	Test Input	Expected Outcome	
Number	Test input	Expected Outcome	Pass/Fail
1.	Form: Main Form File ->	SimCoTest must load the	P
	Open Workspace From	workspaces from that path into the	
	Select a path from the Open	Main form	
	Workspaces From menu and click Ok		
2.	Form: Main Form	SimCoTost must show the Type of	P
۷.	File -> New Workspace	SimCoTest must show the Type of Model Under Test form.	Г
	Select the New Workspace from	Model olider Test form.	
	the File menu		
3.	Form: Main Form	SimCoTest must show the Model	P
	Settings -> Model Settings	Settings form with the default	_
	Select the Model Settings from the	values.	
	Settings		
4.	Form: Main Form	SimCoTest must open the	P
	Shortcut Buttons	corresponding form.	
	Click on any of the Shortcut		
	buttons in the main form		
5.	Form: Main Form	SimCoTeest must show the	P
	Click on the name of a workspace	information related to the	
	in the left panel of the main form	workspace in the right panel	
6.	Form: Main Form	SimCoTest must show the results	P
	Click on the View Results Button	form filled wit the information	
		related to workspace selected in the	
7.	Form: Main Form	main form SimCoTest must show the Rename	P
/.	Click on the View Rename Button	form filled with the name of the	P
	Click oil the view Kename Button		
		workspace selected in the main form	
8.	Form: Main Form	SimCoTest must start the new test	P
0.	Click on the Duplicate Button	workspace wizard with the	1
	dien on the Bapheate Batton	information of the workspace	
		selected in the main form	
9.	Form: Main Form	SimCoTest must gives the user the	P
, ·	Click on the Export button	option to select a path and export	_
	P	the results related to the workspace	
		selected in the main form	
10.	Form: Results Form	must show the name of the Simulink	P
	Model Name	model related to the results form.	
	The Model Name text box in the		
	Main Form		
11.	Form: Results Form (SL/SF	must show the list of test cases	P
	controllers)	generated based on output	
	Generation Algorithm Combo-box	discontinuity algorithm	
	Selecting Discontinuity from the		
12	Generation Algorithm Combo-box	must show the maissities distance as	
12.	Form: Results Form (SL/SF	must show the prioritized list of test	

	controllers)	cases generated based on output	P
	Generation Algorithm Combo-box	diversity algorithm	•
	Selecting Diversity from the	arversity digorithm	
	Generation Algorithm Combo-box		
13.	Form: Results Form (SL/SF	must show the list of test cases	P
	controllers)	generated based on output stability	
	Generation Algorithm Combo-box	algorithm	
	Selecting Stability from the		
	Generation Algorithm Combo-box		
14.	Form: Results Form (SL/SF	must show the list of input signals	P
	controllers)	and configuration parameters	
	Clicking on a test input the	related to that test case in the right	
	results form	part of the form	
15.	Form: Results Form (SL/SF	must include the time and values	P
	controllers)	related to all the steps in the input	
	The information related to an	signal	
	input signal		
16.	Form: Results Form (SL/SF	must show the information about	P
	controllers)	the input signal in the results form.	
	Selecting the name of an input	1 0	
	signal		
17.	Form: Results Form (SL/SF	must show the value of the	P
	controllers)	configuration parameter in the	
	Selecting the name of a	results form.	
	configuration parameter		
18.	Form: Results Form (SL/SF	must load Matlab/Simulink model	P
	controllers)	and run the model with the selected	
	Selecting a test case and clicking	test case.	
	the Run button		
19.	Form: Results Form (closed-loop	must show the name of the	P
	controllers)	workspace.	
	The Workspace Name text edit		
20.	Form: Results Form (closed-loop	must be able to select Smoothness	P
	controllers)	requirement from the Combo-box.	
	The user		
21.	Form: Results Form (closed-loop	must be able to select Stability	P
	controllers)	requirement from the Combo-box.	
	The user	, ,,	
22.	Form: Results Form (closed-loop	must be able to select	P
	controllers)	Responsiveness requirement from	
	The user	the Combo-box.	
