Abstract

Now a days, object-oriented programs are becoming very popular amongst the developers and hence almost all software are designed using the object-oriented paradigm. Advanced features of object-oriented programming has made it complicated to understand, test, debug and maintain. To better manage these software, slicing techniques have been proved to be quite efficient. This paper proposed an algorithm for dynamic slicing of object-oriented software. It uses SDG(System Dependence Graph) and DG(Dynamic Graph) as the intermediate program representation while computing the dynamic slices. In this paper dynamic slicing algorithm is based on traversing through the outgoing control dependence edges and incoming data dependence edges of Dynamic Graph. The major advantage of the proposed algorithm is that the time required to compute the dynamic slice of the object-oriented programs is directly proportional to the number of dependencies (control and/or data) arising during the run time. Also the proposed algorithm depends on the numbers of nodes present in the intermediate program representation.
References

- M. Karmakar, "Interprocedural dynamic slicing with applications to debugging and testing".

Index Terms

Computer Science  
Software Engineering
Keywords
Program Slice  Dynamic Slice  System Dependence Graph  Class Dependence Dynamic Graph.