Automated Repair with Specifications

Description

Recognizing an error in a software system may for example either be achieved by utilizing a test suite with the ”right” set of test cases, or by attaching some kind of formal specifications to the system that is able to describe the control or data flow within the system. In the latter case, errors can be detected by ensuring that the specifications are not violated. Specifications can either be derived from the software system under consideration, or they can be specified by the user as a description (a model) of how the system should work.

This topic examines the tools AutoFix-E and AutoFix-E2 which aim at finding fixes for Eiffel classes that are equipped with contracts (i.e. specifications/assertions).

References


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