**QUESTION 1**

In SQL (Structured Query Language), the SELECT statement is used to retrieve data from one or more tables in a database. It allows users to specify which columns or fields they want to retrieve, as well as any conditions for filtering the data. The SELECT statement is one of the fundamental and most commonly used SQL commands.

A breakdown of how the SELECT statement is typically used to retrieve data:

**Syntax**: The basic syntax of a SELECT statement is as follows:

*SELECT column1, column2, ...*

*FROM table\_name*

*WHERE condition;*

* SELECT: Specifies the columns or fields you want to retrieve from the table.
* FROM: Specifies the table or tables from which to retrieve the data.
* WHERE: Optionally, specifies conditions to filter the rows retrieved from the table. This is optional but allows for more precise data retrieval.

**Execution**: When the SELECT statement is executed, the database engine processes the query by accessing the specified table(s) and retrieving the requested data.

**Result Set**: The result of a SELECT statement is called a result set, which is a collection of rows that meet the specified criteria (if any) and contain the selected columns' data.

**Output**: The retrieved data can be displayed to the user, used for further processing within the database, or returned to an application for presentation or manipulation.

Example of a SELECT statement retrieving all columns from a table:

Let's say we have a table named employees with columns *employee\_id, first\_name, last\_name*, and *department:*

SELECT \*

FROM employees;

This SELECT statement retrieves all columns (\* indicates all columns) from the employees table. It does not specify any conditions (WHERE clause), so it will retrieve all rows from the table. The result set will contain all rows and columns from the employees table.

**QUESTION 2**

In SQL queries, the SELECT, FROM, and WHERE clauses work together to retrieve specific data from a table based on certain conditions.

1. **SELECT Clause**: This clause specifies the columns or fields that you want to retrieve from the table. You can select specific columns or use '\*' to select all columns.
2. **FROM Clause**: This clause specifies the table or tables from which to retrieve the data. It indicates the source of the data that the SELECT statement will operate on.
3. **WHERE Clause**: This optional clause is used to filter rows based on specified conditions. It allows you to narrow down the result set by specifying criteria that rows must meet to be included in the output.

* The FROM clause specifies the table(s) from which to retrieve data.
* The WHERE clause, if included, filters the rows based on specified conditions.
* The SELECT clause determines which columns to include in the output.

Example demonstrating the combined use of these clauses:

Let's say we have a table named employees with columns *employee\_id, first\_name, last\_name, department, and salary.*

To retrieve the names and salaries of employees who work in the 'Sales' department and have a salary greater than 50,000, the SQL query would look like this:

SELECT first\_name, last\_name, salary

FROM employees

WHERE department = 'Sales' AND salary > 50000;

In this example:

* The SELECT clause specifies that we want to retrieve the first\_name, last\_name, and salary columns.
* The FROM clause specifies the employees table as the source of the data.
* The WHERE clause filters the rows to only include those where the department is 'Sales' and the salary is greater than 50,000.

The result set will contain the names and salaries of employees who meet the specified criteria.