A unique complexity metric

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Abstract

Metrics, in general, are defined as "a quantitative measure of the degree to which a system, component, or process possesses a given attribute". Complexity metrics are used to predict critical information about reliability and maintainability of software systems. This paper proposes complexity metric, which includes all major factors responsible for complexity. We validated our metric against the principles of measurement theory since the measurement theory has been proposed and extensively used in the literature as a means to evaluate the software engineering metrics. The scale of the metric is investigated through Extensive structure. It is found that the proposed measure is on ratio scale. The applicability of the proposed measure is tested through test cases and comparative study.