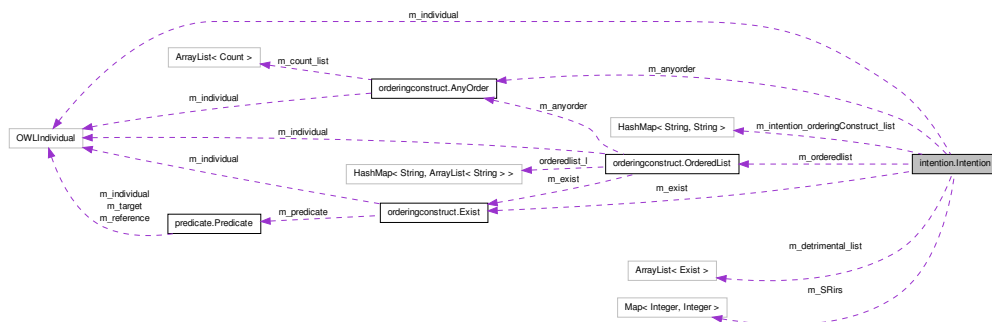
The documentation for this class was generated from the following file:

- `src/tools/FileOperator.java`

8.17 intention.Intention Class Reference

Representation of intentions from their definition in the ontology.

Collaboration diagram for `intention.Intention`:



Public Member Functions

- `Intention ()`
Class constructor.
- `void buildDetrimentalList (Exist _exist)`
Add an ordering construct of type Exist to the list of detrimental state relations.

- ArrayList< [Exist](#) > [getDetrimentalList](#) ()
Return the list of detrimental state relations for an intention.
- OWLIndividual [getIndividual](#) ()
Return an intention of type OWLIndividual.
- String [getIntentionName](#) ()
Return the name of the intention.
- int [getNumberStateRelation](#) ()
Return the number of state relations that constitute an intention.
- [OrderedList](#) [getOrderedList](#) ()
Return the ordering construct [OrderedList](#) for an intention.
- double [getM_am1](#) ()
Return the value of AM_1 .
- double [getM_am2](#) ()
Return the value of AM_2 .
- double [getM_am3](#) ()
Return the value of AM_3 .
- double [getM_am4](#) ()
Return the value of AM_4 .
- double [getM_am5](#) ()
Return the value of AM_5 .
- double [getM_mm1](#) ()
Return the value of MM_1 .
- double [getM_percentComplete_i_s](#) ()
Return the percentage of completion.
- double [getM_percentProductive_i_s](#) ()
Return the percentage of productive states.
- int [getM_SR_i_s](#) ()
Return the number of matched state relations (SR) in an intention (i) as of the current state (s)
- int [getM_SR_Total](#) ()
Return the number of state relations (SR) (whether matched or not) in an intention (i)
- Map< Integer, Integer > [getM_map_SRirs](#) ()
Return the HashMap that contains $SR_{i,r,s}$.
- int [getM_Si](#) ()
Return the number of states (S) that have occurred since (and including) the first matched state relation in an intention (i)
- int [getM_SR_i_r_s](#) ()
Return the value of $SR_{i,r,s}$ for the current intention.
- int [getM_found_detrimental_SR](#) ()
Return the number of detrimental state relations found for an intention.
- int [getM_intention_number](#) ()
Return the ID of an intention.
- double [getM_likelihood_observation](#) ()

- Return the likelihood of observation under a kit.*

 - double [getM_probability_kit_observation](#) ()
- Return the probability of a kit given observations.*

 - void [setExist](#) ([Exist](#) exist_)

Set the instance of the Java Class Exist to an intention.
- void [setIntentionName](#) (String intention_name_)

Set the name of the intention.
- void [setDetrimentalList](#) (ArrayList< [Exist](#) > detrimental_list_)

Set the list of detrimental state relations.
- void [setIndividual](#) (OWLIndividual individual_)

Set the intention as an OWL Individual.
- void [setNumberStateRelation](#) (int number_state_relation_)

Set the number of state relations to an intention.
- void [setOrderedList](#) ([OrderedList](#) orderedlist_)

Set the instance of Ordered List to the intention.
- void [setM_found_detrimental_SR](#) (int found_detrimental_SR_)

Set the number of detrimental state relations.
- void [setM_am1](#) (double am1_)

Set the value for AM_1 .
- void [setM_am2](#) (double am2_)

Set the value for AM_2 .
- void [setM_am3](#) (double am3_)

Set the value for AM_3 .
- void [setM_am4](#) (double am4_)

Set the value for AM_4 .
- void [setM_am5](#) (double am5_)

Set the value for AM_5 .
- void [setM_mm1](#) (double mm1_)

Set the value for MM_1 .
- void [setM_percentComplete_i_s](#) (double percentComplete_i_s_)

Set the percentage of completion.
- void [setM_percentProductive_i_s](#) (double percentProductive_i_s_)

Set the percentage of productive states.
- void [setM_SR_i_s](#) (int SR_i_s_)

Set the number of matched state relations (SR) in an intention (i) as of the current state (s)
- void [setM_SR_Total](#) (int SR_Total_)

Set the number of state relations (SR) (whether matched or not) in an intention (i)
- void [setM_Si](#) (int Si_)

Set the number of states (S) that have occurred since (and including) the first matched state relation in an intention (i)
- void [setM_map_SRirs](#) (Map< Integer, Integer > SRirs_)

Set a HashMap to m_SRirs.
- void [setM_SR_i_r_s](#) (int SR_i_r_s_)

Set the value of $SR_{i,r,s}$ for the current intention.

- void [setM_intention_number](#) (int intention_number_)

Set an ID to an intention.

- void [setM_likelihood_observation](#) (double likelihood_observation_)

Set the likelihood of observation under a kit.

- void [setM_probability_kit_observation](#) (double probability_kit_observation_)

Set the probability of a kit given observations.

Static Public Member Functions

- static String [getM_built_kit](#) ()

Return the kit chosen by the user in [gui.OptionFrame](#).

- static String [getM_selected_plan](#) ()

Get the plan chosen by the user in [gui.OptionFrame](#).

- static void [setM_built_kit](#) (String built_kit_)

Set the kit the user chose to build in [gui.OptionFrame](#).

- static void [setM_selected_plan](#) (String selected_plan_)

Set the value of $m_selected_plan$ from the plan selected by the user.

Public Attributes

- `HashMap< String, String >` [m_intention_orderingConstruct_list](#)

Private Attributes

- `ArrayList< Exist >` [m_detrimental_list](#)

List that contains detrimental states.

- `Exist` [m_exist](#)

Instance of the ordering construct Exist.

- `String` [m_intention_name](#)

Name of the intention.

- `AnyOrder` [m_anyorder](#)

Instance of the ordering construct AnyOrder.

- `OrderedList` [m_orderedlist](#)

Instance of the ordering construct OrderedList.

- `OWLIndividual` [m_individual](#)

OWLIndividual (instance of the class [Intention](#))

- `int` [m_number_state_relation](#)

Number of state relations that consist an intention.

- `int` [m_SR_Total](#)

Number of state relations (SR) (whether matched or not) in an intention (i)

- `int` [m_Si](#)

- Number of states (*S*) that have occurred since (and including) the first matched state relation in an intention (*i*)
- int [m_found_detrimental_SR](#)

Number of detrimental state relations (*detrimentalSR*) that have occurred in an intention (*i*) as of the current state (*s*).
- double [m_am1](#)

AM_1 : Number of observed state relations that are true in an intention (compared to other intentions).
- double [m_am2](#)

AM_2 : Percentage of an intention that is complete.
- double [m_am3](#)

AM_3 : Number of productive states that have occurred since the first productive state relation in an intention.
- double [m_am4](#)

AM_4 : Number of productive states that have occurred (recently) in the past *r* states.
- double [m_am5](#)

AM_5 : Probability of an intention (*i*) being recognized based on an observation (*j*).
- double [m_mm1](#)

MM_1 : The number of detrimental states.
- double [m_percentComplete_i_s](#)

Percent of productive states for intention *i* as of state *s*.
- double [m_percentProductive_i_s](#)

The number of matched state relations (*SR*) in an intention (*i*) as of the current state (*s*)
- int [m_SR_i_s](#)

Number of matched state relations (*SR*) in the past *r* states in an intention (*i*) as of the current state (*s*).

In other words, in the most recent (*r*) states, how many true state relations for an intention exist?
- int [m_SR_i_r_s](#)
- int [m_intention_number](#)

An ID given to an intention, for instance, $a_4b_4c_2$ is associated to the ID #2. IDs are given to intentions in `ontology.Ontology.sortIntentionList()`
- double [m_likelihood_observation](#)

Likelihood for computing AM_5 .
- double [m_probability_kit_observation](#)

Probability for computing AM_5 .
- Map< Integer, Integer > [m_SRirs](#) = new HashMap<Integer, Integer>()

A HashMap where the key is the state and the value is the number of state relations found in the current state.

Static Private Attributes

- static String [m_built_kit](#)

The kit (intention) that the user chose to build.
- static String [m_selected_plan](#)

The plan the user chose for a given kit (intention)

8.17.1 Detailed Description

Representation of intentions from their definition in the ontology.

This class consists of functions to represent intentions from their definition in the ontology. The ontology is read using OWL API tools and the description of each intention is stored in a list.

Author

zeidk

Date

2013/01/01

Contact: zeid.kootbally@nist.gov

8.17.2 Constructor & Destructor Documentation

8.17.2.1 `intention.Intention.Intention ()`

Class constructor.

Instantiate the list of ordering constructs for an intention

Instantiate a list of forbidden ordering constructs (list of detrimental states)

8.17.3 Member Function Documentation

8.17.3.1 `void intention.Intention.builDetrimentalList (Exist _exist)`

Add an ordering construct of type Exist to the list of detrimental state relations.

Parameters

<code>_exist</code>	An ordering construct of type Exist
---------------------	-------------------------------------

8.17.3.2 `ArrayList<Exist> intention.Intention.getDetrimentalList ()`

Return the list of detrimental state relations for an intention.

Returns

[Intention.m_detrimental_list](#)

8.17.3.3 `OWLIndividual intention.Intention.getIndividual ()`

Return an intention of type OWLIndividual.

Returns

[Intention.m_individual](#)

8.17.3.4 String intention.Intention.getIntentionName ()

Return the name of the intention.

Returns

[Intention.m_intention_name](#)

8.17.3.5 double intention.Intention.getM_am1 ()

Return the value of AM_1 .

Returns

[Intention.m_am1](#)

8.17.3.6 double intention.Intention.getM_am2 ()

Return the value of AM_2 .

Returns

[Intention.m_am2](#)

8.17.3.7 double intention.Intention.getM_am3 ()

Return the value of AM_3 .

Returns

[Intention.m_am3](#)

8.17.3.8 double intention.Intention.getM_am4 ()

Return the value of AM_4 .

Returns

[Intention.m_am4](#)

8.17.3.9 double intention.Intention.getM_am5 ()

Return the value of AM_5 .

Returns

[Intention.m_am5](#)

8.17.3.10 static String intention.Intention.getM_built_kit () [static]

Return the kit chosen by the user in [gui.OptionFrame](#).

Returns

[Intention.m_built_kit](#)

8.17.3.11 int intention.Intention.getM_found_detrimental_SR ()

Return the number of detrimental state relations found for an intention.

Returns

[Intention.m_found_detrimental_SR](#)

8.17.3.12 int intention.Intention.getM_intention_number ()

Return the ID of an intention.

Returns

[Intention.m_intention_number](#)

8.17.3.13 double intention.Intention.getM_likelihood_observation ()

Return the likelihood of observation under a kit.

Returns

[Intention.m_likelihood_observation](#)

8.17.3.14 Map<Integer, Integer> intention.Intention.getM_map_SRirs ()

Return the HashMap that contains $SR_{i,r,s}$.

Returns

[Intention.m_SRirs](#)

8.17.3.15 double intention.Intention.getM_mm1 ()

Return the value of MM_1 .

Returns

[Intention.m_mm1](#)

8.17.3.16 double intention.Intention.getM_percentComplete_i_s ()

Return the percentage of completion.

Returns

[Intention.m_percentComplete_i_s](#)

8.17.3.17 double intention.Intention.getM_percentProductive_i_s ()

Return the percentage of productive states.

Returns

[Intention.m_percentProductive_i_s](#)

8.17.3.18 double intention.Intention.getM_probability_kit_observation ()

Return the probability of a kit given observations.

Returns

[Intention.m_probability_kit_observation](#)

8.17.3.19 static String intention.Intention.getM_selected_plan () [static]

Get the plan chosen by the user in [gui.OptionFrame](#).

Returns

[Intention.m_selected_plan](#)

8.17.3.20 int intention.Intention.getM_Si ()

Return the number of states (S) that have occurred since (and including) the first matched state relation in an intention (i)

Returns

[Intention.m_Si](#)

8.17.3.21 `int intention.Intention.getM_SR_i_r_s ()`

Return the value of $SR_{i,r,s}$ for the current intention.

Returns

[Intention.m_SR_i_r_s](#)

8.17.3.22 `int intention.Intention.getM_SR_i_s ()`

Return the number of matched state relations (SR) in an intention (i) as of the current state (s)

Returns

[Intention.m_SR_i_s](#)

8.17.3.23 `int intention.Intention.getM_SR_Total ()`

Return the number of state relations (SR) (whether matched or not) in an intention (i)

Returns

[Intention.m_SR_Total](#)

8.17.3.24 `int intention.Intention.getNumberStateRelation ()`

Return the number of state relations that constitute an intention.

Returns

[Intention.m_number_state_relation](#)

8.17.3.25 `OrderedList intention.Intention.getOrderedList ()`

Return the ordering construct OrderedList for an intention.

Returns

[Intention.m_orderedlist](#)

8.17.3.26 `void intention.Intention.setDetrimentalList (ArrayList< Exist > detrimental_list_)`

Set the list of detrimental state relations.

Parameters

<i>detrimental_-list_</i>	Value to set to Intention.m_detrimental_list
---------------------------	--

8.17.3.27 void intention.Intention.setExist (Exist *exist_*)

Set the instance of the Java Class Exist to an intention.

Parameters

<i>exist_</i>	Value to set to Intention.m_exist
---------------	---

8.17.3.28 void intention.Intention.setIndividual (OWLIndividual *individual_*)

Set the intention as an OWL Individual.

Parameters

<i>individual_</i>	Value to set to Intention.m_individual
--------------------	--

8.17.3.29 void intention.Intention.setIntentionName (String *intention_name_*)

Set the name of the intention.

Parameters

<i>intention_name_</i>	Value to set to Intention.m_intention_name
------------------------	--

8.17.3.30 void intention.Intention.setM_am1 (double *am1_*)

Set the value for AM_1 .

Parameters

<i>am1_</i>	Value to set to Intention.m_am1
-------------	---

8.17.3.31 void intention.Intention.setM_am2 (double *am2_*)

Set the value for AM_2 .

Parameters

<i>am2_</i>	Value to set to Intention.m_am2
-------------	---

8.17.3.32 void intention.Intention.setM_am3 (double *am3_*)

Set the value for AM_3 .

Parameters

<i>am3_</i>	Value to set to AM_3
-------------	------------------------

8.17.3.33 void intention.Intention.setM_am4 (double *am4_*)

Set the value for AM_4 .

Parameters

<i>am4_</i>	Value to set to AM_4
-------------	------------------------

8.17.3.34 void intention.Intention.setM_am5 (double *am5_*)

Set the value for AM_5 .

Parameters

<i>am5_</i>	Value to set to AM_5
-------------	------------------------

8.17.3.35 static void intention.Intention.setM_built_kit (String *built_kit_*) [static]

Set the kit the user chose to build in [gui.OptionFrame](#).

Parameters

<i>built_kit_</i>	Value to set to Intention.m_built_kit
-------------------	---

8.17.3.36 void intention.Intention.setM_found_detrimental_SR (int *found_detrimental_SR_*)

Set the number of detrimental state relations.

Parameters

<i>found_ - detrimental_ - SR_</i>	Value to set to Intention.m_found_detrimental_SR
--	--

8.17.3.37 void intention.Intention.setM_intention_number (int *intention_number_*)

Set an ID to an intention.

Parameters

<i>intention_number_</i>	Value to set to Intention.m_intention_number
--------------------------	--

8.17.3.38 void intention.Intention.setM_likelihood_observation (double *likelihood_observation_*)

Set the likelihood of observation under a kit.

Parameters

<i>likelihood_observation_</i>	Value set to Intention.m_likelihood_observation
--------------------------------	---

8.17.3.39 void intention.Intention.setM_map_SRirs (Map< Integer, Integer > *SRirs_*)

Set a HashMap to m_SRirs.

Parameters

<i>SRirs_</i>	Value to set to Intention.m_SRirs
---------------	---

8.17.3.40 void intention.Intention.setM_mm1 (double *mm1_*)

Set the value for MM_1 .

Parameters

<i>mm1_</i>	Value to set to MM_1
-------------	------------------------

8.17.3.41 void intention.Intention.setM_percentComplete_i_s (double *percentComplete_i_s_*)

Set the percentage of completion.

Parameters

<i>percentComplete_i_s_</i>	Value to set to Intention.m_percentComplete_i_s
-----------------------------	---

8.17.3.42 `void intention.Intention.setM_percentProductive_i_s (double percentProductive_i_s)`

Set the percentage of productive states.

Parameters

<i>percentProductive_i_s</i>	Value to set to Intention.m_percentProductive_i_s
------------------------------	---

8.17.3.43 `void intention.Intention.setM_probability_kit_observation (double probability_kit_observation)`

Set the probability of a kit given observations.

Parameters

<i>probability_kit_observation</i>	Value to set to Intention.m_probability_kit_observation
------------------------------------	---

8.17.3.44 `static void intention.Intention.setM_selected_plan (String selected_plan)`
[static]

Set the value of *m_selected_plan* from the plan selected by the user.

Parameters

<i>selected_plan</i>	Value to set to Intention.m_selected_plan
----------------------	---

8.17.3.45 `void intention.Intention.setM_Si (int Si)`

Set the number of states (*S*) that have occurred since (and including) the first matched state relation in an intention (*i*)

Parameters

<i>Si</i>	The value to set to Intention.m_Si
-----------	--

8.17.3.46 `void intention.Intention.setM_SR_i_r_s (int SR_i_r_s)`

Set the value of $SR_{i,r,s}$ for the current intention.

Parameters

<code>SR_i_r_s_</code>	Value to set to Intention.m_SR_i_r_s
------------------------	--

8.17.3.47 `void intention.Intention.setM_SR_i_s (int SR_i_s_)`

Set the number of matched state relations (*SR*) in an intention (*i*) as of the current state (*s*)

Parameters

<code>SR_i_s_</code>	The value for Intention.m_SR_i_s
----------------------	--

8.17.3.48 `void intention.Intention.setM_SR_Total (int SR_Total_)`

Set the number of state relations (*SR*) (whether matched or not) in an intention (*i*)

Parameters

<code>SR_Total_</code>	The value to set to Intention.m_SR_Total
------------------------	--

8.17.3.49 `void intention.Intention.setNumberStateRelation (int number_state_relation_)`

Set the number of state relations to an intention.

Parameters

<code>number_ - state_ - relation_</code>	Value to set to Intention.m_number_state_relation
---	---

8.17.3.50 `void intention.Intention.setOrderedList (OrderedList orderedlist_)`

Set the instance of Ordered List to the intention.

Parameters

<code>orderedlist_</code>	Value to set to Intention.m_orderedlist
---------------------------	---

8.17.4 Member Data Documentation

8.17.4.1 `double intention.Intention.m_am1` [private]

AM_1 : Number of observed state relations that are true in an intention (compared to other intentions).

The formula for this additive metric for intention i in state s is:

$$AM_{1,i,s} = \frac{SR_{i,s}}{SR_{all,s}} = \frac{SR_{i,s}}{\sum_{i=1}^p SR_{i,s}}$$

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).
- $SR_{all,s}$: The number of matched state relations (SR) in all possible intentions as of the current state (s).

This formula represents the ratio of true states that are in intention i to the sum of all of the true states in all of intentions of interest.

The variable p represents the number of intentions of interest. It is evaluated for every intention of interest at every state.

8.17.4.2 double intention.Intention.m_am2 [private]

AM₂:Percentage of an intention that is complete.

The formula for the percentage complete for intention i in state s is:

$$PercentComplete_{i,s} = \frac{SR_{i,s}}{SR_{i,total}}$$

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).
- $SR_{i,total}$: The number of state relations (SR) (whether matched or not) in an intention (i).

We then normalize this for all intentions of interest to find the additive metric 2 for intention i in state s .

$$AM_{2,i,s} = \frac{PercentComplete_{i,s}}{\sum_{i=1}^p PercentComplete_{i,s}}$$

8.17.4.3 double intention.Intention.m_am3 [private]

AM₃:Number of productive states that have occurred since the first productive state relation in an intention.

The formula for the percentage complete for intention i in state s is:

$$PercentComplete_{i,s} = \frac{SR_{i,s}}{S_i}$$

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).

- S_i : The number of states (S) that have occurred since (and including) the first matched state relation in an intention (i).

We then normalize this for all intentions by determining additive metric 3 for intention i in state s .

$$AM_{3,i,s} = \frac{PercentProductive_{i,s}}{\sum_{i=1}^p PercentProductive_i}$$

8.17.4.4 double intention.Intention.m_am4 [private]

AM_4 : Number of productive states that have occurred (recently) in the past r states.

The formula for AM_4 is:

$$AM_{4,i,s} = \frac{SR_{i,r,s}}{\sum_{i=1}^p SR_{i,r,s}}$$

- $SR_{i,r,s}$: The number of matched state relations (SR) in the past r states in an intention (i) as of the current state (s).

In other words, in the most recent (r)states, how many true state relations for an intention exist?

8.17.4.5 double intention.Intention.m_am5 [private]

AM_5 : Probability of an intention (i) being recognized based on an observation (j).

