

How to Create Test Cases for SysML Requirement?

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<u>Requirement diagram</u> is a useful tool for recording, describing and organization both functional and non-functional requirements of a system. In addition, you can describe how the requirements will be verified with test cases. In this tutorial, we will create a requirement, and then add test cases for validation. Finally, we will walk you through the steps required to produce a report of requirements.

Creating a simple SysML requirement diagram

- 1. Select **Project > New** from the application toolbar.
- 2. In the **New Project** window, enter *Tutorial* as **Name**.

\$	New Project	×			
Create New F	Project				
Create a new project by filling in the following information.					
Name:	Tutorial				
Author:	Peter				
Data type set:	UML 🗸				
Description:	Description:				
+ Advanced O	ptions				
	Create Blank Project Cancel				
	Create biank H bject				

3. Click Create Blank Project.

 Create a SysML requirement diagram first. You can create a requirement diagram by selecting Diagram > New from the application toolbar. Select Requirement Diagram in the New Diagram window and then click Next. Click OK again to create the diagram.

٩		New Diagram	×
	Q Search		
		Process Map Diagram Model an overview of processes that are required to approach a business goal.	^
		Requirement Diagram Model the functional and performance requirements of a system.	
		Sequence Diagram Model how users, objects and systems interact with one another and in what order. Interactions are arranged from top to bottom, following their order of occurrence.	
		Service Categorization Diagram Organize the content of SOA model to allow SOA elements to be used for multiple purposes and to be viewed from different perspectives.	
		Service Contract Diagram Next Car	v

5. Click a requirement Support registration.



Creating test cases

Let's create some test cases for the requirement Support registration.

1. Move your mouse pointer over the requirement.

2. Press on the **Resource Catalog** icon and drag it out.

< <requirement>></requirement>	Resource Catalog
Text = **	
ID = "REQ001"	
source = =	
kind = ""	
verifyMethod = =	
risk = ""	
Atatus = "" 4	

3. Release the mouse button. Select **Verify <- Test Case** from Resource Catalog.

requirement>> port registration	
ext = "" = "REQ001" purce = "" nd = "" ifyMethod = "" ik = "" atus = ""	
	Verify <- Test Case

4. Name the test case as *Test Age Input*



5. In addition to having a named test case shape, you can define the steps to test as well. Open the specification by right clicking on test case *Test Age Input* and selecting **Open Specification...** from the popup menu. 6. Open the tab Test Plans. There are three columns. The Steps column defines a set of steps to test the requirement in a more general angle. The Procedures column defines also the steps, but in a more concrete manner by providing also test data. The Expected Results column is the result expected to achieve by walking through the defined procedures.

General Test Plans Image: Steps Procedures Expected Results 1.	♦ Test Case S	Specification		×
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Steps Procedures Expected Results 1.	⇐ I @ F, FF, I ♠ ♥	≈ ⊋⊊		
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Reset OK Cancel Apply Help				
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	Reset OK	Cancel	Apply Help	

7. Enter the steps as shown below:

Step	Procedur	eExpected Result	Enter user information	Enter: - User name: john - Age: 20	Entered data appear in form	Btidokorpit: #Aqeeplication #soundominit Soundotoomittee
						Summe



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