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DOMAINS OF RELATIONAL DATABASE OPERATIONS IN THE PRESENCE OF UNCERTAIN VALUES

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We consider the structure of a relational database in which uncertain values are allowed. These values are interpreted as nonexistent. We study the formal construction of domains for objects such as the set of attributes, functional dependence, and basic operations of relational algebra. The distributive property of the domains is studied for particular combinations of operations for database queries. It is shown that distributivity holds for a natural join and projection but not in all cases for a natural join and selection.

Keywords: database, relational algebra, domain, uncertain values.

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