- Suppose a kit is described by the number of parts it contains for each type.
That is, $kit_i = (n_{i_A}, n_{i_B}, \dots, n_{i_Q})$ has n_{i_A} parts of type “A”, n_{i_B} parts of type “B”, ..., n_{i_Q} parts of type “Q”.
- Suppose an observation is described by the number of parts seen for each type.
That is, $observation_j = (x_{j_A}, x_{j_B}, \dots, x_{j_Q})$ has seen x_{j_A} parts of type “A”, x_{j_B} parts of type “B”, ..., x_{j_Q} parts of type “Q”.
- The likelihood L of observation j under kit i is given by the multivariate hypergeometric distribution:

$$L(observation_j | kit_i) = \frac{\prod_{p=1}^q n_{i_p} choose x_{j_p}}{\sum_{p=1}^q n_{i_p} choose \sum_{p=1}^q x_{j_p}}$$

The additive metric AM_5 for kit_i is the probability of kit_i given $observation_j$:

$$Probability(kit_i | observation_j) = \frac{L(observation_j | kit_i)}{\sum_{n=1}^N L(observation_j | kit_n)}$$

where n is the total number of kits that are likely to be built.

8.17.4.6 AnyOrder intention.Intention.m_anyorder [private]

Instance of the ordering construct AnyOrder.

8.17.4.7 String intention.Intention.m_built_kit [static, private]

The kit (intention) that the user chose to build.

8.17.4.8 ArrayList<Exist> intention.Intention.m_detrimental_list [private]

List that contains detrimental states.

8.17.4.9 Exist intention.Intention.m_exist [private]

Instance of the ordering construct Exist.

8.17.4.10 int intention.Intention.m_found_detrimental_SR [private]

Number of detrimental state relations (*detrimentalSR*) that have occurred in an intention (*i*) as of the current state (*s*).

Detrimental state relations are state relations that are explicitly prohibited in an intention.

8.17.4.11 OWLIndividual intention.Intention.m_individual [private]

OWLIndividual (instance of the class [Intention](#))

8.17.4.12 String intention.Intention.m_intention_name [private]

Name of the intention.

8.17.4.13 int intention.Intention.m_intention_number [private]

An ID given to an intention, for instance, $a_4b_4c_2$ is associated to the ID #2. IDs are given to intentions in [ontology.Ontology.sortIntentionList\(\)](#)

8.17.4.14 HashMap<String, String> intention.Intention.m_intention_orderingConstruct_list**8.17.4.15 double intention.Intention.m_likelihood_observation** [private]

Likelihood for computing AM_5 .

8.17.4.16 double intention.Intention.m_mm1 [private]

MM_1 : The number of detrimental states.

It was chosen to be a multiplicative metric because the presence of detrimental states should play a larger role in the overall likelihood of an intention as compared to the additive metrics above.

The formula for MM_1 is:

$$MM_{1,i,s} = \frac{SR_{i,s} - detrimentalSR_{i,s}}{SR_{i,s}}$$

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).
- $detrimentalSR_{i,s}$: The number of detrimental states relations that have occurred in intention i as of the current state s .

Percent complete for intention i in state s

8.17.4.17 int intention.Intention.m_number_state_relation [private]

Number of state relations that consist an intention.

8.17.4.18 OrderedList intention.Intention.m_orderedlist [private]

Instance of the ordering construct `OrderedList`.

8.17.4.19 double intention.Intention.m_percentComplete_i_s [private]

Percent of productive states for intention i as of state s .

8.17.4.20 double intention.Intention.m_percentProductive_i_s [private]

The number of matched state relations (SR) in an intention (i) as of the current state (s)

8.17.4.21 double intention.Intention.m_probability_kit_observation [private]

Probability for computing AM_5 .

8.17.4.22 String intention.Intention.m_selected_plan [static, private]

The plan the user chose for a given kit (intention)

8.17.4.23 `int intention.Intention.m_Si` [private]

Number of states (S) that have occurred since (and including) the first matched state relation in an intention (i)

8.17.4.24 `int intention.Intention.m_SR_i_r_s` [private]

8.17.4.25 `int intention.Intention.m_SR_i_s` [private]

Number of matched state relations (SR) in the past r states in an intention (i) as of the current state (s).

In other words, in the most recent (r) states, how many true state relations for an intention exist?

8.17.4.26 `int intention.Intention.m_SR_Total` [private]

Number of state relations (SR) (whether matched or not) in an intention (i)

8.17.4.27 `Map<Integer, Integer> intention.Intention.m_SRirs = new HashMap<Integer, Integer>()` [private]

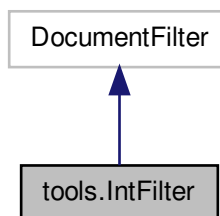
A HashMap where the key is the state and the value is the number of state relations found in the current state.

The documentation for this class was generated from the following file:

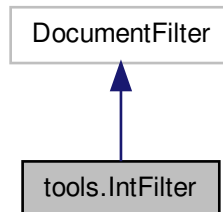
- `src/intention/Intention.java`

8.18 `tools.IntFilter` Class Reference

Inheritance diagram for `tools.IntFilter`:



Collaboration diagram for tools.IntFilter:



Public Member Functions

- void [insertString](#) (FilterBypass fb, int offset, String string, AttributeSet attr) throws BadLocationException
- void [replace](#) (FilterBypass fb, int offset, int length, String text, AttributeSet attrs) throws BadLocationException
- void [remove](#) (FilterBypass fb, int offset, int length) throws BadLocationException

Private Member Functions

- boolean [test](#) (String text)

8.18.1 Member Function Documentation

8.18.1.1 void tools.IntFilter.insertString (FilterBypass *fb*, int *offset*, String *string*, AttributeSet *attr*) throws BadLocationException

8.18.1.2 void tools.IntFilter.remove (FilterBypass *fb*, int *offset*, int *length*) throws BadLocationException

8.18.1.3 void tools.IntFilter.replace (FilterBypass *fb*, int *offset*, int *length*, String *text*, AttributeSet *attrs*) throws BadLocationException

8.18.1.4 boolean tools.IntFilter.test (String *text*) [private]

Return true if the text entered contains an Integer, false otherwise

Parameters

<i>text</i>	The text that is checked
-------------	--------------------------

Returns

The documentation for this class was generated from the following file:

- [src/tools/IntFilter.java](#)

8.19 main.Launcher Class Reference

Main class of the tool.

Public Member Functions

- [Launcher](#) ()
Constructor.

Static Public Member Functions

- static void [main](#) (String[] args) throws OWLException, InterruptedException, InvocationTargetException, ClassNotFoundException, InstantiationException, IllegalAccessException, IOException
Main of the project. The main file allows:
- static void [enabler](#) ()
Enable some gui components from the class gui.Mainframe.

8.19.1 Detailed Description

Main class of the tool.

Author

[Zeid Kootbally](#) zeid.kootbally@nist.gov

Precondition

Make sure the kits directory is present in the same directory as this tool
Make sure kittingClasses.owl, kittingInstances_ir.owl, and soap.owl are in the same directory as this tool

8.19.2 Constructor & Destructor Documentation

8.19.2.1 main.Launcher.Launcher ()

Constructor.

8.19.3 Member Function Documentation

8.19.3.1 static void main.Launcher.enabler () [static]

Enable some gui components from the class gui.Mainframe.

8.19.3.2 static void main.Launcher.main (String[] args) throws OWLException, InterruptedException, InvocationTargetException, ClassNotFoundException, InstantiationException, IllegalAccessException, IOException [static]

Main of the project. The main file allows:

- The creation of an object for the class [Ontology](#)
- Set the OWLAPI manager
- Initialize all the array lists that are used in the project
- Load the ontology
- Set the OWLAPI reasoner
- Set the OWLAPI data factory
- Parse the ontology to retrieve information on each intention

Parameters

<i>args</i>	
-------------	--

Exceptions

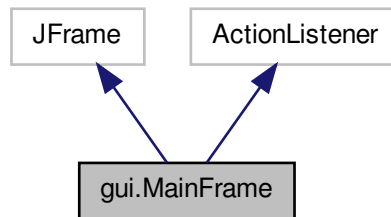
<i>OWLException</i>	
<i>InterruptedException</i>	
<i>InvocationTargetException</i>	
<i>UnsupportedLookAndFeelException</i>	
<i>IllegalAccessException</i>	
<i>InstantiationException</i>	
<i>ClassNotFoundException</i>	
<i>IOException</i>	

The documentation for this class was generated from the following file:

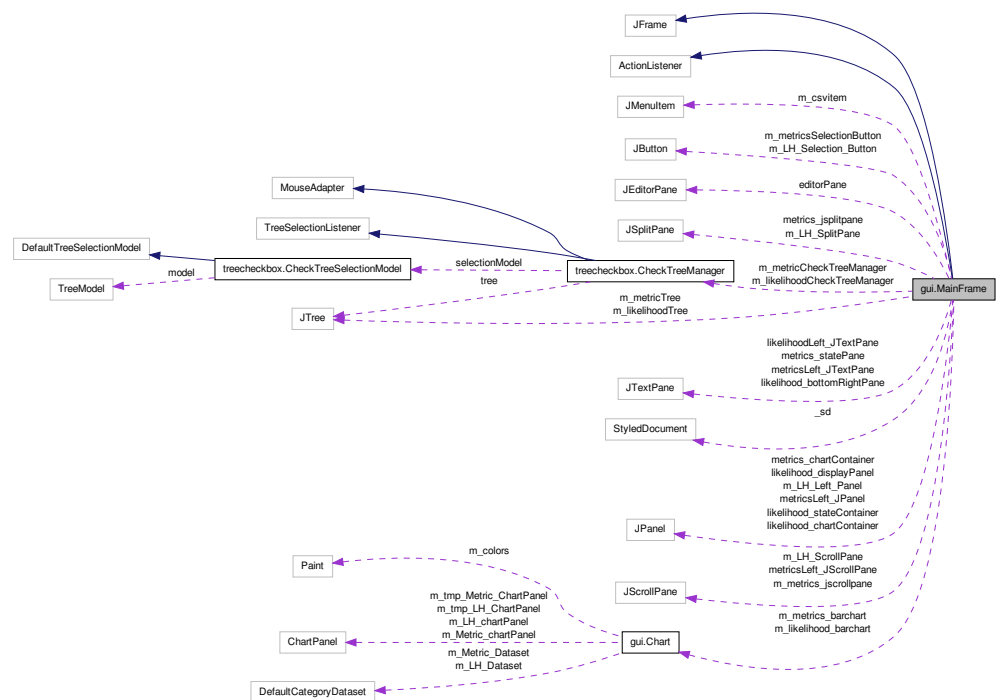
- src/main/[Launcher.java](#)

8.20 gui.MainFrame Class Reference

Inheritance diagram for gui.MainFrame:



Collaboration diagram for gui.MainFrame:



Classes

- class [DisplayMetrics](#)

Public Member Functions

- [MainFrame](#) (String s, JTree metricTree, JTree likelihoodTree)
- void [actionPerformed](#) (ActionEvent actionevent)
- void [saveToCSV](#) (String path)
Create the file file and write intention dataset.
- void [showErrorMessage](#) (String title, String message)

Static Public Member Functions

- static void [updateStateRelationPanel](#) (String s, Color c, JTextPane textpane)

Static Public Attributes

- static final String [EXIT_COMMAND](#) = "EXIT"
- static JTextPane [likelihood_bottomRightPane](#) = new JTextPane()
- static JTextPane [metrics_statePane](#) = new JTextPane()
- static JTextPane [likelihoodLeft_JTextPane](#) = new JTextPane()
- static JTextPane [metricsLeft_JTextPane](#) = new JTextPane()
- static JScrollPane [metricsLeft_JScrollPane](#) = new JScrollPane()
- static JPanel [metricsLeft_JPanel](#) = new JPanel()
- static JPanel [m_LH_Left_Panel](#) = new JPanel()
- static JPanel [metrics_chartContainer](#)
- static JButton [m_metricsSelectionButton](#)
- static JButton [m_LH_Selection_Button](#)
- static JTree [m_metricTree](#)
- static JTree [m_likelihoodTree](#)
- static JMenuItem [m_csvitem](#) = new JMenuItem("Export to CSV...", 112)

Package Attributes

- [CheckTreeManager m_metricCheckTreeManager](#)
- [CheckTreeManager m_likelihoodCheckTreeManager](#)

Private Member Functions

- JPanel [buildMetricPanel](#) (JTree metricTree)
- JPanel [buildLikelihoodPanel](#) (JTree likelihoodTree)
Build the main panel that contains components for the likelihoods.
- JComponent [createContent](#) (JTree metricTree, JTree likelihoodTree)

- void `lh_Button_ActionPerformed` (java.awt.event.ActionEvent evt)
- JMenuBar `createMenuBar` ()
- void `copyToClipboard` ()
- void `applyThemeToChart` ()
- void `exportToPDF` ()
- void `exportToCSV` ()

Export likelihoods result to a csv file.

- void `attemptExit` ()
- JPanel `createLikelihoodChartPanel` ()

Create the chart panel that will contain the likelihood chart.

- JPanel `createMetricsChartPanel` ()

Build the JPanel that will contain the chart displaying metrics values.

Private Attributes

- JPanel `likelihood_displayPanel`
- JPanel `likelihood_chartContainer`
- JPanel `likelihood_stateContainer`
- JEditorPane `editorPane`
- Chart `m_likelihoood_barchart` = new Chart()
- Chart `m_metrics_barchart` = new Chart()

Static Private Attributes

- static final long `serialVersionUID` = 1384873058265918162L
- static StyledDocument `_sd`
- static JSplitPane `metrics_jsplitpane`
- static JSplitPane `m_LH_SplitPane`
- static JScrollPane `m_metrics_jscrollpane` = new JScrollPane()
- static JScrollPane `m_LH_ScrollPane` = new JScrollPane()

8.20.1 Constructor & Destructor Documentation

- 8.20.1.1 `gui.MainFrame.MainFrame (String s, JTree metricTree, JTree likelihoodTree)`

8.20.2 Member Function Documentation

- 8.20.2.1 `void gui.MainFrame.actionPerformed (ActionEvent actionevent)`

- 8.20.2.2 `void gui.MainFrame.applyThemeToChart ()` [private]

- 8.20.2.3 `void gui.MainFrame.attemptExit ()` [private]

- 8.20.2.4 `JPanel gui.MainFrame.buildLikelihoodPanel (JTree likelihoodTree)` [private]

Build the main panel that contains components for the likelihoods.

Parameters

<i>likelihoodTree</i>	The JTree that displays intentions
-----------------------	------------------------------------

Returns

8.20.2.5 JPanel gui.MainFrame.buildMetricPanel (JTree *metricTree*) [private]

8.20.2.6 void gui.MainFrame.copyToClipboard () [private]

8.20.2.7 JComponent gui.MainFrame.createContent (JTree *metricTree*, JTree *likelihoodTree*) [private]

8.20.2.8 JPanel gui.MainFrame.createLikelihoodChartPanel () [private]

Create the chart panel that will contain the likelihood chart.

Returns

The likelihood panel.

8.20.2.9 JMenuBar gui.MainFrame.createMenuBar () [private]

8.20.2.10 JPanel gui.MainFrame.createMetricsChartPanel () [private]

Build the JPanel that will contain the chart displaying metrics values.

Returns

The JPanel that will contain the chart displaying metrics values.

8.20.2.11 void gui.MainFrame.exportToCSV () [private]

Export likelihoods result to a csv file.

8.20.2.12 void gui.MainFrame.exportToPDF () [private]

8.20.2.13 void gui.MainFrame.lh_Button_ActionPerformed (java.awt.event.ActionEvent *evt*) [private]

8.20.2.14 void gui.MainFrame.saveToCSV (String *path*)

Create the file *file* and write intention dataset.

Parameters

<i>file</i>	
-------------	--

8.20.2.15 void gui.MainFrame.showErrorMessage (String *title*, String *message*)

8.20.2.16 static void gui.MainFrame.updateStateRelationPanel (String *s*, Color *c*, JTextPane *textpane*) [static]

8.20.3 Member Data Documentation

8.20.3.1 StyledDocument gui.MainFrame._sd [static, private]

8.20.3.2 JPanel gui.MainFrame.editorPane [private]

8.20.3.3 final String gui.MainFrame.EXIT_COMMAND = "EXIT" [static]

8.20.3.4 JTextPane gui.MainFrame.likelihood_bottomRightPane = new JTextPane()
[static]

8.20.3.5 JPanel gui.MainFrame.likelihood_chartContainer [private]

8.20.3.6 JPanel gui.MainFrame.likelihood_displayPanel [private]

8.20.3.7 JPanel gui.MainFrame.likelihood_stateContainer [private]

8.20.3.8 JTextPane gui.MainFrame.likelihoodLeft_JTextPane = new JTextPane()
[static]

8.20.3.9 JMenuItem gui.MainFrame.m_csvitem = new JMenuItem("Export to CSV...", 112)
[static]

8.20.3.10 JPanel gui.MainFrame.m_LH_Left_Panel = new JPanel() [static]

8.20.3.11 JScrollPane gui.MainFrame.m_LH_ScrollPane = new JScrollPane()
[static, private]

8.20.3.12 JButton gui.MainFrame.m_LH_Selection_Button [static]

8.20.3.13 JSplitPane gui.MainFrame.m_LH_SplitPane [static, private]

8.20.3.14 Chart gui.MainFrame.m_likelihood_barchart = new Chart() [private]

8.20.3.15 CheckTreeManager gui.MainFrame.m_likelihoodCheckTreeManager
[package]

8.20.3.16 JTree gui.MainFrame.m_likelihoodTree [static]

- 8.20.3.17 **CheckTreeManager** `gui.MainFrame.m_metricCheckTreeManager`
[package]
- 8.20.3.18 **Chart** `gui.MainFrame.m_metrics_barchart = new Chart()` [private]
- 8.20.3.19 **JScrollPane** `gui.MainFrame.m_metrics_jscrollpane = new JScrollPane()`
[static, private]
- 8.20.3.20 **JBUTTON** `gui.MainFrame.m_metricsSelectionButton` [static]
- 8.20.3.21 **JTree** `gui.MainFrame.m_metricTree` [static]
- 8.20.3.22 **JPanel** `gui.MainFrame.metrics_chartContainer` [static]
- 8.20.3.23 **JSplitPane** `gui.MainFrame.metrics_jsplitpane` [static, private]
- 8.20.3.24 **JTextPane** `gui.MainFrame.metrics_statePane = new JTextPane()` [static]
- 8.20.3.25 **JPanel** `gui.MainFrame.metricsLeft_JPanel = new JPanel()` [static]
- 8.20.3.26 **JScrollPane** `gui.MainFrame.metricsLeft_JScrollPane = new JScrollPane()`
[static]
- 8.20.3.27 **JTextPane** `gui.MainFrame.metricsLeft_JTextPane = new JTextPane()`
[static]
- 8.20.3.28 **final long** `gui.MainFrame.serialVersionUID = 1384873058265918162L`
[static, private]

The documentation for this class was generated from the following file:

- [src/gui/MainFrame.java](#)

8.21 intention.Metric Class Reference

Definition of additive and multiplicative metrics.

Static Public Member Functions

- static int [get_AM1_Weight](#) ()
- static int [get_AM2_Weight](#) ()
- static int [get_AM3_Weight](#) ()
- static int [get_AM4_Weight](#) ()
- static int [get_AM5_Weight](#) ()
- static void [set_AM1_Weight](#) (int weight)
- static void [set_AM2_Weight](#) (int weight)

- static void [set_AM3_Weight](#) (int weight)
- static void [set_AM4_Weight](#) (int weight)
- static void [set_AM5_Weight](#) (int weight)

Private Member Functions

- int [get_MM1_Weight](#) ()
- void [set_MM1_Weight](#) (int weight)

Static Private Attributes

- static int [m_AM1_weight](#)
- static int [m_AM2_weight](#)
- static int [m_AM3_weight](#)
- static int [m_AM4_weight](#)
- static int [m_AM5_weight](#)
- static int [m_MM1_weight](#)

8.21.1 Detailed Description

Definition of additive and multiplicative metrics.

This class consists of additive and multiplicative metrics definitions

Author

zeidk

Date

2013/01/01

Contact: zeid.kootbally@nist.gov

8.21.2 Member Function Documentation

8.21.2.1 static int intention.Metric.get_AM1_Weight () [static]

Get the weight for AM1.

Returns

The weight for AM1.

8.21.2.2 `static int intention.Metric.get_AM2_Weight () [static]`

Get the weight for AM2.

Returns

The weight for AM2.

8.21.2.3 `static int intention.Metric.get_AM3_Weight () [static]`

Get the weight for AM3.

Returns

The weight for AM3.

8.21.2.4 `static int intention.Metric.get_AM4_Weight () [static]`

Get the weight for AM4.

Returns

The weight for AM4.

8.21.2.5 `static int intention.Metric.get_AM5_Weight () [static]`

Get the weight for AM5.

Returns

The weight for AM5.

8.21.2.6 `int intention.Metric.get_MM1_Weight () [private]`

Get the weight for MM1.

Returns

The weight for MM1.

8.21.2.7 `static void intention.Metric.set_AM1_Weight (int weight) [static]`

Set the weight for AM1.

Parameters

<i>weight</i>	Value set to the weight for AM1.
---------------	----------------------------------

8.21.2.8 `static void intention.Metric.set_AM2_Weight (int weight) [static]`

Set the weight for AM2.

Parameters

<i>weight</i>	Value set to the weight for AM2.
---------------	----------------------------------

8.21.2.9 `static void intention.Metric.set_AM3_Weight (int weight) [static]`

Set the weight for AM3.

Parameters

<i>weight</i>	Value set to the weight for AM3.
---------------	----------------------------------

8.21.2.10 `static void intention.Metric.set_AM4_Weight (int weight) [static]`

Set the weight for AM4.

Parameters

<i>weight</i>	Value set to the weight for AM4.
---------------	----------------------------------

8.21.2.11 `static void intention.Metric.set_AM5_Weight (int weight) [static]`

Set the weight for AM5.

