SQL TRIGGER

SQL Triggers

A trigger is a stored procedure in adatabase that automatically invokes whenever a special event in the database occurs. By using SQL triggers, developers can automate tasks, ensure data consistency, and keep accurate records of database activities. For example, a trigger can be invoked when a row is inserted into a specified table or when specific table columns are updated.

In simple words, a **trigger** is a collection of SQL statements with particular names that are stored in system memory. It belongs to a specific class of **stored procedures** that are automatically invoked in response to database server events. Every **trigger** has a table attached to it.

Why Should You Use SQL Triggers?

Using SQL triggers brings several benefits to the table:

- **Automation**: Triggers handle repetitive tasks, saving our time and effort.
- **Consistency & Data Integrity**: Automatically enforcing rules ensures that our data remains clean and accurate.
- **Business Rules Enforcement**: Triggers can help ensure that changes to our database follow your business logic.
- **Audit Trails**: Track changes automatically, making it easier to monitor and record data updates.

Now that you know why triggers are important, let’s look at how to create and use them effectively.

Trigger Plate

DELIMITER $$

CREATE TRIGGER trigger_name

{BEFORE | AFTER} {INSERT | UPDATE | DELETE}

ON table_name

FOR EACH ROW

BEGIN

Your SQL logic here

Example: UPDATE another_table SET column = value WHERE condition;

END$$

DELIMITER

Key Terms

- **trigger_name:** The name of the trigger to be created
- **BEFORE | AFTER:** Specifies whether the trigger is fired **before** or **after** the triggering event (INSERT, UPDATE, DELETE).
- **{INSERT | UPDATE | DELETE}:** Specifies the operation that will activate the trigger.
- **table_name:** The name of the table the trigger is associated with.
- **FOR EACH ROW:** Indicates that the trigger is row-level, meaning it executes once for each affected row.
- **trigger_body:** The SQL statements to be executed when the trigger is fired.