Abstract

Metrics are essential in software engineering for measuring software complexity, quality, estimating size and project effort. The major techniques for software cost estimation are sizing or predication of various kinds of software deliverable items. The cost estimation techniques consist of various categories like tools and methods for estimating and measuring software
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size, function points, lines of code, and object points. This paper highlights the object-oriented software metrics proposed in 90s' by Chidamber, Kemerer and several studies were conducted to validate the metrics and discovered several deficiencies. Further new object oriented metrics were proposed by Li. Chidamber, Kemerer proposed six software metrics as Weighted Methods per Class (WMC), Depth of Inheritance Tree (DIT), Number of Children (NOC), Coupling Between Object classes (CBO), Response For a Class (RFC), Lack of Cohesion in Methods (LCOM). A new metrics suite for object-oriented programming proposed by Li includes Number of Ancestor Classes (NAC), Number of Local Methods (NLM), Class Method Complexity (CMC), Number of Descendent Classes (NDC), Coupling Through Abstract Data Type (CTA), and Coupling Through Message Passing (CTM) as an alternatives to Chidamber and Kemerer metrics. Here the comparisons have been made between the metrics proposed by Chidamber, Kemerer and Li.

Reference

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Index Terms

Computer Science

Software Engineering

Key words

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sizing

software complexity

software measurement