Parameters

<i>weight</i>	Value set to the weight for AM5.
---------------	----------------------------------

8.21.2.12 `void intention.Metric.set_MM1_Weight (int weight) [private]`

Set the weight for MM1.

Parameters

<i>weight</i>	Value set to the weight for MM1.
---------------	----------------------------------

8.21.3 Member Data Documentation

8.21.3.1 int intention.Metric.m_AM1_weight [static, private]

8.21.3.2 int intention.Metric.m_AM2_weight [static, private]

8.21.3.3 int intention.Metric.m_AM3_weight [static, private]

8.21.3.4 int intention.Metric.m_AM4_weight [static, private]

8.21.3.5 int intention.Metric.m_AM5_weight [static, private]

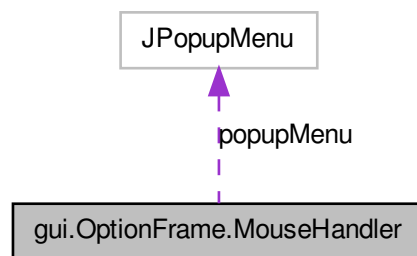
8.21.3.6 int intention.Metric.m_MM1_weight [static, private]

The documentation for this class was generated from the following file:

- [src/intention/Metric.java](#)

8.22 gui.OptionFrame.MouseHandler Class Reference

Collaboration diagram for gui.OptionFrame.MouseHandler:



Public Member Functions

- [MouseHandler](#) (javax.swing.JPopupMenu popup)
- void [mousePressed](#) (java.awt.event.MouseEvent e)
- void [mouseReleased](#) (java.awt.event.MouseEvent e)

Private Attributes

- javax.swing.JPopupMenu [popupMenu](#)

8.22.1 Constructor & Destructor Documentation

8.22.1.1 `gui.OptionFrame.MouseHandler.MouseHandler (javax.swing.JPopupMenu popup)`

8.22.2 Member Function Documentation

8.22.2.1 `void gui.OptionFrame.MouseHandler.mousePressed (java.awt.event.MouseEvent e)`

8.22.2.2 `void gui.OptionFrame.MouseHandler.mouseReleased (java.awt.event.MouseEvent e)`

8.22.3 Member Data Documentation

8.22.3.1 `javax.swing.JPopupMenu gui.OptionFrame.MouseHandler.popupMenu`
`[private]`

The documentation for this class was generated from the following file:

- `src/gui/OptionFrame.java`

8.23 Ontology Class Reference

Class for the ontology.

8.23.1 Detailed Description

Class for the ontology.

This class is used to manipulate the ontology and extract data from it.

Author

zeidk

Date

2013/01/01

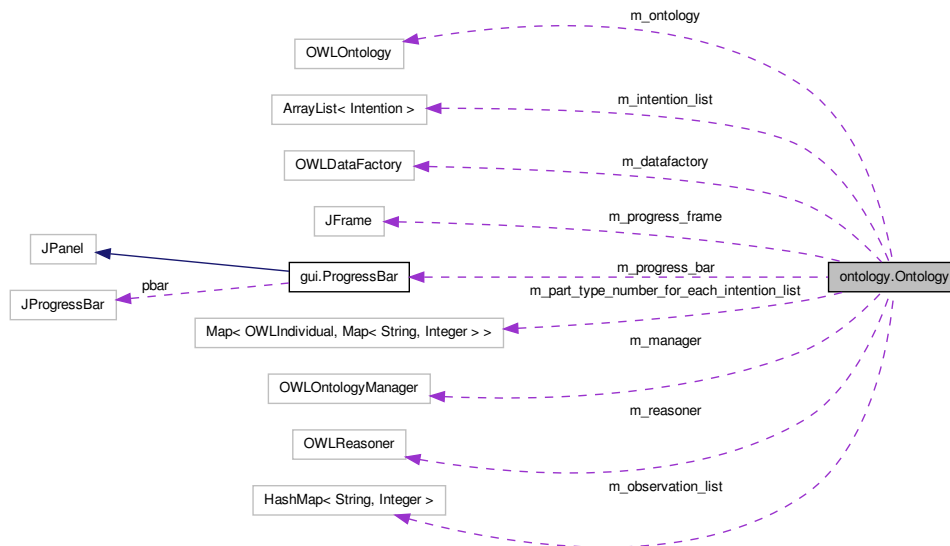
Contact: zeid.kootbally@nist.gov

The documentation for this class was generated from the following file:

- `src/ontology/Ontology.java`

8.24 ontology.Ontology Class Reference

Collaboration diagram for ontology.Ontology:



Public Member Functions

- [Ontology](#) ()
Constructor of the [Ontology](#) class.
- String [getOntologyPath](#) ()
Get the path of the ontology.
- String [getRootClass](#) ()
Get the class root from the ontology.
- void [setRootClass](#) (String rootClass_)
Set the class root from the ontology.
- Set< OWLClassExpression > [getIndividualClass](#) (OWLNamedIndividual individual)
- OWLOntologyManager [getManager](#) ()
Simple getter.
- OWLOntology [getOntology](#) ()
Simple getter.
- String [getPath](#) ()
Simple getter.
- NodeSet< OWLClass > [getSubclasses](#) (String myClassName)
- void [initializeList](#) ()

- void [loadFromFile](#) ()
Load the ontology from a file.
- void [loadOntologyFromPath](#) (String myPath) throws MalformedURLException, OWLException
- void [sortIntentionList](#) ()
Read $m_intention_list$ and re-arrange the list using a number for each intention.
- void [parseIntention](#) (NodeSet< OWLClass > myClass) throws InterruptedException, InvocationTargetException, IOException
- void [showDialogBox](#) ()
- JTree [buildIntentionTree](#) ()
- JTree [buildIntentionMetricsTree](#) ()
- void [setDataFactory](#) ()
- void [setManager](#) ()
- void [setManager](#) (OWLOntologyManager manager)
Simple setter.
- void [setOntology](#) (OWLOntology ontology)
Simple setter.
- void [setPath](#) (String path)
Simple setter.
- void [setReasoner](#) (OWLOntology myOntology)

Static Public Member Functions

- static void [setInstanceFilePath](#) (String path_)
Set the path to the OWL instance file The path is retrieved from the field [OptionFrame.m_instance_txt_field](#).
- static String [cleanIRI](#) (Object entity)
Return the name of the entity without the IRI.
- static double [computeMetricAM1](#) (double _sr_i_s, double _sr_all)
Compute the additive metric AM_1 .
- static double [computeMetricAM2](#) (double _percentComplete_i_s, double _percent_complete_total)
Compute the additive metric AM_2 .
- static double [computeMetricAM3](#) (double percent_productive_i_s, double percent_productive_i)
Compute the additive metric AM_3 .
- static double [computeMetricAM4](#) (double sr_i_r_s, double sum_sr_i_r_s)
Compute the additive metric AM_4 .
- static double [computeMetricAM5](#) (Intention intention)
Compute the additive metric AM_5 .
- static double [computeMetricMM1](#) (int sr_i_s, int detrimental)
- static void [buildObservationList](#) ()
Build a list of the parts observed during kitting.
- static void [updateObservationList](#) (String part_type)

Update the observation list.

- static void [readObservationList](#) ()

Read the observation list m_observation_list.

- static void [chooseTest](#) ()
- static void [computeObservationLikelihood](#) (Intention intention_)

Compute the likelihood L of observation j under kit i.

- static void [computeProbabilityFromObservation](#) (Intention intention_)
- static int [compute_sum_observation](#) ()
- static int [compute_sum_part_type](#) (Intention intention_)
- static ArrayList< String > [removeDuplicates](#) (ArrayList< String > list_)

Remove duplicates in an ArrayList of String.

- static double [computePercentComplete](#) (double sr_i_s, double sr_i_total)

PercentComplete is the percentage complete for an intention in a state.

- static double [computePercentProductive](#) (double sr_i_s, double si)

The formula for the percent productive is used by AM₃ for an intention (i) as of state (s) is:

- static double [computeLikelihood](#) (Intention _intention, int _state)

The overall equation that is used to determine the likelihood of intentions is:

$$L_i = \left[\prod_{1 \leq j \leq m} MM_j \right] \times \left[\frac{\sum_{k=1}^n (AM_k \times W_{AM_k})}{\sum_{k=1}^n W_{AM_k}} \right] \times 100$$

Where:

- static void [computeMetricsInformation](#) (ArrayList< ArrayList< ArrayList< String >>> _states) throws InterruptedException, BadLocationException

Retrieve and compute the information required for metrics computation.

- static String [getIndividualClassString](#) (OWLNamedIndividual individual)
- static String [getIndividualClassString](#) (OWLIndividual individual)
- static char [getSeparator](#) ()

Simple getter.

- static void [matchDetrimentalStateRelationToIntention](#) (ArrayList _state_relation)

Check for each intention if _state_relation is a detrimental state relation.

- static void [updateMainFrame](#) (ArrayList _state_relation, int num)

Display the current state relation in MainFrame.

- static void [matchStateRelationToIntention](#) (ArrayList _state_relation, int num) throws BadLocationException

Check for each intention if the state relation _state_relation matches any of the intention state relations.

- static void [computeProceduresForAM5](#) ()

Public Attributes

- String [m_s_rootClass](#) = "Intention"

Static Public Attributes

- static ArrayList< [Intention](#) > [m_intention_list](#)
- static OWLOntology [m_ontology](#)
- static String [m_kitToBuild](#)
- static String [m_planToBuild](#)
- static String [m_s_subClass](#) = "Kitting"

Static Package Functions

- static int [compute_SR_i_r_s](#) (Map< Integer, Integer > _map, Integer _r, Integer _id_current_state)
Compute the number of true state relations (SR) in the past r states in intention i as of the current state s.
- static BigInteger [choose](#) (final int N, final int K)
Returns a double representation of the Binomial Coefficient, "N choose K", the number of K-element subsets that can be selected from an N-element set.
- static double [roundTwoDecimals](#) (double d)

Private Member Functions

- void [readIntentionList](#) ()
Read the intentions previously stored.
- void [searchList](#) (String individual)

Static Private Member Functions

- static void [buildIntentionList](#) (NodeSet< OWLClass > setOfSubclasses_)
Parse the ontology and retrieve all the elements associated to each intention.
- static ArrayList< ArrayList< ArrayList< String > > > [buildStates](#) (String plan_path)
- static int [cleanDataPropertyInteger](#) (String s)
- static void [readForEachIntentionTheNumberOfPartsForEachType](#) ()
Read the map Map <OWLIndividual, Map<String, Integer> >
- static void [getForEachIntentionTheNumberOfPartsForEachType](#) ()
Retrieve the number of parts each intention contains for each type.
- static void [updateForEachIntentionTheNumberOfPartsForEachType](#) ()
Update m_part_type_number_for_each_intention_list with missing part types.
- static int [compute_SR_all_s](#) ()
- static String [getReferenceObjectClass](#) (OWLNamedIndividual individual)
- static String [getStateRelation](#) (OWLNamedIndividual individual)
- static String [getTargetObjectClass](#) (OWLNamedIndividual individual)
- static boolean [hasProperty](#) (OWLOntologyManager man, OWLReasoner reasoner, OWLClass cls, OWLObjectPropertyExpression prop)

- static ArrayList< String > [input](#) (String state_relation, String target_object, String target_class, String reference_object, String reference_class)
- static Color [getPartColor](#) (String _string)
- static String [getPartType](#) (String _string)
- static String [getStringHead](#) (String _string)
- static String [getStringTail](#) (String _string)
- static void [printProperties](#) (OWLOntologyManager man, OWLOntology ont, OWLReasoner reasoner, OWLClass cls)

Print the properties that an instance has to have.

Private Attributes

- OWLOntologyManager [m_manager](#)
- JFrame [m_progress_frame](#)
- [ProgressBar](#) [m_progress_bar](#)
- String [m_path](#)

Static Private Attributes

- static OWLDataFactory [m_datafactory](#)
- static OWLReasoner [m_reasoner](#)
- static String [m_hasIntention_OrderingConstruct](#) = "#hasIntention_OrderingConstruct"
- static String [m_hasOrderingConstruct_Predicate](#) = "#hasOrderingConstruct_Predicate"
- static String [m_hasOrderingConstruct_OrderingConstruct](#) = "#hasOrderingConstruct_OrderingConstruct"
- static String [m_hasOrderingConstruct_Position](#) = "#hasOrderingConstruct_Position"
- static String [m_hasPredicate_TargetObject](#) = "#hasPredicate_TargetObject"
- static String [m_hasIntention_Name](#) = "#hasIntention_Name"
- static String [m_hasPredicate_ReferenceObject](#) = "#hasPredicate_ReferenceObject"
- static String [m_hasCount_Occurrence](#) = "#hasCount_Occurrence"
- static HashMap< String, Integer > [m_observation_list](#) = new HashMap<String, Integer>()
- static Map< OWLIndividual, Map< String, Integer > > [m_part_type_number_for_each_intention_list](#) = new HashMap<OWLIndividual, Map<String, Integer>>()
- static final String [m_ontology_IRI](#) = "http://www.semanticweb.org/ontologies/2013/0/soap.owl"
- static String [m_s_ontopath](#)
- static final char [m_SEPARATOR](#) = '#'

8.24.1 Constructor & Destructor Documentation

8.24.1.1 ontology.Ontology.Ontology ()

Constructor of the [Ontology](#) class.

8.24.2 Member Function Documentation

8.24.2.1 `static void ontology.Ontology.buildIntentionList (NodeSet< OWLClass > setOfSubclasses_) [static, private]`

Parse the ontology and retrieve all the elements associated to each intention.

Each element found is stored in an attribute of their corresponding Java class. For instance, when the ordering construct "Exist" is found in the definition of an intention, an instance of the Java class Exist is created and information on Exist for the current intention is stored in the instance.

The steps to read an intention are as follows:

- Parse the set of subclasses *setOfSubclasses_* that consists of different domains (Kitting, Assembly, ...).
- In *setOfSubclasses_*, search for the *subclass* defined by the member variable [Ontology.m_s_subClass](#).
- Get each OWL individual of *subclass* with the OWL API function `getInstances(OWLClassExpression ce, boolean direct)`.
- For each individual:
 - Create a Java instance of the class `Intention`.
 - Set this instance's individual.
See also
[Intention.setIndividual\(OWLIndividual\);](#)
 - Set the percentage for this instance to 0.
See also
[Intention.setPercentage\(double\)](#)
 - Set the number of state relations for this instance to 0.
See also
[Intention.setNumberStateRelation\(int\)](#)

Some of the OWL API functions used are:

- `getFlattened()`: A convenience method that gets all of the entities contained in the Nodes in this NodeSet.
- `getInstances(OWLClassExpression ce, boolean direct)`: Gets the individuals which are instances of the specified class expression. The individuals are returned as a NodeSet.
- `getObjectPropertyValues(OWLNamedIndividual ind, OWLObjectPropertyExpression pe)`: Gets the object property values for the specified individual and object property expression. The individuals are returned as a NodeSet.

Parameters

<i>setOfSubclasses</i>	A set of subclasses built from the root class.
------------------------	--

8.24.2.2 JTree ontology.Ontology.buildIntentionMetricsTree ()

8.24.2.3 JTree ontology.Ontology.buildIntentionTree ()

8.24.2.4 static void ontology.Ontology.buildObservationList () [static]

Build a list of the parts observed during kitting.

The list is an ArrayList that contains HashMaps. Each HashMap represents the type of part that exists for kitting.

Returns

8.24.2.5 static ArrayList<ArrayList<ArrayList<String>>> ontology.Ontology.buildStates (String *plan_path*) [static, private]

This function builds all the states for a given intention.

Parameters

<i>kit</i>	The kit to build
------------	------------------

Returns

An ArrayList that contains all the states for the given kit

8.24.2.6 static BigInteger ontology.Ontology.choose (final int *N*, final int *K*) [static, package]

Returns a double representation of the Binomial Coefficient, "N choose K", the number of K-element subsets that can be selected from an N-element set.

Parameters

<i>N</i>	N-element set
<i>K</i>	K-element subset

Returns

Double representation of the Binomial Coefficient

8.24.2.7 `static void ontology.Ontology.chooseTest () [static]`

8.24.2.8 `static int ontology.Ontology.cleanDataPropertyInteger (String s) [static, private]`

8.24.2.9 `static String ontology.Ontology.cleanIRI (Object entity) [static]`

Return the name of the entity without the IRI.

For example, if *entity* = [<http://www.semanticweb.org/ontologies/2013/0/soap.owl#Kitt>], this function returns *Kitting*. This function operates as follows: - Identify the index of the separator *SEPARATOR* - Keep only what is after the *SEPARATOR* - Remove characters that are not alphanumeric

Parameters

<i>entity</i>	Entity to be trimmed
---------------	----------------------

Returns

The name of the entity without the IRI

8.24.2.10 `static int ontology.Ontology.compute_SR_all_s () [static, private]`

8.24.2.11 `static int ontology.Ontology.compute_SR_i_r_s (Map< Integer, Integer > _map, Integer _r, Integer _id_current_state) [static, package]`

Compute the number of true state relations (SR) in the past *r* states in intention *i* as of the current state *s*.

Parameters

<i>_map</i>	Map<Integer, Integer> for an intention <i>i</i> where: <ul style="list-style-type: none"> • Key: The id of a state (0 for the first state, 1 for the second state, ...). • Value: The number of state relations found for the intention <i>i</i> in the Key state.
<i>_r</i>	The last <i>r</i> states
<i>_id_ - current_ - state</i>	The current state

Returns

The value of *SR_i_r_s*

8.24.2.12 `static int ontology.Ontology.compute_sum_observation () [static]`

8.24.2.13 `static int ontology.Ontology.compute_sum_part_type (Intention _intention_)`
`[static]`

8.24.2.14 `static double ontology.Ontology.computeLikelihood (Intention _intention, int _state)`
`[static]`

The overall equation that is used to determine the likelihood of intentions is:

$$L_i = \left[\prod_{1 \leq j \leq m} MM_j \right] \times \left[\frac{\sum_{k=1}^n (AM_k \times W_{AM_k})}{\sum_{k=1}^n W_{AM_k}} \right] \times 100$$

Where:

- L_i is the likelihood of an intention i
- MM_j is the multiplication metric j
- AM_k is the additive metric k
- W_{AM_k} is the weight of the additive metric k
- m is the total number of multiplicative metrics
- n is the total number of additive metrics

All metrics (whether multiplicative or additive) must contain a value between 0 and 1, where 0 is the lowest value and 1 is the highest value.

Additive metrics (AM_k) along with their associated weights, are added together and then divided by the sum of all their weights.

Weights are associated with the additive metrics to show the relative importance of one metric over another. These weights can contain any value greater than 0.

Multiplicative metrics are significant enough in importance that their value is multiplied in the likelihood equation to carry a heavier effect on the overall likelihood.

Parameters

<code>_intention</code>	The intention for which the likelihood will be computed
<code>_state</code>	State

8.24.2.15 `static double ontology.Ontology.computeMetricAM1 (double _sr_i_s, double _sr_all)`
`[static]`

Compute the additive metric AM_1 .

AM_1 : Number of observed state relations that are true in an intention (compared to other intentions).

The formula for this additive metric for intention i in state s is:

$$AM_{1,i,s} = \frac{SR_{i,s}}{SR_{all,s}} = \frac{SR_{i,s}}{\sum_{i=1}^p SR_{i,s}}$$

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).
- $SR_{all,s}$: The number of matched state relations (SR) in all possible intentions as of the current state (s).

This formula represents the ratio of true states that are in intention i to the sum of all of the true states in all of intentions of interest.

The variable p represents the number of intentions of interest. It is evaluated for every intention of interest at every state.

Parameters

<code>_sr_i_s</code>	The number of matched state relations (SR) in an intention (i) as of the current state (s).
<code>_sr_all</code>	The number of matched state relations (SR) in all possible intentions as of the current state (s).

8.24.2.16 `static double ontology.Ontology.computeMetricAM2 (double _percentComplete_i_s, double _percent_complete_total) [static]`

Compute the additive metric AM_2 .

AM_2 : *Percentage of an intention that is complete.*

The formula for the percentage complete for intention i in state s is:

$$PercentComplete_{i,s} = \frac{SR_{i,s}}{SR_{i,total}}$$

We then normalize this for all intentions of interest to find the additive metric 2 for intention i in state s .

$$AM_{2,i,s} = \frac{PercentComplete_{i,s}}{\sum_{i=1}^p PercentComplete_{i,s}}$$

Parameters

<code>_percentComplete_i_s</code>	Percent complete for intention (i) in state (s).
<code>_percent_complete_total</code>	Sum of percent complete for each intention in state (s).

8.24.2.17 `static double ontology.Ontology.computeMetricAM3 (double percent_productive_i_s,
double percent_productive_i) [static]`

Compute the additive metric AM_3 .

AM_3 : Number of productive states that have occurred since the first productive state relation in an intention.

The formula for the percentage complete for intention i in state s is:

$$PercentComplete_{i,s} = \frac{SR_{i,s}}{S_i}$$

We then normalize this for all intentions by determining additive metric 3 for intention i in state s .

$$AM_{3,i,s} = \frac{PercentProductive_{i,s}}{\sum_{i=1}^p PercentProductive_i}$$

8.24.2.18 `static double ontology.Ontology.computeMetricAM4 (double sr_i_r_s, double
sum_sr_i_r_s) [static]`

Compute the additive metric AM_4 .

AM_4 : Number of productive states that have occurred (recently) in the past r states.

The formula for AM_4 is:

$$AM_{4,i,s} = \frac{SR_{i,r,s}}{\sum_{i=1}^p SR_{i,r,s}}$$

Parameters

<i>sr_i_r_s</i>	The number of matched state relations (SR) in the past r states in an intention (i) as of the current state (s).
<i>sum_sr_i_r_s</i>	The sum of all <i>sr_i_r_s</i> for each intention.

Returns

8.24.2.19 `static double ontology.Ontology.computeMetricAM5 (Intention intention)
[static]`

Compute the additive metric AM_5 .

