

Introduction to Relational Database Concepts

Objectives

- Define a primary key
- Define a foreign key
- Define a column-integrity rule
- Identify row, column, primary key, unique key, and foreign key given a diagram of a table containing these elements
- Identify violations of data-integrity rules

Vocabulary

Part One: Identify the vocabulary word for each definition below.

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|----|-------|---|
| 1. | _____ | A constraint which ensures that the column contains no null values and uniquely identifies each row of the table. |
| 2. | _____ | A column or set of columns that refers to a primary key in the same table or another table. |
| 3. | _____ | An entry in a table, consisting of values for each appropriate column |
| 4. | _____ | An implementation of an attribute or relationship in a table |
| 5. | _____ | An integrity constraint that requires every value in a column or set of columns be unique. |
| 6. | _____ | Collections of objects or relations, set of operators to act on those relations, and data integrity for accuracy and consistency. |
| 7. | _____ | More than one column or combination of columns that could serve as the table's primary key |

Part Two: Identify the integrity rules below.

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|----|-------|---|
| 1. | _____ | A column must contain only values consistent with the defined data format of the column |
| 2. | _____ | Define the relationally correct state for a database; they ensure that users can perform only those operations that leave the database in a correct, consistent state |
| 3. | _____ | A primary key must be unique and no part of the primary key can be null |
| 4. | _____ | A foreign key must match an existing primary key value (or else be null) |
| 5. | _____ | The data stored in a database must comply with the rules of the database |

Try It / Solve It

1. Data Integrity in the DJ Database

Examine the sample data for these tables in the DJs on Demand database. Check for entity, referential, and column integrity. Identify any data-integrity violations. Assume that all date columns should have a date format and all amount (cost) columns should have a number format.

