

11. What is denormalization?

Denormalization is a database optimization technique in which we add redundant data to one or more tables. This can help us avoid costly joins in a relational database. Note that denormalization does not mean 'reversing normalization' or 'not to normalize'. It is an optimization technique that is applied after normalization.

Basically, The process of taking a normalized schema and making it non-normalized is called denormalization, and designers use it to tune the performance of systems to support time-critical operations.

Pros of Denormalization:

1. Retrieving data is faster since we do fewer joins
2. Queries to retrieve can be simpler (and therefore less likely to have bugs), since we need to look at fewer tables.

Cons of Denormalization:

1. Updates and inserts are more expensive.
2. Denormalization can make update and insert code harder to write.
3. Data may be inconsistent.
4. Data redundancy necessitates more storage.

12. What is a database cursor?

A database cursor is an identifier associated with a group of rows. It is, in a sense, a pointer to the current row in a buffer.

You must use a cursor in the following cases:

- Statements that return more than one row of data from the database server:
 - A SELECT statement requires a select cursor.
 - An EXECUTE FUNCTION statement requires a function cursor.
- An INSERT statement that sends more than one row of data to the database server requires an insert cursor.

13. What are the different types of the queries?

- Navigational search queries.
- Informational search queries.
- Transactional search queries.

14. Define constraint?

In DBMS, constraints are the set of rules that ensures that when an authorized user modifies the database they do not disturb the data consistency and the constraints are specified within the DDL commands like "alter" and "create" command.

15. What is auto increment?

Auto-increment allows a unique number to be generated automatically when a new record is inserted into a table. Often this is the primary key field that we would like to be created automatically every time a new record is inserted.