- Suppose a kit is described by the number of parts it contains for each type.
That is, $kit_i = (n_{i_A}, n_{i_B}, \dots, n_{i_Q})$ has n_{i_A} parts of type “A”, n_{i_B} parts of type “B”, ..., n_{i_Q} parts of type “Q”.
- Suppose an observation is described by the number of parts seen for each type.

That is, $observation_j = (x_{jA}, x_{jB}, \dots, x_{jQ})$ has seen x_{jA} parts of type “A”, x_{jB} parts of type “B”, ..., x_{jQ} parts of type “Q”.

- The likelihood L of observation j under kit i is given by the multivariate hypergeometric distribution:

$$L(observation_j | kit_i) = \frac{\prod_{p=1}^q n_{ip} choose x_{jp}}{\sum_{p=1}^q n_{ip} choose \sum_{p=1}^q x_{jp}}$$

The additive metric AM_5 for kit_i is the probability of kit_i given $observation_j$:

$$Probability(kit_i | observation_j) = \frac{L(observation_j | kit_i)}{\sum_{n=1}^N L(observation_j | kit_n)}$$

where n is the total number of kits that are likely to be built.

8.24.2.20 `static double ontology.Ontology.computeMetricMM1 (int sr_i_s, int detrimental)`
[static]

8.24.2.21 `static void ontology.Ontology.computeMetricsInformation (ArrayList< ArrayList< ArrayList< String >>> _states) throws InterruptedException, BadLocationException` [static]

Retrieve and compute the information required for metrics computation.

The following pieces of information are used to determine individual metrics:

- $SR_{i,s}$: The number of matched state relations (SR) in an intention (i) as of the current state (s).
- $SR_{i,total}$: The number of state relations (SR), whether matched or not, in an intention (i).
- $SR_{all,s}$: The number of matched state relations (SR) in all possible intentions as of the current state (s).
- S_{total} : The number of states (S) that have occurred since observation began.
- S_i : The number of states (S) that have occurred since (and including) the first matched state relation in an intention (i).
- $detrimentalSR_{i,s}$: The number of detrimental state relations ($detrimentalSR$) that have occurred in an intention (i) as of the current state (s).
- $SR_{i,r,s}$: The number of matched state relations (SR) in the past r states in an intention (i) as of the current state (s). In other words, in the most recent n states, how many true state relations for an intention exist?

Parameters

<code>_states</code>	A list of states.
----------------------	-------------------

Exceptions

<code>InterruptedException</code>	
<code>BadLocationException</code>	

8.24.2.22 `static void ontology.Ontology.computeObservationLikelihood (Intention intention_)`
`[static]`

Compute the likelihood L of observation j under kit i .

The likelihood L of observation j under kit i is given by the multivariate hypergeometric distribution:

$$L(\text{observation}_j | \text{kit}_i) = \frac{\prod_{p=1}^q n_{i_p} \text{choose } x_{j_p}}{\sum_{p=1}^q n_{i_p} \text{choose } \sum_{p=1}^q x_{j_p}}$$

Returns

8.24.2.23 `static double ontology.Ontology.computePercentComplete (double sr_i_s, double sr_i_total)`
`[static]`

PercentComplete is the percentage complete for an intention in a state.

This formula is used by AM_2 and is computed as follows:

$$\text{PercentComplete}_{i,s} = \frac{SR_{i,s}}{SR_{i,total}}$$

Parameters

<code>sr_i_s</code>	The Number of matched state relations (SR) in an intention (i) as of the current state (s).
<code>sr_i_total</code>	The number of states (S) that have occurred since observation began.

Returns

8.24.2.24 `static double ontology.Ontology.computePercentProductive (double sr_i_s, double si) [static]`

The formula for the percent productive is used by AM_3 for an intention (*i*) as of state (*s*) is:

$$PercentProductive_{i,s} = \frac{SR_{i,s}}{S_i}$$

Parameters

<i>sr_i_s</i>	The Number of matched state relations (<i>SR</i>) in an intention (<i>i</i>) as of the current state (<i>s</i>).
<i>si</i>	The number of states (<i>S</i>) that have occurred since (and including) the first matched state relation in an intention (<i>i</i>).

Returns

8.24.2.25 `static void ontology.Ontology.computeProbabilityFromObservation (Intention intention_) [static]`

8.24.2.26 `static void ontology.Ontology.computeProceduresForAM5 () [static]`

8.24.2.27 `static void ontology.Ontology.getForEachIntentionTheNumberOfPartsForEachType () [static, private]`

Retrieve the number of parts each intention contains for each type.

Returns

Map <OWLIndividual, Map<String, Integer> > A HashMap that has the intention as the key and a HashMap as the value. The nested HashMap has the Target object (type of part) of the predicate as the key and the number of parts of the given type as value.

8.24.2.28 `Set<OWLClassExpression> ontology.Ontology.getIndividualClass (OWLNamedIndividual individual)`

8.24.2.29 `static String ontology.Ontology.getIndividualClassString (OWLNamedIndividual individual) [static]`

8.24.2.30 `static String ontology.Ontology.getIndividualClassString (OWLIndividual individual) [static]`

8.24.2.31 `OWLOntologyManager ontology.Ontology.getManager ()`

Simple getter.

Returns

manager

8.24.2.32 `OWL.Ontology ontology.Ontology.getOntology ()`

Simple getter.

Returns

ontology

8.24.2.33 `String ontology.Ontology.getOntologyPath ()`

Get the path of the ontology.

Returns**8.24.2.34** `static Color ontology.Ontology.getPartColor (String _string) [static, private]`**8.24.2.35** `static String ontology.Ontology.getPartType (String _string) [static, private]`**8.24.2.36** `String ontology.Ontology.getPath ()`

Simple getter.

Returns

path

8.24.2.37 `static String ontology.Ontology.getReferenceObjectClass (OWLNamedIndividual individual) [static, private]`

Return The class of the reference object for a given instance of predicate

Parameters

<i>individual</i>	An instance of predicate
-------------------	--------------------------

Returns

The class of the reference object

8.24.2.38 String ontology.Ontology.getRootClass ()

Get the class root from the ontology.

Returns

The class root

8.24.2.39 static char ontology.Ontology.getSeparator () [static]

Simple getter.

Returns

SEPARATOR

8.24.2.40 static String ontology.Ontology.getStateRelation (OWLNamedIndividual *individual*)
[static, private]

Return The state relation for a given instance of predicate

Parameters

<i>individual</i>	An instance of predicate
-------------------	--------------------------

Returns

The state relation

8.24.2.41 static String ontology.Ontology.getStringHead (String *_string*) [static,
private]**8.24.2.42** static String ontology.Ontology.getStringTail (String *_string*) [static,
private]**8.24.2.43** NodeSet<OWLClass> ontology.Ontology.getSubclasses (String *myClassName*)**8.24.2.44** static String ontology.Ontology.getTargetObjectClass (OWLNamedIndividual
individual) [static, private]

Return The class of the target object for a given instance of predicate

Parameters

<i>individual</i>	An instance of predicate
-------------------	--------------------------

Returns

The class of the target object

8.24.2.45 static boolean ontology.Ontology.hasProperty (OWLOntologyManager *man*,
OWLReasoner *reasoner*, OWLClass *cls*, OWLObjectPropertyExpression *prop*)
[static, private]

8.24.2.46 void ontology.Ontology.initializeList ()

8.24.2.47 static ArrayList<String> ontology.Ontology.input (String *state_relation*, String
target_object, String *target_class*, String *reference_object*, String *reference_class*)
[static, private]

8.24.2.48 void ontology.Ontology.loadFromFile ()

Load the ontology from a file.

8.24.2.49 void ontology.Ontology.loadOntologyFromPath (String *myPath*) throws
MalformedURLException, OWLException

8.24.2.50 static void ontology.Ontology.matchDetrimentalStateRelationToIntention (ArrayList
_state_relation) [static]

Check for each intention if *_state_relation* is a detrimental state relation.

Parameters

<i>_state_relation</i>	state relation of the form "State Relation Name","Target Object" ,"OWL CClass of the target object" ,"Reference object","OWL CClass of the reference object"
------------------------	--

8.24.2.51 static void ontology.Ontology.matchStateRelationToIntention (ArrayList
_state_relation, int *num*) throws BadLocationException [static]

Check for each intention if the state relation *_state_relation* matches any of the intention state relations.

Parameters

<i>_state_relation</i>	A state relation of the form "State Relation Name","Target Object" ,"OWL CClass of the target object" ,"Reference object","OWL CClass of the reference object"
------------------------	--

Exceptions

<i>BadLocationException</i>	
-----------------------------	--

8.24.2.52 `void ontology.Ontology.parseIntention (NodeSet< OWLClass > myClass)` throws `InterruptedException`, `InvocationTargetException`, `IOException`

Parse the class *myClass* and store data in arrays (HashMap and ArrayList).

Parameters

<i>myClass</i>	Class to be parsed
----------------	--------------------

Exceptions

<i>InterruptedException</i>	
<i>InvocationTargetException</i>	
<i>IOException</i>	

8.24.2.53 `static void ontology.Ontology.printProperties (OWLOntologyManager man, OWLOntology ont, OWLReasoner reasoner, OWLClass cls)` [`static`, `private`]

Print the properties that an instance has to have.

Parameters

<i>man</i>	The manager
<i>ont</i>	The ontology
<i>reasoner</i>	The reasoner
<i>cls</i>	The class for which we need to check the properties

8.24.2.54 `static void ontology.Ontology.readForEachIntentionTheNumberOfPartsForEachType ()` [`static`, `private`]

Read the map Map <OWLIndividual,Map<String, Integer> >

8.24.2.55 `void ontology.Ontology.readIntentionList ()` [`private`]

Read the intentions previously stored.

Display intention individuals.

8.24.2.56 `static void ontology.Ontology.readObservationList ()` [`static`]

Read the observation list m_observation_list.

8.24.2.57 `static ArrayList<String> ontology.Ontology.removeDuplicates (ArrayList<String> list_) [static]`

Remove duplicates in an ArrayList of String.

The easiest way to remove duplicates is to add the contents to a Set (which will not allow duplicates) and then add the Set back to the ArrayList.

Parameters

<i>list_</i>	Original list that contains duplicates
--------------	--

Returns

list_ with duplicates removed

8.24.2.58 `static double ontology.Ontology.roundTwoDecimals (double d) [static, package]`

8.24.2.59 `void ontology.Ontology.searchList (String individual) [private]`

8.24.2.60 `void ontology.Ontology.setDataFactory ()`

8.24.2.61 `static void ontology.Ontology.setInstanceFilePath (String path_) [static]`

Set the path to the OWL instance file The path is retrieved from the field [OptionFrame.m_instance_txt_field](#).

8.24.2.62 `void ontology.Ontology.setManager ()`

8.24.2.63 `void ontology.Ontology.setManager (OWLOntologyManager manager)`

Simple setter.

Parameters

<i>manager</i>	
----------------	--

8.24.2.64 `void ontology.Ontology.setOntology (OWLOntology ontology)`

Simple setter.

Parameters

<i>ontology</i>	
-----------------	--

8.24.2.65 void ontology.Ontology.setPath (String *path*)

Simple setter.

Parameters

<i>path</i>	
-------------	--

8.24.2.66 void ontology.Ontology.setReasoner (OWLOntology *myOntology*)

8.24.2.67 void ontology.Ontology.setRootClass (String *rootClass*)

Set the class root from the ontology.

Parameters

<i>rootClass</i>	
------------------	--

8.24.2.68 void ontology.Ontology.showDialogBox ()

8.24.2.69 void ontology.Ontology.sortIntentionList ()

Read *m_intention_list* and re-arrange the list using a number for each intention.

The bubble sort algorithm is used to sort *m_intention_list*.

Among the 5 intentions in the ontology, numbers are associated to each intention in the following way:

- *a4b3c3* = 1
- *a4b4c2* = 2
- *a2b3c5* = 3
- *a4b2c2d1* = 4
- *a2b3c3d1e1* = 5

8.24.2.70 static void ontology.Ontology.updateForEachIntentionTheNumberOfPartsForEachType () [static, private]

Update *m_part_type_number_for_each_intention_list* with missing part types.

m_part_type_number_for_each_intention_list contains the number of parts of each part type that each intention contains. For instance, the kit *kit_{a4b4c2}* has 4 for part A, 4 for part B, and 2 for part C. However, Parts D and E also need to be included in *m_part_type_number_for_each_intention_list* with 0 for part D and 0 for part E. The missing part types are retrieved from *m_observation_list*.

8.24.2.71 `static void ontology.Ontology.updateMainFrame (ArrayList _state_relation, int num)`
`[static]`

Display the current state relation in MainFrame.

Parameters

<i>_state_relation</i>	The state relation to display
------------------------	-------------------------------

8.24.2.72 `static void ontology.Ontology.updateObservationList (String part_type)`
`[static]`

Update the observation list.

This function searches for *part_type* in *m_observation_list* and updates its value (occurrence for this part type).

Parameters

<i>part_type</i>	The part type to search in <i>m_observation_list</i>
------------------	--

8.24.3 Member Data Documentation

8.24.3.1 `OWLObjectFactory ontology.Ontology.m_datafactory` `[static, private]`

8.24.3.2 `String ontology.Ontology.m_hasCount_Occurrence = "#hasCount.Occurrence"` `[static, private]`

8.24.3.3 `String ontology.Ontology.m_hasIntention_Name = "#hasIntention_Name"`
`[static, private]`

8.24.3.4 `String ontology.Ontology.m_hasIntention_OrderingConstruct = "#hasIntention_OrderingConstruct"` `[static, private]`

8.24.3.5 `String ontology.Ontology.m_hasOrderingConstruct_OrderingConstruct = "#hasOrderingConstruct_OrderingConstruct"` `[static, private]`

8.24.3.6 `String ontology.Ontology.m_hasOrderingConstruct_Position = "#hasOrderingConstruct.Position"` `[static, private]`

8.24.3.7 `String ontology.Ontology.m_hasOrderingConstruct_Predicate = "#hasOrderingConstruct.Predicate"` `[static, private]`

8.24.3.8 `String ontology.Ontology.m_hasPredicate_ReferenceObject = "#hasPredicate_ReferenceObject"` `[static, private]`

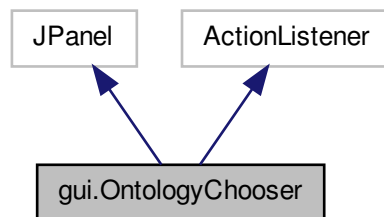
- 8.24.3.9 `String ontology.Ontology.m_hasPredicate_TargetObject =
"#hasPredicate_TargetObject" [static, private]`
- 8.24.3.10 `ArrayList<Intention> ontology.Ontology.m_intention_list [static]`
- 8.24.3.11 `String ontology.Ontology.m_kitToBuild [static]`
- 8.24.3.12 `OWLOntologyManager ontology.Ontology.m_manager [private]`
- 8.24.3.13 `HashMap<String,Integer> ontology.Ontology.m_observation_list = new
HashMap<String, Integer>() [static, private]`
- 8.24.3.14 `OWLOntology ontology.Ontology.m_ontology [static]`
- 8.24.3.15 `final String ontology.Ontology.m_ontology_IRI =
"http://www.semanticweb.org/ontologies/2013/0/soap.owl" [static,
private]`
- 8.24.3.16 `Map<OWLIndividual,Map<String, Integer> > ontology.Ontology.m_
part_type_number_for_each_intention_list = new
HashMap<OWLIndividual,Map<String, Integer> >() [static, private]`
- 8.24.3.17 `String ontology.Ontology.m_path [private]`
- 8.24.3.18 `String ontology.Ontology.m_planToBuild [static]`
- 8.24.3.19 `ProgressBar ontology.Ontology.m_progress_bar [private]`
- 8.24.3.20 `JFrame ontology.Ontology.m_progress_frame [private]`
- 8.24.3.21 `OWLReasoner ontology.Ontology.m_reasoner [static, private]`
- 8.24.3.22 `String ontology.Ontology.m_s_ontopath [static, private]`
- 8.24.3.23 `String ontology.Ontology.m_s_rootClass = "Intention"`
- 8.24.3.24 `String ontology.Ontology.m_s_subClass = "Kitting" [static]`
- 8.24.3.25 `final char ontology.Ontology.m_SEPARATOR = '#' [static,
private]`

The documentation for this class was generated from the following file:

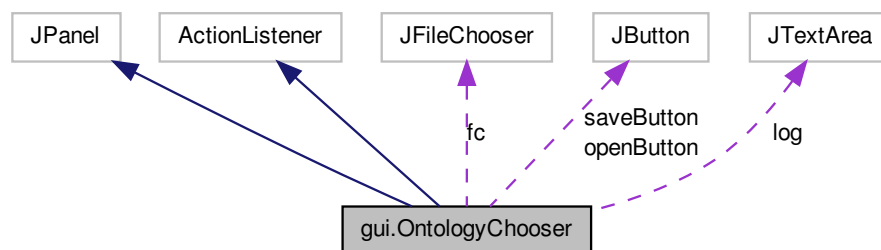
- [src/ontology/Ontology.java](#)

8.25 gui.OntologyChooser Class Reference

Inheritance diagram for gui.OntologyChooser:



Collaboration diagram for gui.OntologyChooser:



Public Member Functions

- [OntologyChooser](#) ()
- void [actionPerformed](#) (ActionEvent e)

Static Public Member Functions

- static void [createAndShowGUI](#) ()

Static Protected Member Functions

- static ImageIcon [createImageIcon](#) (String path)

Package Attributes

- JButton [openButton](#)
- JButton [saveButton](#)
- JTextArea [log](#)
- JFileChooser [fc](#)

Static Private Attributes

- static final String [newline](#) = "\n"

8.25.1 Detailed Description

Author

zeid This class consists of methods that allow the user to select the kittingInstances.owl file

8.25.2 Constructor & Destructor Documentation

8.25.2.1 gui.OntologyChooser.OntologyChooser ()

8.25.3 Member Function Documentation

8.25.3.1 void gui.OntologyChooser.actionPerformed (ActionEvent e)

8.25.3.2 static void gui.OntologyChooser.createAndShowGUI () [static]

Create the GUI and show it. For thread safety, this method should be invoked from the event dispatch thread.

8.25.3.3 static ImageIcon gui.OntologyChooser.createImageIcon (String path) [static, protected]

Returns an ImageIcon, or null if the path was invalid.

8.25.4 Member Data Documentation

8.25.4.1 JFileChooser gui.OntologyChooser.fc [package]

8.25.4.2 JTextArea gui.OntologyChooser.log [package]

8.25.4.3 final String gui.OntologyChooser.newline = "\n" [static, private]

8.25.4.4 JButton gui.OntologyChooser.openButton [package]

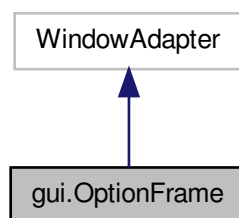
8.25.4.5 JButton gui.OntologyChooser.saveButton [package]

The documentation for this class was generated from the following file:

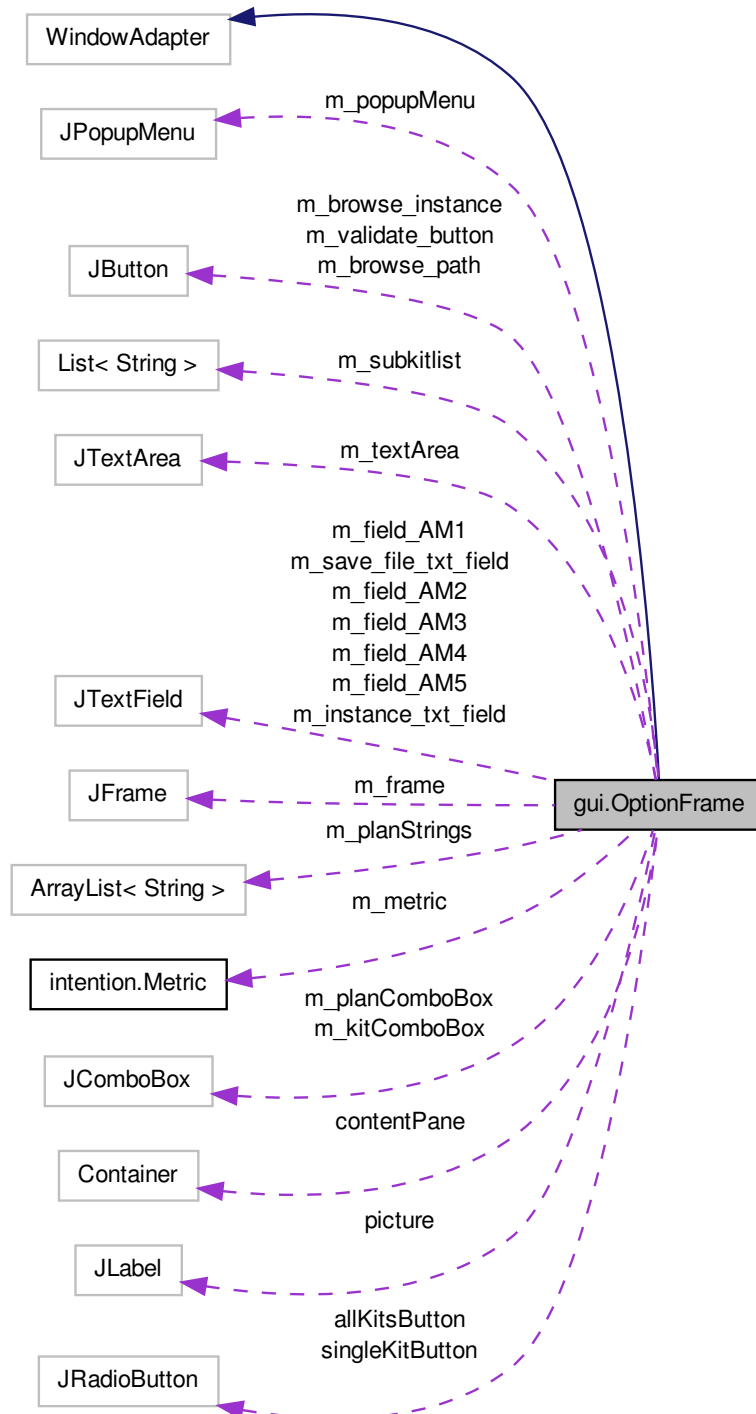
- src/gui/[OntologyChooser.java](#)

