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CSC409 ASSIGNMENT

A Relation in a database course they are referring to a tabular set of data either permanently stored in the database (a table) or derived from tables according to a mathematical description (a view or a query result).

PROPERTIES

VALUES ARE ATOMIC: This property implies that columns in a relational table are not repeating group or arrays. The key benefit of the one value property is that it simplifies data manipulation logic. Such tables are referred to as being in the “first normal form” (1NF).

EACH COLUMN HAS A UNIQUE NAME: Because the sequence of columns is insignificant, columns must be referenced by name and not by position. A column name need not be unique within an entire database but only within the table to which it belongs.

SEQUENCE OF ROWS IS INSIGNIFICANT: This property is analogous the one above but applies to rows instead of columns. The main benefit is that the rows of a relational table can be retrieved in different order and sequences. Adding information to a relational table is simplified and does not affect existing queries.

COLUMN VALUES ARE OF SAME KIND: In relational terms this means that all values in a column come from the same domain. A domain is a set of values which a column may have. This property simplifies data access because developers and users can be certain of the type of data contained in a given column. It also simplifies data validation. Because all values are from the same domain, the domain can be defined and enforced with the Data Definition Language (DDL) of the database software.

EACH ROW IS UNIQUE: This property ensures that no two rows in a relational table are identical; there is at least one column, or set of columns, the values of which uniquely identify each row in the table. Such columns are called primary keys. This property guarantees that every row in a relational table is meaningful and that a specific row can be identified by specifying the primary key value.