**SQL Triggers**

Trigger is a statement that a system executes automatically when there is any modification to the database. In a trigger, we first specify when the trigger is to be executed and then the action to be performed when the trigger executes. Triggers are used to specify certain integrity constraints and referential constraints that cannot be specified using the constraint mechanism of SQL.

**Types of Triggers**

**There are 6 types of triggers**

1. **AFTER INSERT** activated after data is inserted into the table.
2. **AFTER UPDATE:** activated after data in the table is modified.
3. **AFTER DELETE:** activated after data is deleted/removed from the table.
4. **BEFORE INSERT:** activated before data is inserted into the table.
5. **BEFORE UPDATE:** activated before data in the table is modified.
6. **BEFORE DELETE:** activated before data is deleted/removed from the table.

**Example**

1. **Write a trigger to ensure that no employee of age less than 25 can be inserted in the database.**

delimiter $$

CREATE TRIGGER Check\_age BEFORE INSERT ON employee

FOR EACH ROW

BEGIN

IF NEW.age < 25 THEN

SIGNAL SQLSTATE '45000'

SET MESSAGE\_TEXT = 'ERROR:

AGE MUST BE ATLEAST 25 YEARS!';

END IF;

END; $$

delimiter;

**Query on SQL JOIN**

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

**Example**

**Table 1**

|  |  |  |
| --- | --- | --- |
| **ORDER ID** | **Customer ID** | **Order Date** |
| 10308 | 2 | 2018-09-07 |
| 10309 | 4 | 2018-09-08 |

**Table 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Customer ID** | **Customer Name** | **Contact Name** | **Country** |
| 10308 | Ana Trujillio Anders | Ana Anders | Germany |
| 10309 | Antonio Moreno Taqueria | Antonio Moreno | UK |

**Query**

SELECT Orders.OrderID, Customers.CustomerName, Orders.OrderDate  
FROM Orders  
INNER JOIN Customers ON Orders.CustomerID=Customers.CustomerID;

**Results**

|  |  |  |
| --- | --- | --- |
| **ORDER ID** | **Customer Name** | **Order Date** |
| 10308 | Ana Trujillio Anders | 2018-09-07 |
| 10309 | Antonio Moreno Taqueria | 2018-09-08 |