8.26 gui.OptionFrame Class Reference

Inheritance diagram for gui.OptionFrame:



Collaboration diagram for gui.OptionFrame:



Classes

- class [MouseHandler](#)
- class [PlanComboBoxListener](#)

Public Member Functions

- [OptionFrame](#) ()
- void [addComponentsToPane](#) (Container pane, final [Ontology](#) onto)
- void [updateConfigFile](#) (String text) throws IOException
- List< String > [readConfigFile](#) (String configFile)
- void [createAndUpdateConfigFile](#) (String instance) throws FileNotFoundException, UnsupportedEncodingException
- void [createPopupMenu](#) ()
Create a popup menu when right-click on a JTextField.
- void [createAndShowGUI](#) ([Ontology](#) onto)
- void [setMetric](#) ([Metric](#) metric)
- [Metric](#) [getMetric](#) ()

Static Public Member Functions

- static ArrayList< String > [getKitList](#) ()
- static JButton [createButtonFromTemplate](#) (JButton _button)
- static void [findFilesinDirectory](#) (String plan_path)

Static Public Attributes

- static JTextField [m_instance_txt_field](#)
- static JButton [m_browse_instance](#)
- static JFrame [m_frame](#)
- static Boolean [m_validate](#)
- static JTextArea [m_textArea](#)
- static Container [contentPane](#)
- static List< String > [m_subkitlist](#)
- static JLabel [picture](#)
- static JRadioButton [singleKitButton](#)

Static Protected Member Functions

- static void [updateLabel](#) (String name)

Static Protected Attributes

- static final String [NO_DECORATIONS](#) = "no_dec"
- static final String [LF_DECORATIONS](#) = "laf_dec"
- static final String [WS_DECORATIONS](#) = "ws_dec"
- static final String [CREATE_WINDOW](#) = "new_win"
- static final String [DEFAULT_ICON](#) = "def_icon"
- static final String [FILE_ICON](#) = "file_icon"
- static final String [PAINT_ICON](#) = "paint_icon"

Package Attributes

- static JTextField [m_save_file_txt_field](#)
- static JTextField [m_field_AM1](#)
- static JTextField [m_field_AM2](#)
- static JTextField [m_field_AM3](#)
- static JTextField [m_field_AM4](#)
- static JTextField [m_field_AM5](#)
- static JButton [m_validate_button](#)
- static JButton [m_browse_path](#)
- static JComboBox [m_planComboBox](#)
- static JRadioButton [allKitsButton](#)

Static Package Attributes

- static final boolean [shouldFill](#) = false
- static final boolean [shouldWeightX](#) = true
- static final boolean [RIGHT_TO_LEFT](#) = false
- static boolean [m_bool_allKits](#) = false

Static Private Member Functions

- static void [add](#) (Component c, GridBagLayout gbl, GridBagConstraints gbc, int x, int y, int w, int h)

Private Attributes

- JPopupMenu [m_popupMenu](#)

Static Private Attributes

- static [Metric m_metric](#)
- static JComboBox [m_kitComboBox](#)
- static ArrayList< String > [m_planStrings](#) = new ArrayList<String>()

8.26.1 Constructor & Destructor Documentation

8.26.1.1 `gui.OptionFrame.OptionFrame ()`

8.26.2 Member Function Documentation

8.26.2.1 `static void gui.OptionFrame.add (Component c, GridBagLayout gbl, GridBagConstraints gbc, int x, int y, int w, int h)` [static, private]

8.26.2.2 `void gui.OptionFrame.addComponentToPane (Container pane, final Ontology onto)`

8.26.2.3 `void gui.OptionFrame.createAndShowGUI (Ontology onto)`

Create the GUI and show it. For thread safety, this method should be invoked from the event-dispatching thread.

8.26.2.4 `void gui.OptionFrame.createAndUpdateConfigFile (String instance)` throws `FileNotFoundException`, `UnsupportedEncodingException`

8.26.2.5 `static JButton gui.OptionFrame.createButtonFromTemplate (JButton _button)` [static]

8.26.2.6 `void gui.OptionFrame.createPopupMenu ()`

Create a popup menu when right-click on a JTextField.

8.26.2.7 `static void gui.OptionFrame.findFilesInDirectory (String plan_path)` [static]

8.26.2.8 `static ArrayList<String> gui.OptionFrame.getKitList ()` [static]

8.26.2.9 `Metric gui.OptionFrame.getMetric ()`

8.26.2.10 `List<String> gui.OptionFrame.readConfigFile (String configFile)`

8.26.2.11 `void gui.OptionFrame.setMetric (Metric metric)`

8.26.2.12 `void gui.OptionFrame.updateConfigFile (String text)` throws `IOException`

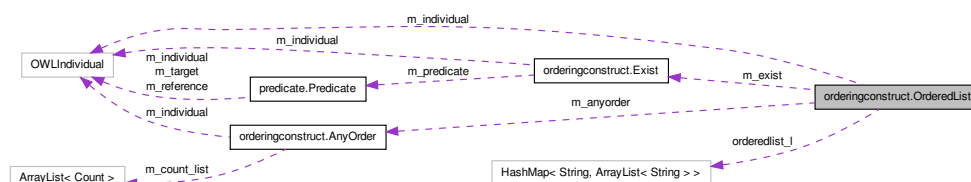
8.26.2.13 `static void gui.OptionFrame.updateLabel (String name)` [static, protected]

8.26.3 Member Data Documentation

8.26.3.1 `JRadioButton gui.OptionFrame.allKitsButton` [package]

- 8.26.3.2 Container `gui.OptionFrame.contentPane` [static]
- 8.26.3.3 final String `gui.OptionFrame.CREATE_WINDOW = "new_win"` [static, protected]
- 8.26.3.4 final String `gui.OptionFrame.DEFAULT_ICON = "def.icon"` [static, protected]
- 8.26.3.5 final String `gui.OptionFrame.FILE_ICON = "file_icon"` [static, protected]
- 8.26.3.6 final String `gui.OptionFrame.LF_DECORATIONS = "laf_dec"` [static, protected]
- 8.26.3.7 boolean `gui.OptionFrame.m_bool_allKits = false` [static, package]
- 8.26.3.8 JButton `gui.OptionFrame.m_browse_instance` [static]
- 8.26.3.9 JButton `gui.OptionFrame.m_browse_path` [package]
- 8.26.3.10 JTextField `gui.OptionFrame.m_field_AM1` [package]
- 8.26.3.11 JTextField `gui.OptionFrame.m_field_AM2` [package]
- 8.26.3.12 JTextField `gui.OptionFrame.m_field_AM3` [package]
- 8.26.3.13 JTextField `gui.OptionFrame.m_field_AM4` [package]
- 8.26.3.14 JTextField `gui.OptionFrame.m_field_AM5` [package]
- 8.26.3.15 JFrame `gui.OptionFrame.m_frame` [static]
- 8.26.3.16 JTextField `gui.OptionFrame.m_instance_txt_field` [static]
- 8.26.3.17 JComboBox `gui.OptionFrame.m_kitComboBox` [static, private]
- 8.26.3.18 Metric `gui.OptionFrame.m_metric` [static, private]
- 8.26.3.19 JComboBox `gui.OptionFrame.m_planComboBox` [package]
- 8.26.3.20 ArrayList<String> `gui.OptionFrame.m_planStrings = new ArrayList<String>()` [static, private]
- 8.26.3.21 JPopupMenu `gui.OptionFrame.m_popupMenu` [private]
- 8.26.3.22 JTextField `gui.OptionFrame.m_save_file_txt_field` [package]

- src/gui/OptionFrame.java



Public Member Functions

- [OrderedList](#) ()
- [Exist](#) [getExist](#) ()
- void [setExist](#) ([Exist](#) e)
- [AnyOrder](#) [getAnyOrder](#) ()
- void [setAnyOrder](#) ([AnyOrder](#) ao)
- OWLIndividual [getIndividual](#) ()
- void [setIndividual](#) (OWLIndividual i)

Public Attributes

- `HashMap< String, ArrayList< String > >` [orderedlist_](#)

Private Attributes

- String [orderedlist_name](#)
- [Exist](#) [m_exist](#)
- [AnyOrder](#) [m_anyorder](#)
- OWLIndividual [m_individual](#)

8.27.1 Constructor & Destructor Documentation

8.27.1.1 `orderingconstruct.OrderedList.OrderedList ()`

8.27.2 Member Function Documentation

8.27.2.1 `AnyOrder orderingconstruct.OrderedList.getAnyOrder ()`

8.27.2.2 `Exist orderingconstruct.OrderedList.getExist ()`

8.27.2.3 `OWLIndividual orderingconstruct.OrderedList.getIndividual ()`

8.27.2.4 `void orderingconstruct.OrderedList.setAnyOrder (AnyOrder ao)`

8.27.2.5 `void orderingconstruct.OrderedList.setExist (Exist e)`

8.27.2.6 `void orderingconstruct.OrderedList.setIndividual (OWLIndividual i)`

8.27.3 Member Data Documentation

8.27.3.1 `AnyOrder orderingconstruct.OrderedList.m_anyorder` `[private]`

8.27.3.2 `Exist orderingconstruct.OrderedList.m_exist` `[private]`

8.27.3.3 OWLIndividual orderingconstruct.OrderedList.m_individual [private]

8.27.3.4 HashMap<String, ArrayList<String> >
orderingconstruct.OrderedList.orderedlist_l

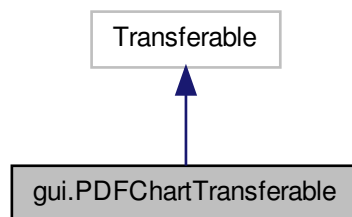
8.27.3.5 String orderingconstruct.OrderedList.orderedlist_name [private]

The documentation for this class was generated from the following file:

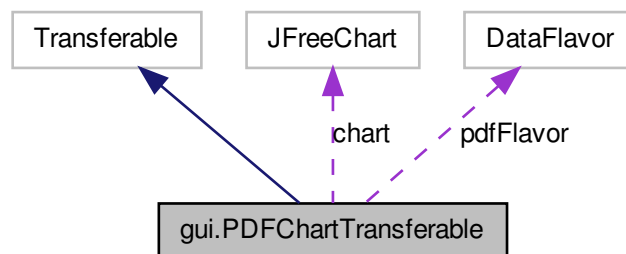
- src/orderingconstruct/[OrderedList.java](#)

8.28 gui.PDFChartTransferable Class Reference

Inheritance diagram for gui.PDFChartTransferable:



Collaboration diagram for gui.PDFChartTransferable:



Public Member Functions

- [PDFChartTransferable](#) (JFreeChart *jfreechart*, int *i*, int *j*)
- [PDFChartTransferable](#) (JFreeChart *jfreechart*, int *i*, int *j*, boolean *flag*)
- DataFlavor[] [getTransferDataFlavors](#) ()
- boolean [isDataFlavorSupported](#) (DataFlavor *dataflavor*)
- Object [getTransferData](#) (DataFlavor *dataflavor*) throws UnsupportedOperationException, IOException

Static Public Member Functions

- static void [writeChartAsPDF](#) (ByteArrayOutputStream *bytearrayoutputstream*, JFreeChart *jfreechart*, int *i*, int *j*, FontMapper *fontmapper*) throws IOException

Package Attributes

- final DataFlavor [pdfFlavor](#)

Private Attributes

- JFreeChart [chart](#)
- int [width](#)
- int [height](#)

8.28.1 Constructor & Destructor Documentation

8.28.1.1 `gui.PDFChartTransferable.PDFChartTransferable (JFreeChart jfreechart, int i, int j)`

8.28.1.2 `gui.PDFChartTransferable.PDFChartTransferable (JFreeChart jfreechart, int i, int j, boolean flag)`

8.28.2 Member Function Documentation

8.28.2.1 Object `gui.PDFChartTransferable.getTransferData (DataFlavor dataflavor)` throws UnsupportedOperationException, IOException

8.28.2.2 DataFlavor [] `gui.PDFChartTransferable.getTransferDataFlavors ()`

8.28.2.3 boolean `gui.PDFChartTransferable.isDataFlavorSupported (DataFlavor dataflavor)`

8.28.2.4 static void `gui.PDFChartTransferable.writeChartAsPDF (ByteArrayOutputStream bytearrayoutputstream, JFreeChart jfreechart, int i, int j, FontMapper fontmapper)`
throws IOException `[static]`

8.28.3 Member Data Documentation

8.28.3.1 JFreeChart gui.PDFChartTransferable.chart [private]

8.28.3.2 int gui.PDFChartTransferable.height [private]

8.28.3.3 final DataFlavor gui.PDFChartTransferable.pdfFlavor [package]

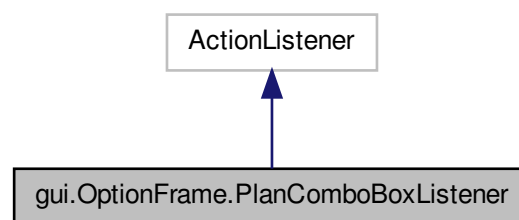
8.28.3.4 int gui.PDFChartTransferable.width [private]

The documentation for this class was generated from the following file:

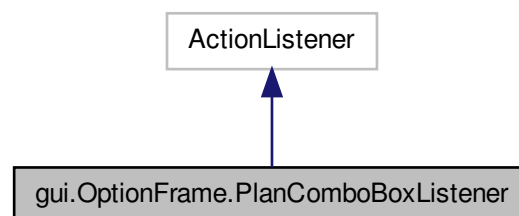
- src/gui/[PDFChartTransferable.java](#)

8.29 gui.OptionFrame.PlanComboBoxListener Class Reference

Inheritance diagram for gui.OptionFrame.PlanComboBoxListener:



Collaboration diagram for gui.OptionFrame.PlanComboBoxListener:



Public Member Functions

- void [actionPerformed](#) (ActionEvent e)

8.29.1 Member Function Documentation

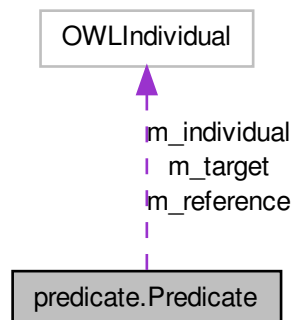
8.29.1.1 void gui.OptionFrame.PlanComboBoxListener.actionPerformed (ActionEvent e)

The documentation for this class was generated from the following file:

- src/gui/[OptionFrame.java](#)

8.30 predicate.Predicate Class Reference

Collaboration diagram for predicate.Predicate:



Public Member Functions

- [Predicate](#) ()
- OWLIndividual [getIndividual](#) ()
- OWLIndividual [getReference](#) ()
- String [getReferenceObjectClass](#) ()
- String [getStateRelation](#) ()
- OWLIndividual [getTarget](#) ()
- String [getTargetObjectClass](#) ()
- void [setIndividual](#) (OWLIndividual i)
- void [setReference](#) (OWLIndividual i)

- void [setReferenceObjectClass](#) (String s)
- void [setStateRelation](#) (String s)
- void [setTarget](#) (OWLIndividual i)
- void [setTargetObjectClass](#) (String s)

Private Attributes

- OWLIndividual [m_individual](#)
- OWLIndividual [m_reference](#)
- String [m_reference_class](#)
- String [m_staterelation](#)
- OWLIndividual [m_target](#)
- String [m_target_class](#)

8.30.1 Constructor & Destructor Documentation

8.30.1.1 `predicate.Predicate.Predicate ()`

8.30.2 Member Function Documentation

8.30.2.1 `OWLIndividual predicate.Predicate.getIndividual ()`

8.30.2.2 `OWLIndividual predicate.Predicate.getReference ()`

8.30.2.3 `String predicate.Predicate.getReferenceObjectClass ()`

8.30.2.4 `String predicate.Predicate.getStateRelation ()`

8.30.2.5 `OWLIndividual predicate.Predicate.getTarget ()`

8.30.2.6 `String predicate.Predicate.getTargetObjectClass ()`

8.30.2.7 `void predicate.Predicate.setIndividual (OWLIndividual i)`

8.30.2.8 `void predicate.Predicate.setReference (OWLIndividual i)`

8.30.2.9 `void predicate.Predicate.setReferenceObjectClass (String s)`

8.30.2.10 `void predicate.Predicate.setStateRelation (String s)`

8.30.2.11 `void predicate.Predicate.setTarget (OWLIndividual i)`

8.30.2.12 `void predicate.Predicate.setTargetObjectClass (String s)`

8.30.3 Member Data Documentation

8.30.3.1 OWLIndividual predicate.Predicate.m_individual [private]

8.30.3.2 OWLIndividual predicate.Predicate.m_reference [private]

8.30.3.3 String predicate.Predicate.m_reference_class [private]

8.30.3.4 String predicate.Predicate.m_staterelation [private]

8.30.3.5 OWLIndividual predicate.Predicate.m_target [private]

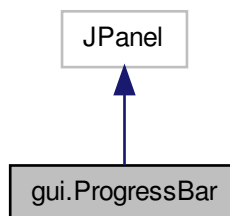
8.30.3.6 String predicate.Predicate.m_target_class [private]

The documentation for this class was generated from the following file:

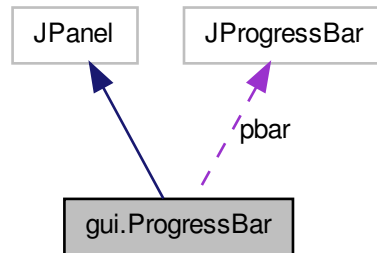
- src/predicate/[Predicate.java](#)

8.31 gui.ProgressBar Class Reference

Inheritance diagram for gui.ProgressBar:



Collaboration diagram for gui.ProgressBar:



Public Member Functions

- [ProgressBar](#) ()
- void [updateBar](#) (int newValue)

Package Attributes

- JProgressBar [pbar](#)

Static Package Attributes

- static final int [MY_MINIMUM](#) = 0
- static final int [MY_MAXIMUM](#) = 100

8.31.1 Constructor & Destructor Documentation

8.31.1.1 `gui.ProgressBar.ProgressBar ()`

8.31.2 Member Function Documentation

8.31.2.1 `void gui.ProgressBar.updateBar (int newValue)`

8.31.3 Member Data Documentation

8.31.3.1 `final int gui.ProgressBar.MY_MAXIMUM = 100` [static, package]

8.31.3.2 `final int gui.ProgressBar.MY_MINIMUM = 0` [static, package]

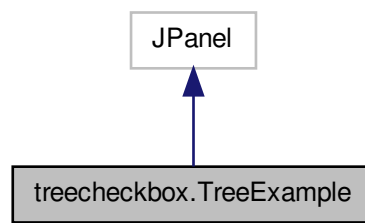
8.31.3.3 `JProgressBar gui.ProgressBar.pbar` [package]

The documentation for this class was generated from the following file:

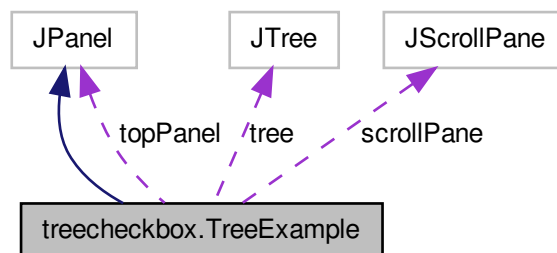
- [src/gui/ProgressBar.java](#)

8.32 treecheckbox.TreeExample Class Reference

Inheritance diagram for treecheckbox.TreeExample:



Collaboration diagram for treecheckbox.TreeExample:



Public Member Functions

- [TreeExample](#) ()

Private Attributes

- JPanel [topPanel](#)
- JTree [tree](#)
- JScrollPane [scrollPane](#)

Static Private Attributes

- static final long [serialVersionUID](#) = 1L

8.32.1 Constructor & Destructor Documentation

8.32.1.1 `treecheckbox.TreeExample.TreeExample ()`

8.32.2 Member Data Documentation

8.32.2.1 `JScrollPane treecheckbox.TreeExample.scrollPane` [private]

8.32.2.2 `final long treecheckbox.TreeExample.serialVersionUID = 1L` [static, private]

8.32.2.3 `JPanel treecheckbox.TreeExample.topPanel` [private]

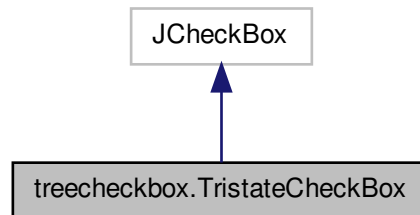
8.32.2.4 `JTree treecheckbox.TreeExample.tree` [private]

The documentation for this class was generated from the following file:

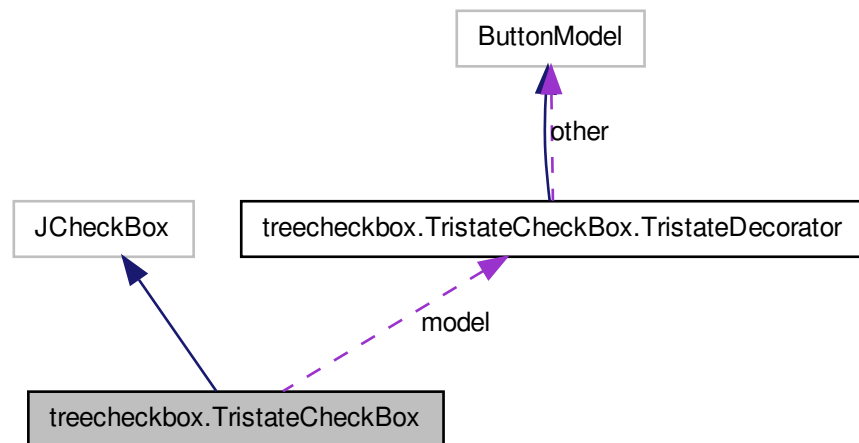
- `src/treecheckbox/TreeExample.java`

8.33 treecheckbox.TristateCheckBox Class Reference

Inheritance diagram for treecheckbox.TristateCheckBox:



Collaboration diagram for treecheckbox.TristateCheckBox:



Classes

- class [TristateDecorator](#)

Public Member Functions

- [TristateCheckBox](#) (String text, Icon icon, Boolean initial)
- [TristateCheckBox](#) (String text, Boolean initial)
- [TristateCheckBox](#) (String text)
- [TristateCheckBox](#) ()
- void [addMouseListener](#) (MouseListener l)
- void [setState](#) (Boolean state)
- Boolean [getState](#) ()

Private Attributes

- final [TristateDecorator model](#)

8.33.1 Detailed Description

Maintenance tip - There were some tricks to getting this code working:

1. You have to overwrite [addMouseListener\(\)](#) to do nothing 2. You have to add a mouse event on mousePressed by calling super.addMouseListener() 3. You have to replace the UIActionMap for the keyboard event "pressed" with your own one. 4. You have to remove the UIActionMap for the keyboard event "released". 5. You have to grab focus when the next state is entered, otherwise clicking on the component won't get the focus. 6. You have to make a [TristateDecorator](#) as a button model that wraps the original button model and does state management.

