Abstract

Nowadays many organizations are maintaining computer based information systems. These information systems are valuable assets to the organization. Most of the business information or corporate decisions are buried across the systems in the organization and due to the need based modifications sometimes the attributes are scattered throughout the program and even
there is a redundancy in the stored data. These business information and corporate decisions represents the business rules of the organization and they are in the form of functional dependencies. These functional dependencies are unevenly scattered and sometimes redundant too. In a database, the records containing these unevenly scattered functional dependencies may be distributed throughout the database, leading to anomalies.

This paper proposes a methodology for the minimization of the functional dependencies available either in a program code or in a database using the minimal cover process. By minimizing these functional dependencies, the redundant and irrelevant attributes are removed and the structure of the application program is kept intact in the maintenance phase.

Reference


Index Terms

Computer Science
Information Systems

Key words

Functional dependencies
minimal cover
minimization
business rules