23.	Form: Results Form (closed-loop	must be able to select Liveness	P
	controllers)	requirement from the Combo-box.	
	The user		
24.	Form: Results Form (closed-loop	must be able to select Normalized	P
	controllers)	Smoothness requirement from the	
	The user	combobox.	
controllers) diagram must be shown in t	The corresponding HeatMap	P	
	diagram must be shown in the form.		
	By selecting a requirement from		

	the Combobox		
26.	Form: Results Form (closed-loop	must show the average of the	Р
	controllers)	corresponding objective function	_
	The color of each region of the	value for test cases in that region.	
	HeatMap	variation to the cases in that region	
27.	Form: Results Form (closed-loop	must execute the closed-loop	P
	controllers)	controller model with the	
	Double clicking on each point in the	corresponding test input.	
	HeatMap		
28.	Form: Results Form (closed-loop	must execute the closed-loop	P
	controllers)	controller model with the test input	
	Clicking RunModel	with ID and FD identified in the text	
		boxes.	
29.	Form: Results Form (closed-loop	must execute the closed-loop	P
	controllers)	controller model with the worst-	
	Clicking Run the Selected Test	case test input selected in the form.	
	Case	•	
30.	Form: Type of Model Under Test	must give two different options to	P
	Type of Model Under Test form	the user to generate a test	
		workspace, including	
		Simulink/Stateflow controller and	
		Continuous controller	
31.	Form: Type of Model Under Test	Clicking Next must shows the Model	Р
	In the Type of Model Under Test	Setting Form	
	form		
32.	Form: Model Settings Form	must load the default model settings	P
	Model Settings Form	information into the form.	
33.	Form: Model Settings Form	must give the possibility to change	P
	Model Settings Form	the Matlab path.	
34.	Form: Model Settings Form	must give the possibility to select	P
	Model Settings Form	the Simulink model under test.	
35.	Form: Model Settings Form	must give the possibility to add a	P
	Model Settings Form	mode path to the list of Matlab	
		paths.	
36.	Form: Model Settings Form	must give the possibility to add	P
50.	Model Settings Form	scripts to run before running the	1
	<u> </u>	Matlab model.	
37.	Form: Model Settings Form	Clicking Next must shows the Sanity	P
J/.	In the Model Settings form	Checks Form	1
38.	Form: Sanity Checks Form	It must be possible to check or	P
30.	In the Sanity Checks form	uncheck sanity checks related to	F
	in the samey Greeks Willi	Model Blocks	
39.	Form, Canity Chacks Form		P
39.	Form: Sanity Checks Form	It must be possible to check or	1
	In the Sanity Checks form	uncheck sanity checks related to	
4.0	Provide Colonia Provide Coloni	Configuration Parameters	2
40.	Form: Sanity Checks Form	must loads the model and perform	P
	Clicking the Perform Checks	the Sanity Check on the model and	
	button	Shows the Sanity Check Results	
I		form	1

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41.	Form: Sanity Check Results Form	must load the model and highlight	P
	Clicking on each block in the list	the corresponding block in the	
	of Model Blocks in the Sanity	model	
	Check Results form		
42.	Form: Sanity Check Results Form	must load the model and highlight	P
	Clicking on each configuration	the corresponding configuration	
	parameter in the list of	parameter in the model	
	configuration parameters in the		
	Sanity Check Results form		
43.	Form: Sanity Check Results Form	must show the data extraction	P
	Clicking the Next button in the	results form.	
	Sanity Checks form		
44.	Form: Data Extraction Results Form	must show the name of the Model.	Р
11.	The Model Name text edit in the	industrial with the manne of the Model.	1
	Data Extraction Results form		
45.	Form: Data Extraction Results Form	must show the Simulation Time	P
45.	The Model Simulation Time text	extracted from the Model.	Г
	edit in the Data Extraction	extracted from the Model.	
1.0	Results form	and be able to release All and an	D
46.	Form: Data Extraction Results Form	must be able to select All options	P
	User	from Variable Type Combobox.	