8.33.2 Constructor & Destructor Documentation

8.33.2.1 `treecheckbox.TristateCheckBox.TristateCheckBox (String text, Icon icon, Boolean initial)`

8.33.2.2 `treecheckbox.TristateCheckBox.TristateCheckBox (String text, Boolean initial)`

8.33.2.3 `treecheckbox.TristateCheckBox.TristateCheckBox (String text)`

8.33.2.4 `treecheckbox.TristateCheckBox.TristateCheckBox ()`

8.33.3 Member Function Documentation

8.33.3.1 `void treecheckbox.TristateCheckBox.addMouseListener (MouseListener l)`

No one may add mouse listeners, not even Swing!

8.33.3.2 `Boolean treecheckbox.TristateCheckBox.getState ()`

Return the current state, which is determined by the selection status of the model.

8.33.3.3 void treecheckbox.TristateCheckBox.setState (Boolean state)

Set the new state to either SELECTED, NOT_SELECTED or DONT_CARE. If state == null, it is treated as DONT_CARE.

8.33.4 Member Data Documentation

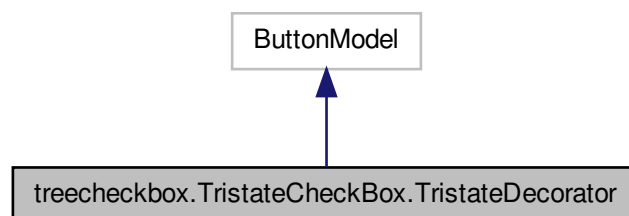
8.33.4.1 final TristateDecorator treecheckbox.TristateCheckBox.model [private]

The documentation for this class was generated from the following file:

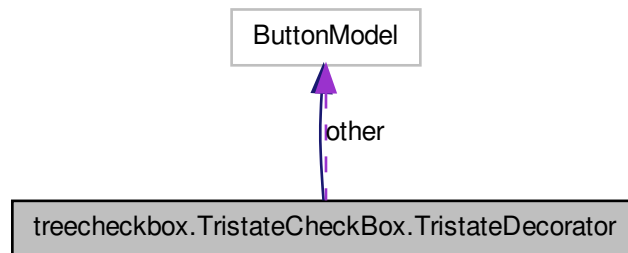
- src/treecheckbox/[TristateCheckBox.java](#)

8.34 treecheckbox.TristateCheckBox.TristateDecorator Class Reference

Inheritance diagram for treecheckbox.TristateCheckBox.TristateDecorator:



Collaboration diagram for treecheckbox.TristateCheckBox.TristateDecorator:



Public Member Functions

- void [setArmed](#) (boolean b)
- boolean [isFocusTraversable](#) ()
- void [setEnabled](#) (boolean b)
- boolean [isArmed](#) ()
- boolean [isSelected](#) ()
- boolean [isEnabled](#) ()
- boolean [isPressed](#) ()
- boolean [isRollover](#) ()
- void [setSelected](#) (boolean b)
- void [setPressed](#) (boolean b)
- void [setRollover](#) (boolean b)
- void [setMnemonic](#) (int key)
- int [getMnemonic](#) ()
- void [setActionCommand](#) (String s)
- String [getActionCommand](#) ()
- void [setGroup](#) (ButtonGroup group)
- void [addActionListener](#) (ActionListener l)
- void [removeActionListener](#) (ActionListener l)
- void [addItemListener](#) (ItemListener l)
- void [removeItemListener](#) (ItemListener l)
- void [addChangeListener](#) (ChangeListener l)
- void [removeChangeListener](#) (ChangeListener l)
- Object[] [getSelectedObjects](#) ()

Private Member Functions

- [TristateDecorator](#) (ButtonModel [other](#))
- void [setState](#) (Boolean state)
- Boolean [getState](#) ()
- void [nextState](#) ()

Private Attributes

- final ButtonModel [other](#)

8.34.1 Detailed Description

Exactly which Design Pattern is this? Is it an Adapter, a Proxy or a Decorator? In this case, my vote lies with the Decorator, because we are extending functionality and "decorating" the original model with a more powerful model.

8.34.2 Constructor & Destructor Documentation

8.34.2.1 `treecheckbox.TristateCheckBox.TristateDecorator.TristateDecorator (ButtonModel other) [private]`

8.34.3 Member Function Documentation

8.34.3.1 `void treecheckbox.TristateCheckBox.TristateDecorator.addActionListener (ActionListener I)`

8.34.3.2 `void treecheckbox.TristateCheckBox.TristateDecorator.addChangeListener (ChangeListener I)`

8.34.3.3 `void treecheckbox.TristateCheckBox.TristateDecorator.addItemListener (ItemListener I)`

8.34.3.4 `String treecheckbox.TristateCheckBox.TristateDecorator.getActionCommand ()`

8.34.3.5 `int treecheckbox.TristateCheckBox.TristateDecorator.getMnemonic ()`

8.34.3.6 `Object [] treecheckbox.TristateCheckBox.TristateDecorator.getSelectedObjects ()`

8.34.3.7 `Boolean treecheckbox.TristateCheckBox.TristateDecorator.getState () [private]`

The current state is embedded in the selection / armed state of the model.

We return the SELECTED state when the checkbox is selected but not armed, DONT_CARE state when the checkbox is selected and armed (grey) and NOT_SELECTED when the checkbox is deselected.

8.34.3.8 boolean treecheckbox.TristateCheckBox.TristateDecorator.isArmed ()

All these methods simply delegate to the "other" model that is being decorated.

8.34.3.9 boolean treecheckbox.TristateCheckBox.TristateDecorator.isEnabled ()

8.34.3.10 boolean treecheckbox.TristateCheckBox.TristateDecorator.isFocusTraversable ()

8.34.3.11 boolean treecheckbox.TristateCheckBox.TristateDecorator.isPressed ()

8.34.3.12 boolean treecheckbox.TristateCheckBox.TristateDecorator.isRollover ()

8.34.3.13 boolean treecheckbox.TristateCheckBox.TristateDecorator.isSelected ()

8.34.3.14 void treecheckbox.TristateCheckBox.TristateDecorator.nextState () [private]

We rotate between NOT_SELECTED, SELECTED and DONT_CARE.

8.34.3.15 void treecheckbox.TristateCheckBox.TristateDecorator.removeActionListener (
 ActionListener l)

8.34.3.16 void treecheckbox.TristateCheckBox.TristateDecorator.removeChangeListener (
 ChangeListener l)

8.34.3.17 void treecheckbox.TristateCheckBox.TristateDecorator.removeItemListener (
 ItemListener l)

8.34.3.18 void treecheckbox.TristateCheckBox.TristateDecorator.setActionCommand (String s)

8.34.3.19 void treecheckbox.TristateCheckBox.TristateDecorator.setArmed (boolean b)

Filter: No one may change the armed status except us.

8.34.3.20 void treecheckbox.TristateCheckBox.TristateDecorator.setEnabled (boolean b)

We disable focusing on the component when it is not enabled.

8.34.3.21 void treecheckbox.TristateCheckBox.TristateDecorator.setGroup (ButtonGroup group
)

8.34.3.22 void treecheckbox.TristateCheckBox.TristateDecorator.setMnemonic (int key)

8.34.3.23 void treecheckbox.TristateCheckBox.TristateDecorator.setPressed (boolean b)

8.34.3.24 void treecheckbox.TristateCheckBox.TristateDecorator.setRollover (boolean b)

8.34.3.25 void treecheckbox.TristateCheckBox.TristateDecorator.setSelected (boolean *b*)

8.34.3.26 void treecheckbox.TristateCheckBox.TristateDecorator.setState (Boolean *state*)
[private]

8.34.4 Member Data Documentation

8.34.4.1 final ButtonModel treecheckbox.TristateCheckBox.TristateDecorator.other
[private]

The documentation for this class was generated from the following file:

- src/treecheckbox/[TristateCheckBox.java](#)

Chapter 9

File Documentation

9.1 src/gui/Chart.java File Reference

Classes

- class [gui.Chart](#)
Chart display for metrics and likelihoods.
- class [gui.Chart.CustomRenderer](#)
- class [gui.Chart.CustomRendererLine](#)

Packages

- package [gui](#)

9.2 src/gui/CommonGUIComponents.java File Reference

Classes

- class [gui.CommonGUIComponents](#)
Common GUI components used across different files of the project.

Packages

- package [gui](#)

9.3 src/gui/DemoPanel.java File Reference

Classes

- class [gui.DemoPanel](#)

Packages

- package [gui](#)

9.4 src/gui/DrawStringPanel.java File Reference

Classes

- class [gui.DrawStringPanel](#)

Packages

- package [gui](#)

9.5 src/gui/MainFrame.java File Reference

Classes

- class [gui.MainFrame](#)
- class [gui.MainFrame.DisplayMetrics](#)

Packages

- package [gui](#)

9.6 src/gui/OntologyChooser.java File Reference

Classes

- class [gui.OntologyChooser](#)

Packages

- package [gui](#)

9.7 src/gui/OptionFrame.java File Reference

Classes

- class [gui.OptionFrame](#)
- class [gui.OptionFrame.PlanComboBoxListener](#)
- class [gui.OptionFrame.MouseHandler](#)

Packages

- package [gui](#)

9.8 src/gui/PDFChartTransferable.java File Reference

Classes

- class [gui.PDFChartTransferable](#)

Packages

- package [gui](#)

9.9 src/gui/ProgressBar.java File Reference

Classes

- class [gui.ProgressBar](#)

Packages

- package [gui](#)

9.10 src/intention/Intention.java File Reference

Classes

- class [intention.Intention](#)

Representation of intentions from their definition in the ontology.

Packages

- package [intention](#)

9.11 src/intention/Metric.java File Reference

Classes

- class [intention.Metric](#)
Definition of additive and multiplicative metrics.

Packages

- package [intention](#)

9.12 src/main/Launcher.java File Reference

Contains the main of the program.

Classes

- class [main.Launcher](#)
Main class of the tool.

Packages

- package [main](#)

9.12.1 Detailed Description

Contains the main of the program.

Author

[Zeid Kootbally](#) zeid.kootbally@nist.gov

Version

1.0

Date

September 2013

Precondition

Make sure the kits directory is present in the same directory as this tool
Make sure kittingClasses.owl, kittingInstances_ir.owl, and soap.owl are in the same directory as this tool

9.13 src/ontology/Ontology.java File Reference**Classes**

- class [ontology.Ontology](#)

Packages

- package [ontology](#)

9.14 src/orderingconstruct/AnyOrder.java File Reference**Classes**

- class [orderingconstruct.AnyOrder](#)
A set of state relationships that must all occur in any order.

Packages

- package [orderingconstruct](#)
Formal mechanism to allow an ordering of state relationships to represent an intention.

9.15 src/orderingconstruct/Count.java File Reference**Classes**

- class [orderingconstruct.Count](#)
A state relationship that must be present multiple times.

Packages

- package [orderingconstruct](#)
Formal mechanism to allow an ordering of state relationships to represent an intention.

9.16 src/orderingconstruct/Exist.java File Reference

Classes

- class [orderingconstruct.Exist](#)
A state relationship that must exist.

Packages

- package [orderingconstruct](#)
Formal mechanism to allow an ordering of state relationships to represent an intention.

9.17 src/orderingconstruct/OrderedList.java File Reference

Classes

- class [orderingconstruct.OrderedList](#)

Packages

- package [orderingconstruct](#)
Formal mechanism to allow an ordering of state relationships to represent an intention.

9.18 src/orderingconstruct/package-info.java File Reference

Packages

- package [orderingconstruct](#)
Formal mechanism to allow an ordering of state relationships to represent an intention.

9.19 src/tools/package-info.java File Reference

Packages

- package [tools](#)

9.20 src/treecheckbox/package-info.java File Reference

Packages

- package [treecheckbox](#)

9.21 src/predicate/Predicate.java File Reference

Classes

- class [predicate.Predicate](#)

Packages

- package [predicate](#)

9.22 src/tools/Configuration.java File Reference

Classes

- class [tools.Configuration](#)

Packages

- package [tools](#)

9.23 src/tools/FileOperator.java File Reference

Classes

- class [tools.FileOperator](#)

Packages

- package [tools](#)

9.24 src/tools/IntFilter.java File Reference

Classes

- class [tools.IntFilter](#)

Packages

- package [tools](#)

9.25 src/treecheckbox/CheckTreeCellRenderer.java File Reference**Classes**

- class [treecheckbox.CheckTreeCellRenderer](#)

Packages

- package [treecheckbox](#)

9.26 src/treecheckbox/CheckTreeManager.java File Reference**Classes**

- class [treecheckbox.CheckTreeManager](#)

Packages

- package [treecheckbox](#)

9.27 src/treecheckbox/CheckTreeSelectionModel.java File Reference**Classes**

- class [treecheckbox.CheckTreeSelectionModel](#)

Packages

- package [treecheckbox](#)

9.28 src/treecheckbox/TreeExample.java File Reference

Classes

- class [treecheckbox.TreeExample](#)

Packages

- package [treecheckbox](#)

9.29 src/treecheckbox/TristateCheckBox.java File Reference

Classes

- class [treecheckbox.TristateCheckBox](#)
- class [treecheckbox.TristateCheckBox.TristateDecorator](#)

Packages

- package [treecheckbox](#)

Index

_sd
 gui::MainFrame, 80
 actionPerformed
 gui::MainFrame, 78
 gui::MainFrame::DisplayMetrics, 45
 gui::OntologyChooser, 110
 gui::OptionFrame::PlanComboBoxListener,
 122
 add
 gui::OptionFrame, 115
 addActionListener
 treecheckbox::TristateCheckBox::TristateDecorator,
 132
 addChangeListener
 treecheckbox::TristateCheckBox::TristateDecorator,
 132
 addChart
 gui::DemoPanel, 44
 addChildPaths
 treecheckbox::CheckTreeManager, 28
 addComponentsToPane
 gui::OptionFrame, 115
 addCountToList
 orderingconstruct::AnyOrder, 18
 addItemListener
 treecheckbox::TristateCheckBox::TristateDecorator,
 132
 addMouseListener
 treecheckbox::TristateCheckBox, 129
 addSelectionPaths
 treecheckbox::CheckTreeSelectionModel,
 30
 allKitsButton
 gui::OptionFrame, 115
 anchor
 gui::DrawStringPanel, 47
 angle
 gui::DrawStringPanel, 48
 AnyOrder
 orderingconstruct::AnyOrder, 18
 applyThemeToChart
 gui::MainFrame, 78
 areSiblingsSelected
 treecheckbox::CheckTreeSelectionModel,
 30
 attemptExit
 gui::MainFrame, 78
 buildDetrimentalList
 intention::Intention, 58
 buildIntentionList
 ontology::Ontology, 92
 buildLikelihoodMetricsTree
 ontology::Ontology, 93
 buildIntentionTree
 ontology::Ontology, 93
 buildLikelihoodPanel
 gui::MainFrame, 78
 buildMetricPanel
 gui::MainFrame, 79
 buildObservationList
 ontology::Ontology, 93
 buildStates
 ontology::Ontology, 93
 Chart
 gui::PDFChartTransferable, 120
 chart
 chartLeftPaneColor
 gui::CommonGUIComponents, 33
 chartPanelColor
 gui::CommonGUIComponents, 33
 charts
 gui::DemoPanel, 44
 checkBox
 treecheckbox::CheckTreeCellRenderer,
 27
 CheckTreeCellRenderer
 treecheckbox::CheckTreeCellRenderer,
 27

- CheckTreeManager
 - treecheckbox::CheckTreeManager, [28](#)
- CheckTreeSelectionModel
 - treecheckbox::CheckTreeSelectionModel, [30](#)
- choose
 - ontology::Ontology, [93](#)
- chooseTest
 - ontology::Ontology, [93](#)
- cleanDataPropertyInteger
 - ontology::Ontology, [94](#)
- cleanIRI
 - ontology::Ontology, [94](#)
- colors
 - gui::Chart::CustomRenderer, [40](#)
 - gui::Chart::CustomRendererLine, [42](#)
- compute_SR_all_s
 - ontology::Ontology, [94](#)
- compute_SR_i_r_s
 - ontology::Ontology, [94](#)
- compute_sum_observation
 - ontology::Ontology, [94](#)
- compute_sum_part_type
 - ontology::Ontology, [94](#)
- computeLikelihood
 - ontology::Ontology, [95](#)
- computeMetricAM1
 - ontology::Ontology, [95](#)
- computeMetricAM2
 - ontology::Ontology, [96](#)
- computeMetricAM3
 - ontology::Ontology, [96](#)
- computeMetricAM4
 - ontology::Ontology, [97](#)
- computeMetricAM5
 - ontology::Ontology, [97](#)
- computeMetricMM1
 - ontology::Ontology, [98](#)
- computeMetricsInformation
 - ontology::Ontology, [98](#)
- computeObservationLikelihood
 - ontology::Ontology, [99](#)
- computePercentComplete
 - ontology::Ontology, [99](#)
- computePercentProductive
 - ontology::Ontology, [99](#)
- computeProbabilityFromObservation
 - ontology::Ontology, [100](#)
- computeProceduresForAM5
 - ontology::Ontology, [100](#)
- contentPane
 - gui::OptionFrame, [115](#)
- copyToClipboard
 - gui::MainFrame, [79](#)
- Count
 - orderingconstruct::Count, [37](#)
- CREATE_WINDOW
 - gui::OptionFrame, [116](#)
- createAndShowGUI
 - gui::OntologyChooser, [110](#)
 - gui::OptionFrame, [115](#)
- createAndUpdateConfigFile
 - gui::OptionFrame, [115](#)
- createButtonFromTemplate
 - gui::OptionFrame, [115](#)
- createChart_likelihood
 - gui::Chart, [23](#)
- createChart_metrics
 - gui::Chart, [23](#)
- createContent
 - gui::MainFrame, [79](#)
- createImageIcon
 - gui::OntologyChooser, [110](#)
- createLikelihoodChartPanel
 - gui::MainFrame, [79](#)
- createLikelihoodDataset
 - gui::Chart, [23](#)
- createMenuBar
 - gui::MainFrame, [79](#)
- createMetricsChartPanel
 - gui::MainFrame, [79](#)
- createMetricsDataset
 - gui::Chart, [23](#)
- createPopupMenu
 - gui::OptionFrame, [115](#)
- CustomRenderer
 - gui::Chart::CustomRenderer, [40](#)
- CustomRendererLine
 - gui::Chart::CustomRendererLine, [42](#)
- DEFAULT_ICON
 - gui::OptionFrame, [116](#)
- delegate
 - treecheckbox::CheckTreeCellRenderer, [27](#)
- DemoPanel
 - gui::DemoPanel, [44](#)
- DocumentFilter, [45](#)
- DrawStringPanel
 - gui::DrawStringPanel, [47](#)

- editorPane
 - gui::MainFrame, 80
- enabler
 - main::Launcher, 75
- Exist
 - orderingconstruct::Exist, 50
- EXIT_COMMAND
 - gui::MainFrame, 80
- exportToCSV
 - gui::MainFrame, 79
- exportToPDF
 - gui::MainFrame, 79
- fc
 - gui::OntologyChooser, 110
- FILE_ICON
 - gui::OptionFrame, 116
- FileOperator
 - tools::FileOperator, 53
- findFilesInDirectory
 - gui::OptionFrame, 115
- font
 - gui::DrawStringPanel, 48
- get_AM1_Weight
 - intention::Metric, 82
- get_AM2_Weight
 - intention::Metric, 82
- get_AM3_Weight
 - intention::Metric, 83
- get_AM4_Weight
 - intention::Metric, 83
- get_AM5_Weight
 - intention::Metric, 83
- get_MM1_Weight
 - intention::Metric, 83
- getActionCommand
 - treecheckbox::TristateCheckBox::TristateCheckBox, 132
- getAllCheckedPaths
 - treecheckbox::CheckTreeManager, 29
- getAnyOrder
 - orderingconstruct::OrderedList, 118
- getCharts
 - gui::DemoPanel, 44
- getChartTitle
 - gui::Chart, 23
- getCountList
 - orderingconstruct::AnyOrder, 19
- getDescendants
 - treecheckbox::CheckTreeManager, 29
- getDetrimentalList
 - intention::Intention, 58
- getExist
 - orderingconstruct::OrderedList, 118
- getFont
 - gui::DrawStringPanel, 47
- getForEachIntentionTheNumberOfPartsForEachType
 - ontology::Ontology, 100
- getIndividual
 - intention::Intention, 58
 - orderingconstruct::AnyOrder, 19
 - orderingconstruct::Count, 37
 - orderingconstruct::Exist, 50
 - orderingconstruct::OrderedList, 118
 - predicate::Predicate, 123
- getIndividualClass
 - ontology::Ontology, 100
- getIndividualClassString
 - ontology::Ontology, 100
- getIntentionName
 - intention::Intention, 59
- getItemPaint
 - gui::Chart::CustomRenderer, 40
 - gui::Chart::CustomRendererLine, 42
- getKitList
 - gui::OptionFrame, 115
- getLegendItems
 - gui::Chart, 23
- getM_am1
 - intention::Intention, 59
- getM_am2
 - intention::Intention, 59
- getM_am3
 - intention::Intention, 59
- getM_am4
 - intention::Intention, 59
- getM_am5
 - intention::Intention, 59
- getM_built_kit
 - intention::Intention, 60
- getM_found_detrimental_SR
 - intention::Intention, 60
- getM_intention_number
 - intention::Intention, 60
- getM_likelihoood_observation
 - intention::Intention, 60
- getM_map_SRirs
 - intention::Intention, 60
- getM_mm1

