Abstract

Object Oriented Databases (OODB) is becoming popular day by day and being used in a large number of application domains. In order to support homogeneous distributed OODBs a clear understanding of partitioning of class and how to do it by using different partitioning algorithms is needed. In this paper an algorithm for vertical fragmentation in a model consisting of class and comprising of complex attributes and complex methods is presented. The approach for fragmentation is top-down and entity of fragmentation is class. The algorithm presented here is an enhancement to the previous work of vertical partitioning algorithms in OODB management systems. The algorithm takes input as the class to be partitioned into fragments or groups, generates Method Usage Matrix as its first step from the methods and queries provided. It then generates Method Affinity matrix which is constructed using above matrix and based on method affinity values of two methods. Two new factors are introduced Method Linking Factor and Group Linking Factor which provides more control on deciding groups and increasing the flexibility of the algorithm.

References

- L. Bellatreche, A. Simonet and M. Simonet, Vertical Fragmentation in Distributed Object Database with Complex Attributes and Complex Methods, in International Workshop on Database and Expert Systems Applications (DEXA'96), September, 1996.

**Index Terms**

Computer Science  
Database Management And Systems

**Keywords**

Vertical Partitioning  
Distributed Object Oriented Database Management Systems  
Method Affinity  
Method Usage  
Complex Methods  
Complex Attributes.