



ReqT in the CERBERO H2020 EU Project

ReqT is part of the SAGE Verification suite and it is integrated into the CERBERO toolchain to provide requirements-based testing of Cyber-Physical Systems models.

It is Open!

ReqT code is completely open, the repository is available at
<https://gitlab.sagelab.it/sage/ReqT>

Stay Tuned and Contact Us!

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CREDITS: THE TOOL IS A JOINT WORK BETWEEN
UNIVERSITY OF SASSARI AND UNIVERSITY OF GENOA



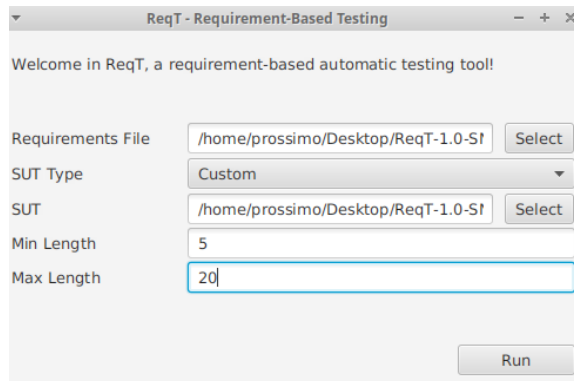
ReqT

ReqT is an open-source tool for automatic testing. It uses a formal specification to choose which action to perform on a system and to evaluate its response.

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Simple Interface

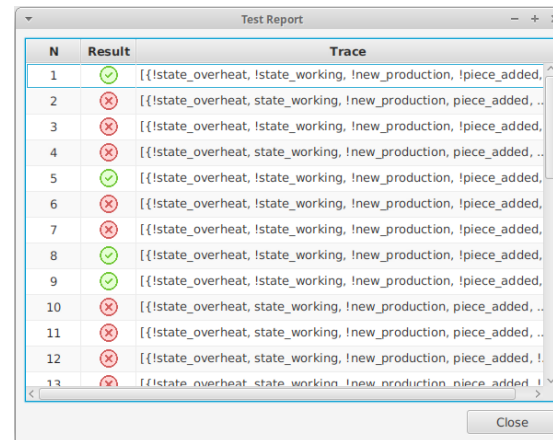
ReqT provides a simple Graphical User Interface (GUI) **to perform automatic testing with respect to a formal specification**. The user just needs to indicate the specification to use and the system to test, plus few optional parameters to set the algorithm.



Pressing the Run button, ReqT start the **generation and execution of tests** on the system under test.

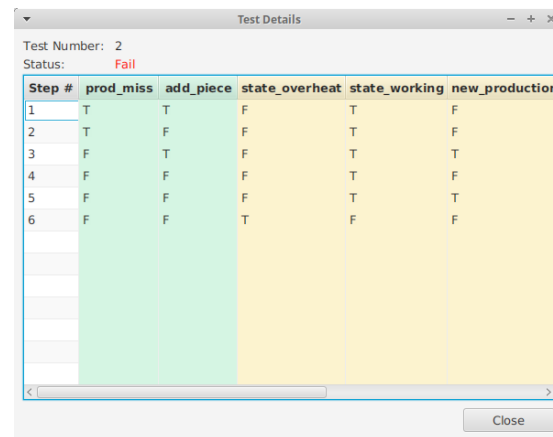
Tests Reporting

At the end of the process, ReqT generates a report with the list of all executed tests and their status.



N	Result	Trace
1	✓	[[!state_overheat, !state_working, !new_production, !piece_added, ...
2	✗	[[!state_overheat, state_working, !new_production, piece_added, ...
3	✗	[[!state_overheat, !state_working, !new_production, !piece_added, ...
4	✗	[[!state_overheat, state_working, !new_production, piece_added, ...
5	✓	[[!state_overheat, !state_working, !new_production, !piece_added, ...
6	✗	[[!state_overheat, !state_working, !new_production, !piece_added, ...
7	✗	[[!state_overheat, !state_working, !new_production, !piece_added, ...
8	✓	[[!state_overheat, !state_working, !new_production, !piece_added, ...
9	✓	[[!state_overheat, !state_working, !new_production, !piece_added, ...
10	✗	[[!state_overheat, state_working, !new_production, piece_added, ...
11	✗	[[!state_overheat, state_working, !new_production, piece_added, ...
12	✗	[[!state_overheat, state_working, !new_production, piece_added, !
13	✗	[[!state_overheat, state_working, !new_production, piece_added, !

Each test can be analysed in details by just double clicking on it.



Step #	prod_miss	add_piece	state_overheat	state_working	new_production
1	T	T	F	T	F
2	T	F	F	T	F
3	F	T	F	T	T
4	F	F	F	T	F
5	F	F	F	T	T
6	F	F	T	F	F

Specification

Requirements can be expressed in Linear Temporal Logic (LTL) or as Property Specification Patterns (PSP).

The specification can easily be defined and verified with **ReqV**, part of the SAGE suite.

System Under Test

ReqT accepts a System Under Test (SUT) either as a model in Kiss or Smv format, or as a **generic Java class**, extending the SUT class defined in the **SpecPro** library (also part of the SAGE suite).