- intention::Intention, [60](#)
- getM_percentComplete_i_s
 - intention::Intention, [61](#)
- getM_percentProductive_i_s
 - intention::Intention, [61](#)
- getM_probability_kit_observation
 - intention::Intention, [61](#)
- getM_selected_plan
 - intention::Intention, [61](#)
- getM_Si
 - intention::Intention, [61](#)
- getM_SR_i_r_s
 - intention::Intention, [61](#)
- getM_SR_i_s
 - intention::Intention, [62](#)
- getM_SR_Total
 - intention::Intention, [62](#)
- getManager
 - ontology::Ontology, [100](#)
- getMetric
 - gui::OptionFrame, [115](#)
- getMetricsChartTitle
 - gui::Chart, [24](#)
- getMnemonic
 - treecheckbox::TristateCheckBox::TristateDecorator, [132](#)
- getNumberStateRelation
 - intention::Intention, [62](#)
- getOccurence
 - orderingconstruct::Count, [37](#)
- getOccurrence
 - orderingconstruct::Exist, [50](#)
- getOntology
 - ontology::Ontology, [101](#)
- getOntologyPath
 - ontology::Ontology, [101](#)
- getOrderedList
 - intention::Intention, [62](#)
- getPartColor
 - ontology::Ontology, [101](#)
- getPartType
 - ontology::Ontology, [101](#)
- getPath
 - ontology::Ontology, [101](#)
- getPosition
 - orderingconstruct::AnyOrder, [19](#)
 - orderingconstruct::Exist, [50](#)
- getPredicate
 - orderingconstruct::Count, [37](#)
 - orderingconstruct::Exist, [50](#)
- getPreferredSize
 - gui::DrawStringPanel, [47](#)
- getReference
 - predicate::Predicate, [123](#)
- getReferenceObjectClass
 - ontology::Ontology, [101](#)
 - predicate::Predicate, [123](#)
- getRootClass
 - ontology::Ontology, [101](#)
- getSelectedObjects
 - treecheckbox::TristateCheckBox::TristateDecorator, [132](#)
- getSelectionModel
 - treecheckbox::CheckTreeManager, [29](#)
- getSeparator
 - ontology::Ontology, [102](#)
- getState
 - treecheckbox::TristateCheckBox, [129](#)
 - treecheckbox::TristateCheckBox::TristateDecorator, [132](#)
- getStateRelation
 - ontology::Ontology, [102](#)
 - predicate::Predicate, [123](#)
- getStringHead
 - ontology::Ontology, [102](#)
- getStringTail
 - ontology::Ontology, [102](#)
- getSubclasses
 - ontology::Ontology, [102](#)
- getTarget
 - predicate::Predicate, [123](#)
- getTargetObjectClass
 - ontology::Ontology, [102](#)
 - predicate::Predicate, [123](#)
- getTotalNumber
 - orderingconstruct::AnyOrder, [19](#)
 - orderingconstruct::Exist, [50](#)
- getTransferData
 - gui::PDFChartTransferable, [120](#)
- getTransferDataFlavors
 - gui::PDFChartTransferable, [120](#)
- getTreeCellRendererComponent
 - treecheckbox::CheckTreeCellRenderer, [27](#)
- Graphical User Interface, [11](#)
- gui, [13](#)
- gui::Chart, [20](#)
 - Chart, [23](#)
 - createChart_likelihood, [23](#)
 - createChart_metrics, [23](#)

- createLikelihoodDataset, 23
- createMetricsDataset, 23
- getChartTitle, 23
- getLegendItems, 23
- getMetricsChartTitle, 24
- m_colors, 24
- m_LH_Chart_Title, 25
- m_LH_chartPanel, 25
- m_LH_Dataset, 25
- m_Metric_Chart_Title, 25
- m_Metric_chartPanel, 25
- m_Metric_Dataset, 25
- m_tmp_LH_ChartPanel, 25
- m_tmp_Metric_ChartPanel, 25
- setChartTitle, 24
- setMetricsChartTitle, 24
- updateChart_likelihood, 24
- updateChart_metrics, 24
- gui::Chart::CustomRenderer, 39
 - colors, 40
 - CustomRenderer, 40
 - getItemPaint, 40
 - serialVersionUID, 41
- gui::Chart::CustomRendererLine, 41
 - colors, 42
 - CustomRendererLine, 42
 - getItemPaint, 42
 - serialVersionUID, 42
- gui::CommonGUIComponents, 31
 - chartLeftPaneColor, 33
 - chartPanelColor, 33
 - intentionColor1, 33
 - intentionColor10, 33
 - intentionColor2, 33
 - intentionColor3, 33
 - intentionColor4, 33
 - intentionColor5, 33
 - intentionColor6, 34
 - intentionColor7, 34
 - intentionColor8, 34
 - intentionColor9, 34
 - JFreeChartBackground, 34
 - JTabbedPaneColor, 34
 - m_legendFont, 34
 - m_part_green, 34
 - m_part_orange, 34
 - m_part_yellow, 34
 - m_state, 34
 - m_stateRelationFont, 34
 - m_titleFont, 34
 - menuBarColor, 34
 - state_color, 34
 - tabColor, 34
- gui::DemoPanel, 43
 - addChart, 44
 - charts, 44
 - DemoPanel, 44
 - getCharts, 44
- gui::DrawStringPanel, 46
 - anchor, 47
 - angle, 48
 - DrawStringPanel, 47
 - font, 48
 - getFont, 47
 - getPreferredSize, 47
 - paintComponent, 47
 - PREFERRED_SIZE, 48
 - rotate, 48
 - rotationAnchor, 48
 - setAnchor, 47
 - setAngle, 47
 - setFont, 47
 - setRotationAnchor, 47
 - text, 48
- gui::MainFrame, 76
 - _sd, 80
 - actionPerformed, 78
 - applyThemeToChart, 78
 - attemptExit, 78
 - buildLikelihoodPanel, 78
 - buildMetricPanel, 79
 - copyToClipboard, 79
 - createContent, 79
 - createLikelihoodChartPanel, 79
 - createMenuBar, 79
 - createMetricsChartPanel, 79
 - editorPane, 80
 - EXIT_COMMAND, 80
 - exportToCSV, 79
 - exportToPDF, 79
 - lh_Button_ActionPerformed, 79
 - likelihood_bottomRightPane, 80
 - likelihood_chartContainer, 80
 - likelihood_displayPanel, 80
 - likelihood_stateContainer, 80
 - likelihoodLeft_JTextPane, 80
 - m_csvitem, 80
 - m_LH_Left_Panel, 80
 - m_LH_ScrollPane, 80
 - m_LH_Selection_Button, 80

- m_LH_SplitPane, 80
- m_likelihood_barchart, 80
- m_likelihoodCheckTreeManager, 80
- m_likelihoodTree, 80
- m_metricCheckTreeManager, 80
- m_metrics_barchart, 81
- m_metrics_jscrollpane, 81
- m_metricsSelectionButton, 81
- m_metricTree, 81
- MainFrame, 78
- metrics_chartContainer, 81
- metrics_jsplitpane, 81
- metrics_statePane, 81
- metricsLeft_JPanel, 81
- metricsLeft_JScrollPane, 81
- metricsLeft_JTextPane, 81
- saveToCSV, 79
- serialVersionUID, 81
- showErrorMessage, 80
- updateStateRelationPanel, 80
- gui::MainFrame::DisplayMetrics, 44
 - actionPerformed, 45
- gui::OntologyChooser, 109
 - actionPerformed, 110
 - createAndShowGUI, 110
 - createImageIcon, 110
 - fc, 110
 - log, 110
 - newline, 111
 - OntologyChooser, 110
 - openButton, 111
 - saveButton, 111
- gui::OptionFrame, 111
 - add, 115
 - addComponentsToPane, 115
 - allKitsButton, 115
 - contentPane, 115
 - CREATE_WINDOW, 116
 - createAndShowGUI, 115
 - createAndUpdateConfigFile, 115
 - createButtonFromTemplate, 115
 - createPopupMenu, 115
 - DEFAULT_ICON, 116
 - FILE_ICON, 116
 - findFilesInDirectory, 115
 - getKitList, 115
 - getMetric, 115
 - LF_DECORATIONS, 116
 - m_bool_allKits, 116
 - m_browse_instance, 116
 - m_browse_path, 116
 - m_field_AM1, 116
 - m_field_AM2, 116
 - m_field_AM3, 116
 - m_field_AM4, 116
 - m_field_AM5, 116
 - m_frame, 116
 - m_instance_txt_field, 116
 - m_kitComboBox, 116
 - m_metric, 116
 - m_planComboBox, 116
 - m_planStrings, 116
 - m_popupMenu, 116
 - m_save_file_txt_field, 116
 - m_subkitlist, 116
 - m_textArea, 117
 - m_validate, 117
 - m_validate_button, 117
 - NO_DECORATIONS, 117
 - OptionFrame, 115
 - PAINT_ICON, 117
 - picture, 117
 - readConfigFile, 115
 - RIGHT_TO_LEFT, 117
 - setMetric, 115
 - shouldFill, 117
 - shouldWeightX, 117
 - singleKitButton, 117
 - updateConfigFile, 115
 - updateLabel, 115
 - WS_DECORATIONS, 117
- gui::OptionFrame::MouseHandler, 85
 - MouseHandler, 86
 - mousePressed, 86
 - mouseReleased, 86
 - popupMenu, 86
- gui::OptionFrame::PlanComboBoxListener, 121
 - actionPerformed, 122
- gui::PDFChartTransferable, 119
 - chart, 120
 - getTransferData, 120
 - getTransferDataFlavors, 120
 - height, 121
 - isDataFlavorSupported, 120
 - PDFChartTransferable, 120
 - pdfFlavor, 121
 - width, 121
 - writeChartAsPDF, 120
- gui::ProgressBar, 124

- MY_MAXIMUM, 125
- MY_MINIMUM, 125
- pbar, 126
- ProgressBar, 125
- updateBar, 125
- hasProperty
 - ontology::Ontology, 103
- height
 - gui::PDFChartTransferable, 121
- hotspot
 - treecheckbox::CheckTreeManager, 29
- initializeList
 - ontology::Ontology, 103
- input
 - ontology::Ontology, 103
- insertString
 - tools::IntFilter, 73
- Intention
 - intention::Intention, 58
- intention, 13
- Intention Structure, 11
- intention::Intention, 53
 - buildDetrimentalList, 58
 - getDetrimentalList, 58
 - getIndividual, 58
 - getIntentionName, 59
 - getM_am1, 59
 - getM_am2, 59
 - getM_am3, 59
 - getM_am4, 59
 - getM_am5, 59
 - getM_built_kit, 60
 - getM_found_detrimental_SR, 60
 - getM_intention_number, 60
 - getM_likelihood_observation, 60
 - getM_map_SRirs, 60
 - getM_mm1, 60
 - getM_percentComplete_i_s, 61
 - getM_percentProductive_i_s, 61
 - getM_probability_kit_observation, 61
 - getM_selected_plan, 61
 - getM_Si, 61
 - getM_SR_i_r_s, 61
 - getM_SR_i_s, 62
 - getM_SR_Total, 62
 - getNumberStateRelation, 62
 - getOrderedList, 62
 - Intention, 58
 - m_am1, 67
 - m_am2, 68
 - m_am3, 68
 - m_am4, 69
 - m_am5, 69
 - m_anyorder, 69
 - m_built_kit, 70
 - m_detrimental_list, 70
 - m_exist, 70
 - m_found_detrimental_SR, 70
 - m_individual, 70
 - m_intention_name, 70
 - m_intention_number, 70
 - m_intention_orderingConstruct_list, 70
 - m_likelihood_observation, 70
 - m_mm1, 70
 - m_number_state_relation, 71
 - m_orderedlist, 71
 - m_percentComplete_i_s, 71
 - m_percentProductive_i_s, 71
 - m_probability_kit_observation, 71
 - m_selected_plan, 71
 - m_Si, 71
 - m_SR_i_r_s, 72
 - m_SR_i_s, 72
 - m_SR_Total, 72
 - m_SRirs, 72
 - setDetrimentalList, 62
 - setExist, 63
 - setIndividual, 63
 - setIntentionName, 63
 - setM_am1, 63
 - setM_am2, 63
 - setM_am3, 64
 - setM_am4, 64
 - setM_am5, 64
 - setM_built_kit, 64
 - setM_found_detrimental_SR, 64
 - setM_intention_number, 64
 - setM_likelihood_observation, 65
 - setM_map_SRirs, 65
 - setM_mm1, 65
 - setM_percentComplete_i_s, 65
 - setM_percentProductive_i_s, 65
 - setM_probability_kit_observation, 66
 - setM_selected_plan, 66
 - setM_Si, 66
 - setM_SR_i_r_s, 66
 - setM_SR_i_s, 67
 - setM_SR_Total, 67

- setNumberStateRelation, 67
- setOrderedList, 67
- intention::Metric, 81
 - get_AM1_Weight, 82
 - get_AM2_Weight, 82
 - get_AM3_Weight, 83
 - get_AM4_Weight, 83
 - get_AM5_Weight, 83
 - get_MM1_Weight, 83
 - m_AM1_weight, 85
 - m_AM2_weight, 85
 - m_AM3_weight, 85
 - m_AM4_weight, 85
 - m_AM5_weight, 85
 - m_MM1_weight, 85
 - set_AM1_Weight, 83
 - set_AM2_Weight, 84
 - set_AM3_Weight, 84
 - set_AM4_Weight, 84
 - set_AM5_Weight, 84
 - set_MM1_Weight, 84
- intentionColor1
 - gui::CommonGUIComponents, 33
- intentionColor10
 - gui::CommonGUIComponents, 33
- intentionColor2
 - gui::CommonGUIComponents, 33
- intentionColor3
 - gui::CommonGUIComponents, 33
- intentionColor4
 - gui::CommonGUIComponents, 33
- intentionColor5
 - gui::CommonGUIComponents, 33
- intentionColor6
 - gui::CommonGUIComponents, 34
- intentionColor7
 - gui::CommonGUIComponents, 34
- intentionColor8
 - gui::CommonGUIComponents, 34
- intentionColor9
 - gui::CommonGUIComponents, 34
- isArmed
 - treecheckbox::TristateCheckBox::TristateDecorator, 132
- isDataFlavorSupported
 - gui::PDFChartTransferable, 120
- isDescendant
 - treecheckbox::CheckTreeSelectionModel, 31
- isEnabled
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- isFocusTraversable
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- isMac
 - tools::Configuration, 35
- isPartiallySelected
 - treecheckbox::CheckTreeSelectionModel, 31
- isPathSelected
 - treecheckbox::CheckTreeSelectionModel, 31
- isPressed
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- isRollover
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- isSelected
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- isUnix
 - tools::Configuration, 35
- isWindows
 - tools::Configuration, 35
- JFreeChartBackground
 - gui::CommonGUIComponents, 34
- JTabbedPaneColor
 - gui::CommonGUIComponents, 34
- Launcher
 - main::Launcher, 74
- LF_DECORATIONS
 - gui::OptionFrame, 116
- lh_Button_ActionPerformed
 - gui::MainFrame, 79
- likelihood_bottomRightPane
 - gui::MainFrame, 80
- likelihood_chartContainer
 - gui::MainFrame, 80
- likelihood_displayPanel
 - gui::MainFrame, 80
- likelihood_stateContainer
 - gui::MainFrame, 80
- likelihoodLeft_JTextPane
 - gui::MainFrame, 80
- loadFromFile
 - ontology::Ontology, 103

- loadOntologyFromPath
 - ontology::Ontology, 103
- log
 - gui::OntologyChooser, 110
- m_am1
 - intention::Intention, 67
- m_AM1_weight
 - intention::Metric, 85
- m_am2
 - intention::Intention, 68
- m_AM2_weight
 - intention::Metric, 85
- m_am3
 - intention::Intention, 68
- m_AM3_weight
 - intention::Metric, 85
- m_am4
 - intention::Intention, 69
- m_AM4_weight
 - intention::Metric, 85
- m_am5
 - intention::Intention, 69
- m_AM5_weight
 - intention::Metric, 85
- m_anyorder
 - intention::Intention, 69
 - orderingconstruct::OrderedList, 118
- m_bool_allKits
 - gui::OptionFrame, 116
- m_browse_instance
 - gui::OptionFrame, 116
- m_browse_path
 - gui::OptionFrame, 116
- m_built_kit
 - intention::Intention, 70
- m_colors
 - gui::Chart, 24
- m_count_list
 - orderingconstruct::AnyOrder, 20
- m_csvitem
 - gui::MainFrame, 80
- m_datafactory
 - ontology::Ontology, 107
- m_detrimental_list
 - intention::Intention, 70
- m_exist
 - intention::Intention, 70
 - orderingconstruct::OrderedList, 118
- m_field_AM1
 - gui::OptionFrame, 116
- m_field_AM2
 - gui::OptionFrame, 116
- m_field_AM3
 - gui::OptionFrame, 116
- m_field_AM4
 - gui::OptionFrame, 116
- m_field_AM5
 - gui::OptionFrame, 116
- m_found_detrimental_SR
 - intention::Intention, 70
- m_frame
 - gui::OptionFrame, 116
- m_hasCount_Occurrence
 - ontology::Ontology, 107
- m_hasIntention_Name
 - ontology::Ontology, 107
- m_hasIntention_OrderingConstruct
 - ontology::Ontology, 107
- m_hasOrderingConstruct_OrderingConstruct
 - ontology::Ontology, 107
- m_hasOrderingConstruct_Position
 - ontology::Ontology, 107
- m_hasOrderingConstruct_Predicate
 - ontology::Ontology, 107
- m_hasPredicate_ReferenceObject
 - ontology::Ontology, 107
- m_hasPredicate_TargetObject
 - ontology::Ontology, 107
- m_individual
 - intention::Intention, 70
 - orderingconstruct::AnyOrder, 20
 - orderingconstruct::Count, 38
 - orderingconstruct::Exist, 51
 - orderingconstruct::OrderedList, 118
 - predicate::Predicate, 123
- m_instance_txt_field
 - gui::OptionFrame, 116
- m_intention_list
 - ontology::Ontology, 108
- m_intention_name
 - intention::Intention, 70
- m_intention_number
 - intention::Intention, 70
- m_intention_orderingConstruct_list
 - intention::Intention, 70
- m_kitComboBox
 - gui::OptionFrame, 116
- m_kitToBuild
 - ontology::Ontology, 108

- m_legendFont
 - gui::CommonGUIComponents, 34
- m_LH_Chart_Title
 - gui::Chart, 25
- m_LH_chartPanel
 - gui::Chart, 25
- m_LH_Dataset
 - gui::Chart, 25
- m_LH_Left_Panel
 - gui::MainFrame, 80
- m_LH_ScrollPane
 - gui::MainFrame, 80
- m_LH_Selection_Button
 - gui::MainFrame, 80
- m_LH_SplitPane
 - gui::MainFrame, 80
- m_likelihood_barchart
 - gui::MainFrame, 80
- m_likelihood_observation
 - intention::Intention, 70
- m_likelihoodCheckTreeManager
 - gui::MainFrame, 80
- m_likelihoodTree
 - gui::MainFrame, 80
- m_manager
 - ontology::Ontology, 108
- m_metric
 - gui::OptionFrame, 116
- m_Metric_Chart_Title
 - gui::Chart, 25
- m_Metric_chartPanel
 - gui::Chart, 25
- m_Metric_Dataset
 - gui::Chart, 25
- m_metricCheckTreeManager
 - gui::MainFrame, 80
- m_metrics_barchart
 - gui::MainFrame, 81
- m_metrics_jscrollpane
 - gui::MainFrame, 81
- m_metricsSelectionButton
 - gui::MainFrame, 81
- m_metricTree
 - gui::MainFrame, 81
- m_mm1
 - intention::Intention, 70
- m_MM1_weight
 - intention::Metric, 85
- m_number_state_relation
 - intention::Intention, 71
- m_observation_list
 - ontology::Ontology, 108
- m_occurrence
 - orderingconstruct::Count, 38
 - orderingconstruct::Exist, 51
- m_ontology
 - ontology::Ontology, 108
- m_ontology_IRI
 - ontology::Ontology, 108
- m_orderedlist
 - intention::Intention, 71
- m_OS
 - tools::Configuration, 35
- m_part_green
 - gui::CommonGUIComponents, 34
- m_part_orange
 - gui::CommonGUIComponents, 34
- m_part_type_number_for_each_intention_
 - list
 - ontology::Ontology, 108
- m_part_yellow
 - gui::CommonGUIComponents, 34
- m_path
 - ontology::Ontology, 108
- m_percentComplete_i_s
 - intention::Intention, 71
- m_percentProductive_i_s
 - intention::Intention, 71
- m_planComboBox
 - gui::OptionFrame, 116
- m_planStrings
 - gui::OptionFrame, 116
- m_planToBuild
 - ontology::Ontology, 108
- m_popupMenu
 - gui::OptionFrame, 116
- m_position
 - orderingconstruct::AnyOrder, 20
 - orderingconstruct::Exist, 52
- m_predicate
 - orderingconstruct::Count, 39
 - orderingconstruct::Exist, 52
- m_probability_kit_observation
 - intention::Intention, 71
- m_progress_bar
 - ontology::Ontology, 108
- m_progress_frame
 - ontology::Ontology, 108
- m_reasoner
 - ontology::Ontology, 108