47.	Form: Data Extraction Results Form	must be able to select Input options	P
	The Variable Type Combobox	from Variable Type Combobox.	
48.	Form: Data Extraction Results Form	must be able to select	P
	The Variable Type Combobox	Configurations options from	
		Variable Type Combobox.	
49.	Form: Data Extraction Results Form	must be able to select Output	P
	The Variable Type Combobox	options from Variable Type	
		Combobox.	
50.	Form: Data Extraction Results Form	must extract all the information	P
	The Data Extraction Results form	related to input, configuration	
		parameters and outputs of the	
		model.	
51.	Form: Data Extraction Results Form	SimCoTest must correctly extract	P
	In the Data Extraction Results Form	the name, data type, data ranges for	•
		each input and output of the model.	
52.	Form: Data Extraction Results Form	SimCoTest must correctly extract	Р
52.	In the Data Extraction Results Form	the name, default value, data type	1
	die Zata Ziti detton Nedutto i offin	and data ranges for each	
		<u> </u>	
		configuration parameter of the	
F2	Form, Data Festiva stian Deserte Fe	model.	D
53.	Form: Data Extraction Results Form	User must be able to change the test	P
	In the Data Extraction Results Form	generation ranges (min and max)	
		for input and output variables and	
		configuration parameters	
54.	Form: Data Extraction Results Form	must show the input/output/	P
	Clicking the Highlight in Model	configuration parameters	
	button	highlighted in the model	
55.	Form: Data Extraction Results Form	must run the model with the input	P

	Clicking the Run Model Under Test	information in the form	
56.	Form: Data Extraction Results Form	must show the Test Generation	P
	Clicking the Next in the Data	Settings Form.	_
	Extraction Results Form		
57.	Form: Test Generation Settings	must show the name of the output	P
	Form	in the output name combo-box	
	Selecting the Output Number from	The state of the s	
	the Combo-box		
58.	Form: Data Extraction Results Form	must show the number of the output	P
	Selecting the Output Name from the	in the output number combo-box	
	Combo-box		
59.	Form : Test Generation Settings	must be able to identify the number	P
	Form	of test cases generated by output	
	The user	diversity algorithm	
60.	Form: Test Generation Settings	must be able to identify the number	P
	Form	of test cases generated based on	
	The user	output stability algorithm	
61.	Form: Test Generation Settings	must be able to identify the number	P
	Form	of test cases generated based on	
	The user	output discontinuity algorithm	
62.	Form: Test Generation Settings	must set the size of test suites for all	P
	Form	algorithms to zero	
	Clicking the Exclude button		
63.	Form: Test Generation Settings	must be able to identify the test	P
	Form	generation time.	
	User		
64.	Form: Closed-loop controllers	must be able to identify the desired	P
	model Parameters form	value variable.	
	User		
65.	Form: Closed-loop controllers	must be able to identify the actual	P
	model Parameters form	value variable.	
	User		
66.	Form: Closed-loop controllers	must be able to identify the From	P
	model Parameters form	value for desired value variable.	
	User	1 11 11 16 1 7	
67.	Form: Closed-loop controllers	must be able to identify the To	P
	model Parameters form	value for desired value variable.	
(0)	User Clased laser controllers		Б
68.	Form: Closed-loop controllers	must be able to identify the model	P
	model Parameters form	simulation time.	
(0	User Closed loop controllers	must be able to add as County	D
69.	Form : Closed-loop controllers model Parameters form	must be able to add configuration	P
		parameters to the form.	
70	User Form: Closed loop controllers	must be able to identify the survey of	D
70.	Form : Closed-loop controllers model Parameters form	must be able to identify the range of	P
	User	configuration parameters.	
71	Form: Closed-loop controllers	must be able to run the model with	D
71.	model Parameters form		P
	User	an initial desired value and a final	
70		desired value.	D
72.	Form: Closed-loop controllers test	must be able to identify the number	P

	settings form	of regions in the HeatMap	
	User		
73.	Form: Closed-loop controllers test	must immediately change when the	Р
	settings form	user changes the number of	
	The number of regions in the	Heatmap regions.	
