SQL Quick Notes in 2 Pages

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SQL Basics:

- SQL stands for Structured Query Language.

- It is a domain-specific language used for managing and manipulating relational

  databases.

Database Components:

- Tables: Data is stored in tables with rows and columns.

- Columns: Define the type of data (e.g., text, numbers) stored in a table.

- Rows: Each row in a table represents a single record or data entry.

Common SQL Commands:

- SELECT: Retrieve data from a table.

- INSERT: Add new records to a table.

- UPDATE: Modify existing records in a table.

- DELETE: Remove records from a table.

SQL Clauses:

- WHERE: Used to filter records based on a specified condition.

- ORDER BY: Sort the result set in ascending or descending order.

- GROUP BY: Group rows based on a common value in a column.

- HAVING: Filter grouped rows based on a condition.

SQL Functions:

- COUNT(): Count the number of rows in a result set.

- SUM(): Calculate the sum of values in a column.

- AVG(): Calculate the average of values in a column.

- MAX(): Find the maximum value in a column.

- MIN(): Find the minimum value in a column.

SQL Joins:

- JOIN: Combines rows from two or more tables based on a related column.

- INNER JOIN: Returns only the matching rows from both tables.

- LEFT JOIN (or LEFT OUTER JOIN): Returns all rows from the left table and matching rows from the right table.
- RIGHT JOIN (or RIGHT OUTER JOIN): Returns all rows from the right table and matching rows from the left table.
- FULL JOIN (or FULL OUTER JOIN): Returns all rows when there is a match in either table.

SQL Constraints:

- PRIMARY KEY: Ensures the uniqueness of values in a column, typically used to identify records uniquely.
- FOREIGN KEY: Establishes a relationship between two tables based on a column in one table referencing the primary key of another table.
- UNIQUE: Ensures that all values in a column are unique.
- NOT NULL: Ensures that a column cannot contain NULL values.

SQL DDL (Data Definition Language) Commands:

- CREATE TABLE: Create a new table.
- ALTER TABLE: Modify an existing table's structure.
- DROP TABLE: Delete a table and its data.

SQL DML (Data Manipulation Language) Commands:

- INSERT INTO: Add new records to a table.
- UPDATE: Modify existing records.
- DELETE FROM: Remove records from a table.

SQL Tips:

- Use comments (-- or /* */) to document your SQL queries.
- Practice and test your SQL statements on sample databases to improve your skills.
- Be cautious when using DELETE and UPDATE statements, as they can have a significant impact on your data.

Remember that SQL is a powerful tool for working with databases, and practice is key to mastering it. Start with simple queries and gradually work your way up to more complex tasks.

Hope it helps :)

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