Abstract

The explosive growths in the usage of object oriented programming in the development of large applications have put extensive pressure in testing and maintenance of these systems. A graphical representation for these programs has the advantage of lending to efficient analysis compared to code based textual analysis. The Class Dependence Graph (CIDG) is insufficient
to capture the features of real time safety critical object oriented program. We extend the basic CIDG to incorporate features like control flow and exception handling, timing, criticality, method sequences and state information. The model that we have developed can easily be subjected to automated analysis for establishing points within a program that needs to be tested when the program is subjected to changes.

Reference


Index Terms

Computer Science

Software Engineering
Key words

Class
control dependence
class dependence graph
control flow
data dependence
object
object oriented program
state
regression testing