

Measuring The Coupling Of Procedural Programs

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Summary

Coupling is one of two attributes of software that have great impact on software quality. Quite a few methods have been established to quantify the measurement of coupling. This paper presents a new method that provides coupling measurement of procedural programs. The first step of this method populates a description matrix that describes the software system that is being evaluated capturing all system attributes that affect coupling. Factors that affect coupling were studied and a scheme to reflect them in the description matrix was developed. A method has also been developed to calculate coupling between each two components of the system. The second step uses this method to populate a coupling matrix that indicates the coupling measurement between each two components of the system. Other metrics such as calculating the overall coupling of the system can be evaluated from the generated matrix. One of the strengths of this approach is that it can be used to measure coupling of software of the procedural languages as well as object-oriented languages. The procedures that populate the description matrix are different for the two different paradigms but everything else is the same. A comparison with three other software metrics is illustrated with the result of two experiments

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