

## **A CSM APPROACH: IMPACT ANALYSIS OF OBJECT ORIENTED SOFTWARE SYSTEMS**

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### **Abstract**

The objective of this study is to develop a methodology to improve the maintenance of Object-Oriented software systems. The hypothesis of this is that the architecture of an object-oriented software system can be used to determine the impact of system changes. The relationships in Object-Oriented systems such as Inheritance, polymorphism, encapsulation, information-hiding, aggregation and association combination has made Object-oriented System complicated to maintain. Main purpose of software maintenance is to assure the quality of performance of the respected software. Main emphasis of maintenance is *change*, but design errors, undiscovered faults, and installing new applications, will cause the software degrading. If this ever happen, there would be a possibility that testing could take place because the changes has affected the software in such a way that it's not proper in the sense of performance. Locating the effects of maintenance provides the maintainer with knowledge that assists in debugging and testing the affected components. This work presents a methodology to assist in the maintenance of Object-Oriented software systems, using Java as a test language. A CSM (Comparative Software Maintenance) will help the software maintainers to calculate and take cautious step before a change is made to the particular software.

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