REPRESENTATION OF A DATABASE RELATION AND ITS FUNCTIONAL DEPENDENCIES USING A SINGLY LINKED LIST STRUCTURE FOR AUTOMATION OF RELATIONAL DATABASE NORMALIZATION USING DBNORMA

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Abstract

In this paper a novel approach of representing a database relation using one linked list is proposed for a tool called DBNorma, which is used for semi-automating the process of relational database schema normalization. This paper addresses all the issues of representing a relational schema along with its functional dependencies in a linked list, so that efficient algorithms of various normal forms can be designed by taking into account this representation. This automation will considerably reduce time and cost of normalization process in software industry along with manual errors. It is also concluded that a considerable amount of memory can be saved by using this approach. Since understanding linked list is easy, the representation will be easy to understand. The definitions of various normal form algorithms on such a representation will be efficient since linked list structure can be manipulated efficiently.