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Authors:

Jayaprakash Krishnan

Gunasekar Subramani

Sapna P. G.

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Abstract

Regression testing involves testing not only the functionality containing a defect but also testing related functionality to check if a change has introduce side effects. In order to check for the above, a change impact model has been developed using the artifacts built for the software during the design phase. Using both static and dynamic diagrams of UML, it is possible to understand the effect of a change. Also, this serves as a mechanism to ensure customer

requirements are satisfied. In this paper, a fine-grained assessment of system change is given at the activity, class and functionality(ie. use case) level using design models. When a defect is notified, first the activity or method containing the defect is identified. The impact of the defect on other methods is calculated and risk level assigned. Further, the same is used to calculate risk level at the class level and then at the use case level. An indication of the level of risk the method, class and use case incurs due to the change is indicated aiding in selection of regression tests.

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Index Terms

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Keywords

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