- m_reference
 - predicate::Predicate, 124
- m_reference_class
 - predicate::Predicate, 124
- m_s_ontopath
 - ontology::Ontology, 108
- m_s_rootClass
 - ontology::Ontology, 108
- m_s_subClass
 - ontology::Ontology, 108
- m_save_file_txt_field
 - gui::OptionFrame, 116
- m_selected_plan
 - intention::Intention, 71
- m_SEPARATOR
 - ontology::Ontology, 108
- m_Si
 - intention::Intention, 71
- m_SR_i_r_s
 - intention::Intention, 72
- m_SR_i_s
 - intention::Intention, 72
- m_SR_Total
 - intention::Intention, 72
- m_SRirs
 - intention::Intention, 72
- m_state
 - gui::CommonGUIComponents, 34
- m_staterelation
 - predicate::Predicate, 124
- m_stateRelationFont
 - gui::CommonGUIComponents, 34
- m_subkitlist
 - gui::OptionFrame, 116
- m_target
 - predicate::Predicate, 124
- m_target_class
 - predicate::Predicate, 124
- m_textArea
 - gui::OptionFrame, 117
- m_titleFont
 - gui::CommonGUIComponents, 34
- m_tmp_LH_ChartPanel
 - gui::Chart, 25
- m_tmp_Metric_ChartPanel
 - gui::Chart, 25
- m_total_number
 - orderingconstruct::AnyOrder, 20
 - orderingconstruct::Exist, 52
- m_validate
 - gui::OptionFrame, 117
- m_validate_button
 - gui::OptionFrame, 117
- main, 13
 - main::Launcher, 75
- main::Launcher, 74
 - enabler, 75
 - Launcher, 74
 - main, 75
- MainFrame
 - gui::MainFrame, 78
- matchDetrimentalStateRelationToIntention
 - ontology::Ontology, 103
- matchStateRelationToIntention
 - ontology::Ontology, 103
- menuBarColor
 - gui::CommonGUIComponents, 34
- metrics_chartContainer
 - gui::MainFrame, 81
- metrics_jsplitpane
 - gui::MainFrame, 81
- metrics_statePane
 - gui::MainFrame, 81
- metricsLeft_JPanel
 - gui::MainFrame, 81
- metricsLeft_JScrollPane
 - gui::MainFrame, 81
- metricsLeft_JTextPane
 - gui::MainFrame, 81
- model
 - treecheckbox::CheckTreeSelectionModel, 31
 - treecheckbox::TristateCheckBox, 130
- mouseClicked
 - treecheckbox::CheckTreeManager, 29
- MouseHandler
 - gui::OptionFrame::MouseHandler, 86
- mousePressed
 - gui::OptionFrame::MouseHandler, 86
- mouseReleased
 - gui::OptionFrame::MouseHandler, 86
- MY_MAXIMUM
 - gui::ProgressBar, 125
- MY_MINIMUM
 - gui::ProgressBar, 125
- newline
 - gui::OntologyChooser, 111
- nextState

- treecheckbox::TristateCheckBox::TristateDecomposeStringHead, 102
- 133
- NO_DECORATIONS
 - gui::OptionFrame, 117
- Ontology, 86
 - ontology::Ontology, 91
- ontology, 14
- ontology::Ontology, 87
 - buildIntentionList, 92
 - buildIntentionMetricsTree, 93
 - buildIntentionTree, 93
 - buildObservationList, 93
 - buildStates, 93
 - choose, 93
 - chooseTest, 93
 - cleanDataPropertyInteger, 94
 - cleanIRI, 94
 - compute_SR_all_s, 94
 - compute_SR_i_r_s, 94
 - compute_sum_observation, 94
 - compute_sum_part_type, 94
 - computeLikelihood, 95
 - computeMetricAM1, 95
 - computeMetricAM2, 96
 - computeMetricAM3, 96
 - computeMetricAM4, 97
 - computeMetricAM5, 97
 - computeMetricMM1, 98
 - computeMetricsInformation, 98
 - computeObservationLikelihood, 99
 - computePercentComplete, 99
 - computePercentProductive, 99
 - computeProbabilityFromObservation, 100
 - computeProceduresForAM5, 100
 - getForEachIntentionTheNumberOfParts-ForEachType, 100
 - getIndividualClass, 100
 - getIndividualClassString, 100
 - getManager, 100
 - getOntology, 101
 - getOntologyPath, 101
 - getPartColor, 101
 - getPartType, 101
 - getPath, 101
 - getReferenceObjectClass, 101
 - getRootClass, 101
 - getSeparator, 102
 - getStateRelation, 102
 - getStringHead, 102
 - getStringTail, 102
 - getSubclasses, 102
 - getTargetObjectClass, 102
 - hasProperty, 103
 - initializeList, 103
 - input, 103
 - loadFromFile, 103
 - loadOntologyFromPath, 103
 - m_datafactory, 107
 - m_hasCount_Occurrence, 107
 - m_hasIntention_Name, 107
 - m_hasIntention_OrderingConstruct, 107
 - m_hasOrderingConstruct_OrderingConstruct, 107
 - m_hasOrderingConstruct_Position, 107
 - m_hasOrderingConstruct_Predicate, 107
 - m_hasPredicate_ReferenceObject, 107
 - m_hasPredicate_TargetObject, 107
 - m_intention_list, 108
 - m_kitToBuild, 108
 - m_manager, 108
 - m_observation_list, 108
 - m_ontology, 108
 - m_ontology_IRI, 108
 - m_part_type_number_for_each_intention_list, 108
 - m_path, 108
 - m_planToBuild, 108
 - m_progress_bar, 108
 - m_progress_frame, 108
 - m_reasoner, 108
 - m_s_ontopath, 108
 - m_s_rootClass, 108
 - m_s_subClass, 108
 - m_SEPARATOR, 108
 - matchDetrimentalStateRelationToIntention, 103
 - matchStateRelationToIntention, 103
 - Ontology, 91
 - parseIntention, 104
 - printProperties, 104
 - readForEachIntentionTheNumberOfParts-ForEachType, 104
 - readIntentionList, 104
 - readObservationList, 104
 - removeDuplicates, 104
 - roundTwoDecimals, 105
 - searchList, 105
 - setDataFactory, 105

- setInstanceFilePath, 105
- setManager, 105
- setOntology, 105
- setPath, 105
- setReasoner, 106
- setRootClass, 106
- showDialogBox, 106
- sortIntentionList, 106
- updateForEachIntentionTheNumberOfPartsForEachType, 106
- updateMainFrame, 106
- updateObservationList, 107
- OntologyChooser
 - gui::OntologyChooser, 110
- openButton
 - gui::OntologyChooser, 111
- openFile
 - tools::FileOperator, 53
- OptionFrame
 - gui::OptionFrame, 115
- OrderedList
 - orderingconstruct::OrderedList, 118
- orderedlist_l
 - orderingconstruct::OrderedList, 119
- orderedlist_name
 - orderingconstruct::OrderedList, 119
- orderingconstruct, 14
- orderingconstruct::AnyOrder, 17
 - addCountToList, 18
 - AnyOrder, 18
 - getCountList, 19
 - getIndividual, 19
 - getPosition, 19
 - getTotalNumber, 19
 - m_count_list, 20
 - m_individual, 20
 - m_position, 20
 - m_total_number, 20
 - setIndividual, 19
 - setPosition, 19
 - setTotalNumber, 20
- orderingconstruct::Count, 36
 - Count, 37
 - getIndividual, 37
 - getOccurrence, 37
 - getPredicate, 37
 - m_individual, 38
 - m_occurrence, 38
 - m_predicate, 39
 - setIndividual, 38
 - setOccurrence, 38
 - setPredicate, 38
- orderingconstruct::Exist, 48
 - Exist, 50
 - getIndividual, 50
 - getOccurrence, 50
 - getPosition, 50
 - getPredicate, 50
 - getTotalNumber, 50
 - m_individual, 51
 - m_occurrence, 51
 - m_position, 52
 - m_predicate, 52
 - m_total_number, 52
 - setIndividual, 50
 - setOccurrence, 51
 - setPosition, 51
 - setPredicate, 51
 - setTotalNumber, 51
- orderingconstruct::OrderedList, 117
 - getAnyOrder, 118
 - getExist, 118
 - getIndividual, 118
 - m_anyorder, 118
 - m_exist, 118
 - m_individual, 118
 - OrderedList, 118
 - orderedlist_l, 119
 - orderedlist_name, 119
 - setAnyOrder, 118
 - setExist, 118
 - setIndividual, 118
- other
 - treecheckbox::TristateCheckBox::TristateDecorator, 134
- PAINT_ICON
 - gui::OptionFrame, 117
- paintComponent
 - gui::DrawStringPanel, 47
- parseIntention
 - ontology::Ontology, 104
- pbar
 - gui::ProgressBar, 126
- PDFChartTransferable
 - gui::PDFChartTransferable, 120
- pdfFlavor
 - gui::PDFChartTransferable, 121
- picture
 - gui::OptionFrame, 117

- popupMenu
 - gui::OptionFrame::MouseHandler, 86
- Predicate
 - predicate::Predicate, 123
- predicate, 15
- predicate::Predicate, 122
 - getIndividual, 123
 - getReference, 123
 - getReferenceObjectClass, 123
 - getStateRelation, 123
 - getTarget, 123
 - getTargetObjectClass, 123
 - m_individual, 123
 - m_reference, 124
 - m_reference_class, 124
 - m_staterelation, 124
 - m_target, 124
 - m_target_class, 124
 - Predicate, 123
 - setIndividual, 123
 - setReference, 123
 - setReferenceObjectClass, 123
 - setStateRelation, 123
 - setTarget, 123
 - setTargetObjectClass, 123
- PREFERRED_SIZE
 - gui::DrawStringPanel, 48
- printProperties
 - ontology::Ontology, 104
- ProgressBar
 - gui::ProgressBar, 125
- readConfigFile
 - gui::OptionFrame, 115
- readForEachIntentionTheNumberOfPartsForEachType
 - ontology::Ontology, 104
- readIntentionList
 - ontology::Ontology, 104
- readLines
 - tools::FileOperator, 53
- readObservationList
 - ontology::Ontology, 104
- remove
 - tools::IntFilter, 73
- removeActionListener
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- removeChangeListener
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- removeDuplicates
 - ontology::Ontology, 104
- removeItemListener
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- removeSelectionPaths
 - treecheckbox::CheckTreeSelectionModel, 31
- replace
 - tools::IntFilter, 73
- RIGHT_TO_LEFT
 - gui::OptionFrame, 117
- rotate
 - gui::DrawStringPanel, 48
- rotationAnchor
 - gui::DrawStringPanel, 48
- roundTwoDecimals
 - ontology::Ontology, 105
- saveAllKitsData
 - tools::FileOperator, 53
- saveButton
 - gui::OntologyChooser, 111
- saveToCSV
 - gui::MainFrame, 79
- scrollPane
 - treecheckbox::TreeExample, 127
- searchList
 - ontology::Ontology, 105
- selectionModel
 - treecheckbox::CheckTreeCellRenderer, 27
 - treecheckbox::CheckTreeManager, 29
- serialVersionUID
- TypeChart::CustomRenderer, 41
 - gui::Chart::CustomRendererLine, 42
 - gui::MainFrame, 81
 - treecheckbox::TreeExample, 127
- set_AM1_Weight
 - intention::Metric, 83
- set_AM2_Weight
 - intention::Metric, 84
- set_AM3_Weight
 - intention::Metric, 84
- set_AM4_Weight
 - intention::Metric, 84
- set_AM5_Weight
 - intention::Metric, 84
- set_AM10_Weight
 - intention::Metric, 84

- setActionCommand
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- setAnchor
 - gui::DrawStringPanel, 47
- setAngle
 - gui::DrawStringPanel, 47
- setAnyOrder
 - orderingconstruct::OrderedList, 118
- setArmed
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- setChartTitle
 - gui::Chart, 24
- setDataFactory
 - ontology::Ontology, 105
- setDetrimentalList
 - intention::Intention, 62
- setEnabled
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- setExist
 - intention::Intention, 63
 - orderingconstruct::OrderedList, 118
- setFont
 - gui::DrawStringPanel, 47
- setGroup
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- setIndividual
 - intention::Intention, 63
 - orderingconstruct::AnyOrder, 19
 - orderingconstruct::Count, 38
 - orderingconstruct::Exist, 50
 - orderingconstruct::OrderedList, 118
 - predicate::Predicate, 123
- setInstanceFilePath
 - ontology::Ontology, 105
- setIntentionName
 - intention::Intention, 63
- setM_am1
 - intention::Intention, 63
- setM_am2
 - intention::Intention, 63
- setM_am3
 - intention::Intention, 64
- setM_am4
 - intention::Intention, 64
- setM_am5
 - intention::Intention, 64
- setM_built_kit
 - intention::Intention, 64
- setM_found_detrimental_SR
 - intention::Intention, 64
- setM_intention_number
 - intention::Intention, 64
- setM_likelihood_observation
 - intention::Intention, 65
- setM_map_SRirs
 - intention::Intention, 65
- setM_percentComplete_i_s
 - intention::Intention, 65
- setM_percentProductive_i_s
 - intention::Intention, 65
- setM_probability_kit_observation
 - intention::Intention, 66
- setM_selected_plan
 - intention::Intention, 66
- setM_Si
 - intention::Intention, 66
- setM_SR_i_r_s
 - intention::Intention, 66
- setM_SR_i_s
 - intention::Intention, 67
- setM_SR_Total
 - intention::Intention, 67
- setManager
 - ontology::Ontology, 105
- setMetric
 - gui::OptionFrame, 115
- setMetricsChartTitle
 - gui::Chart, 24
- setMnemonic
 - treecheckbox::TristateCheckBox::TristateDecorator, 133
- setNumberStateRelation
 - intention::Intention, 67
- setOccurrence
 - orderingconstruct::Count, 38
 - orderingconstruct::Exist, 51
- setOntology
 - ontology::Ontology, 105
- setOrderedList
 - intention::Intention, 67
- setPath
 - ontology::Ontology, 105
- setPosition
 - orderingconstruct::AnyOrder, 19

- orderingconstruct::Exist, [51](#)
- setPredicate
 - orderingconstruct::Count, [38](#)
 - orderingconstruct::Exist, [51](#)
- setPressed
 - treecheckbox::TristateCheckBox::TristateCheckBox, [133](#)
- setReasoner
 - ontology::Ontology, [106](#)
- setReference
 - predicate::Predicate, [123](#)
- setReferenceObjectClass
 - predicate::Predicate, [123](#)
- setRollover
 - treecheckbox::TristateCheckBox::TristateCheckBox, [133](#)
- setRootClass
 - ontology::Ontology, [106](#)
- setRotationAnchor
 - gui::DrawStringPanel, [47](#)
- setSelected
 - treecheckbox::TristateCheckBox::TristateCheckBox, [133](#)
- setSelectionPaths
 - treecheckbox::CheckTreeSelectionModel, [31](#)
- setState
 - treecheckbox::TristateCheckBox, [129](#)
 - treecheckbox::TristateCheckBox::TristateCheckBox, [134](#)
- setStateRelation
 - predicate::Predicate, [123](#)
- setTarget
 - predicate::Predicate, [123](#)
- setTargetObjectClass
 - predicate::Predicate, [123](#)
- setTotalNumber
 - orderingconstruct::AnyOrder, [20](#)
 - orderingconstruct::Exist, [51](#)
- shouldFill
 - gui::OptionFrame, [117](#)
- shouldWeightX
 - gui::OptionFrame, [117](#)
- showDialogBox
 - ontology::Ontology, [106](#)
- showErrorMessage
 - gui::MainFrame, [80](#)
- singleKitButton
 - gui::OptionFrame, [117](#)
- sortIntentionList
 - ontology::Ontology, [106](#)
- src/gui/Chart.java, [135](#)
- src/gui/CommonGUIComponents.java, [135](#)
- src/gui/DemoPanel.java, [135](#)
- src/gui/DrawStringPanel.java, [136](#)
- src/gui/MainFrame.java, [136](#)
- src/gui/OntologyChooser.java, [136](#)
- src/gui/OptionFrame.java, [137](#)
- src/gui/PDFChartTransferable.java, [137](#)
- src/gui/ProgressBar.java, [137](#)
- src/intention/Intention.java, [137](#)
- src/intention/Metric.java, [138](#)
- src/main/Launcher.java, [138](#)
- src/ontology/Ontology.java, [139](#)
- src/orderingconstruct/AnyOrder.java, [139](#)
- src/orderingconstruct/Count.java, [139](#)
- src/orderingconstruct/Exist.java, [140](#)
- src/orderingconstruct/OrderedList.java, [140](#)
- src/orderingconstruct/package-info.java, [140](#)
- src/predicate/Predicate.java, [141](#)
- src/tools/Configuration.java, [141](#)
- src/tools/FileOperator.java, [141](#)
- src/tools/IntFilter.java, [141](#)
- src/tools/package-info.java, [140](#)
- src/treecheckbox/CheckTreeCellRenderer.java, [142](#)
- src/treecheckbox/CheckTreeManager.java, [142](#)
- src/treecheckbox/CheckTreeSelectionModel.java, [142](#)
- src/treecheckbox/package-info.java, [141](#)
- src/treecheckbox/TreeExample.java, [143](#)
- src/treecheckbox/TristateCheckBox.java, [143](#)
- state_color
 - gui::CommonGUIComponents, [34](#)
- tabColor
 - gui::CommonGUIComponents, [34](#)
- test
 - tools::IntFilter, [73](#)
- text
 - gui::DrawStringPanel, [48](#)
- toggleRemoveSelection
 - treecheckbox::CheckTreeSelectionModel, [31](#)
- tools, [15](#)
- tools::Configuration, [35](#)
- isMac, [35](#)
- isUnix, [35](#)
- isWindows, [35](#)

- m_OS, 35
- tools::FileOperator, 52
 - FileOperator, 53
 - openFile, 53
 - readLines, 53
 - saveAllKitsData, 53
 - translatePlanToStateRelation, 53
- tools::IntFilter, 72
 - insertString, 73
 - remove, 73
 - replace, 73
 - test, 73
- topPanel
 - treecheckbox::TreeExample, 127
- translatePlanToStateRelation
 - tools::FileOperator, 53
- tree
 - treecheckbox::CheckTreeManager, 29
 - treecheckbox::TreeExample, 127
- treecheckbox, 16
- treecheckbox::CheckTreeCellRenderer, 26
 - checkBox, 27
 - CheckTreeCellRenderer, 27
 - delegate, 27
 - getTreeCellRendererComponent, 27
 - selectionModel, 27
- treecheckbox::CheckTreeManager, 27
 - addChildPaths, 28
 - CheckTreeManager, 28
 - getAllCheckedPaths, 29
 - getDescendants, 29
 - getSelectionModel, 29
 - hotspot, 29
 - mouseClicked, 29
 - selectionModel, 29
 - tree, 29
 - valueChanged, 29
- treecheckbox::CheckTreeSelectionModel, 29
 - addSelectionPaths, 30
 - areSiblingsSelected, 30
 - CheckTreeSelectionModel, 30
 - isDescendant, 31
 - isPartiallySelected, 31
 - isPathSelected, 31
 - model, 31
 - removeSelectionPaths, 31
 - setSelectionPaths, 31
 - toggleRemoveSelection, 31
- treecheckbox::TreeExample, 126
 - scrollPane, 127
- serialVersionUID, 127
- topPanel, 127
- tree, 127
 - TreeExample, 127
- treecheckbox::TristateCheckBox, 128
 - addMouseListener, 129
 - getState, 129
 - model, 130
 - setState, 129
 - TristateCheckBox, 129
- treecheckbox::TristateCheckBox::TristateDecorator, 130
 - addActionListener, 132
 - addChangeListener, 132
 - addItemListener, 132
 - getActionCommand, 132
 - getMnemonic, 132
 - getSelectedObjects, 132
 - getState, 132
 - isArmed, 132
 - isEnabled, 133
 - isFocusTraversable, 133
 - isPressed, 133
 - isRollover, 133
 - isSelected, 133
 - nextState, 133
 - other, 134
 - removeActionListener, 133
 - removeChangeListener, 133
 - removeItemListener, 133
 - setActionCommand, 133
 - setArmed, 133
 - setEnabled, 133
 - setGroup, 133
 - setMnemonic, 133
 - setPressed, 133
 - setRollover, 133
 - setSelected, 133
 - setState, 134
 - TristateDecorator, 132
- TreeExample
 - treecheckbox::TreeExample, 127
- TristateCheckBox
 - treecheckbox::TristateCheckBox, 129
- TristateDecorator
 - treecheckbox::TristateCheckBox::TristateDecorator, 132
- updateBar
 - gui::ProgressBar, 125

- updateChart_likelihood
 - gui::Chart, [24](#)
- updateChart_metrics
 - gui::Chart, [24](#)
- updateConfigFile
 - gui::OptionFrame, [115](#)
- updateForEachIntentionTheNumberOfPartsForEachType
 - ontology::Ontology, [106](#)
- updateLabel
 - gui::OptionFrame, [115](#)
- updateMainFrame
 - ontology::Ontology, [106](#)
- updateObservationList
 - ontology::Ontology, [107](#)
- updateStateRelationPanel
 - gui::MainFrame, [80](#)
- valueChanged
 - treecheckbox::CheckTreeManager, [29](#)
- width
 - gui::PDFChartTransferable, [121](#)
- writeChartAsPDF
 - gui::PDFChartTransferable, [120](#)
- WS_DECORATIONS
 - gui::OptionFrame, [117](#)