

Scenarios, Business Rules, and Matching

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Abstract

Scenarios (or use cases) and business rules each have strengths and offer mutually reinforcing views of a software system. Scenarios describe uses of a system in terms of situations, interactions, and events unfolding over time. Business rules describe fundamental constraints on a system's transactions. However, analysis of scenarios and business rules together can be challenging. We present an approach for evaluating these two distinct views in combination. We operationalize business rules as scenarios that must match the world in every appropriate context, or as negative scenarios that must not match. Scenarios are patterns that can match occurrences in the world; a system whose behavior meets its requirements results in occurrences that its scenarios match successfully. We mediate the interaction of business rules and scenarios through *co-matching events* appearing in two or more scenarios. A co-matched event is not judged to have successfully matched unless all the events that co-match it do. A case study of business rules for automated teller machines illustrates our approach.