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Discussion 1.1

Web 335

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Relational Databases

1. In the context of relational databases, what are relationships?

Database relationships are associations between tables that are created using join statements to retrieve data [IBM].

1. What are the advantages of relational databases?

The advantages of a relational database is that, once you have your data held in clearly defined, compact tables, you can connect or relate the data held in different tables [condor].

1. What are the disadvantages of relational databases?

* **Cost:** Relational databases are expensive to setup and maintain. According to Anni Martin from techwalla, “If your company is large and you need a more robust database, you will need to hire a programmer to create a relational database using Structured Query Language (SQL) and a database administrator to maintain the database once it is built … if you store legally confidential or protected information in your database such as health information, social security numbers or credit card numbers, you will also have to secure your data against unauthorized access in order to meet regulatory standards.”
* **Abundance of Information:** Because of modern tools, data has become more complex which poses a challenge for an older database system expecting common information.
* **Structured Limits: “**Some relational databases have limits on field lengths. When you design the database, you have to specify the amount of data you can fit into a field. Some names or search queries are shorter than the actual, and this can lead to data loss[Martin].”
* **Database Distancing:** In a system with multiple departments that handle vast amount of user data, databases can become isolated and difficult to tie into each other to make relationships.

1. Identify at least one feature of MySQL and describe what it is and how it is used (SQL join queries, indexes, primary keys, foreign keys, SELECT statements, etc.,).

Primary keys are always required in a database table. The primary key can be changed however it is usually the first field and includes an ID for each row in the table. The primary key is usually an integer if not changed to another field. Primary keys can help in relationships by using foreign keys. “A foreign key is a column (or combination of columns) in a table whose values must match values of a column in some other table. FOREIGN KEY constraints enforce referential integrity, which essentially says that if column value A refers to column value B, then column value B must exist” [cockroachlabs].

Reference List

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