Applicability of Weyuker’s Property 9 to Inheritance Metric

Abstract

In the metric suite for Object-Oriented design put forward by Chidamber and Kemerer it is observed that Weyuker property 9 is not satisfied by any of the structural Inheritance Complexity Metrics. The same is also observed for the candidate structural inheritance complexity metric by Brito and Carapuca, Li’s inheritance metric suite, Rajnish and Bhattacherjee inheritance metric. This paper presents two new inheritance metrics: one is ICC (Inheritance Complexity of Class) measured at the class level, which does not satisfies Weyuker property 9 and another one is ICT (Inheritance Complexity of Tree) measured at the tree level, which satisfies the Weyuker property 9 (Interaction Increases Complexity). Examples supporting the applicability of the property are also presented.

References

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