	Heatmp		
74.	Form: Closed-loop controllers test	must be able to identify the number	P
	settings form	of test cases that need to be run in a	
	User	Heatmap region.	
75.	Form: Closed-loop controllers test	must be able to identify the number	P
	settings form	of worst-case scenarios in each	
	User	Heatmap region.	
76.	Form: Closed-loop controllers test	must be able to include some of the	Р
	settings form	HeatMap Regions in the search.	
	User		
77.	Form: Closed-loop controllers test	must be able to exclude some of the	P
	settings form	HeatMap Regions from the search.	
	User		
78.	Form: Closed-loop controllers test	must be able to exclude some of the	P
	settings form	HeatMap Regions using slidebars.	
	User		
79.	Form: Closed-loop controllers test	must be able to include some of the	P
	settings form	HeatMap Regions using slidebars.	
	User		
80.	Form : Closed-loop controllers test	must be able to see the	P
	settings form	approximated running time of the	
	User	tests.	
81.	Form: Closed-loop controllers test	must be able to see the	P
	settings form	approximated ending time of the	
	User	tests.	
82.	Form: In the Software Mode form	must be able to select and start the	P
	User	software in the normal mode.	
83.	Form: In the Software Mode form	must be able to select and start the	P
	User	software in the maintenance mode.	
84.	Form: When the software is run in	must be able to select and start the	P
	the maintenance mode	software in the maintenance mode.	
	User		
85.	Form : In the Software Mode form	must be able to select and start the	P
	User	software in the maintenance mode.	
86.	Form: In the Advance Continuous	must be able to select Random	P
	Controller Settings form	Search as random exploration	
	User	algorithm.	
87.	Form : In the Advance Continuous	must be able to select Adaptive	P
	Controller Settings form	Random Search as random	
	User	exploration algorithm.	
88.	Form : In the Advance Continuous	must be able to select Adaptive	P
	Controller Settings form	Random Search as random	
	User	exploration algorithm.	
	0001	emprorueron digorienni.	

	Controller Settings form	Random Exploration.	
	User		
90.	Form : In the Advance Continuous Controller Settings form	SimCoTest must escape the random	P
	If the escape random exploration	exploration.	
	is checked,		
91.	Form: In the Advance Continuous	must be able to select random	Р
)1.	Controller Settings form	search as the local search algorithm.	1
	User	searen as the rotal searen algorithm.	
92.	Form: In the Advance Continuous	must be able to select Hill-Climbing	Р
	Controller Settings form	as the local search algorithm.	
	User	J	
93.	Form: In the Advance Continuous	must be able to select HCRR as the	P
	Controller Settings form	local search algorithm.	
	User		
94.	Form: In the Advance Continuous	must be able to select Simulated	P
	Controller Settings form	Annealing as the local search	
	User	algorithm.	
95.	Form: In the Advance Continuous	must be able to select the number of	P
	Controller Settings form	Algorithm iterations.	
0.6	User Form: In the Advance Continuous	was at he able to calcut the	D
96.	Controller Settings form	must be able to select the	P
	User	explorative type of algorithm for	
97.	Form: In the Advance Continuous	search step. must be able to select the	Р
)/.	Controller Settings form	exploitative algorithm for the search	1
	User	step.	
98.	Form: Main Form	Should start the new test workspace	P
70.	Shortcut Buttons	wizard.	1
	Click on New Test Workspace	Wizura.	
	button		
99.	Form: Main Form	Should start the model setting form.	P
	Shortcut Buttons		
	Click on of Model Setting button		
100.	Form: Main Form	Should start the Simulink Test	P
	Shortcut Buttons	Settings form.	
	Click on Simulink Testing form		
101.	Form: Main Form	Should start the Continuous	P
	Shortcut Buttons	Controller Settings form3.	
	Continuous Controller Settings		
102	form: Main Form	Chould start the Advanced Cimulials	D
102.	Shortcut Buttons	Should start the Advanced Simulink	P
	Click on Advanced Simulink	Test Settings form.	
	Testing form		
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