

Title : Database Triggers

Problem Statement:

Write a database trigger on library table. The system should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in library-audit table.

Objective:-

- Understand the concept of row level and statement level trigger.
- Understand the concept of trigger initiated against event

Theory:-

Trigger -

In MySQL, a trigger is a stored program invoked automatically in response to an event, such as insert, update or delete that occurs in the associated table. For example, you can define a trigger that is invoked automatically before a new row is inserted into a table.

The SQL standards defines two types of triggers

- Row-level triggers = is activated for each row that is inserted, updated or deleted. For example, if a table has 100 rows inserted, updated / deleted, the trigger is automatically invoked 100 times.
- Statement-level triggers = is executed once for each transaction regardless of number of rows affected

Syntax

Create trigger trigger_name {before/after}
{insert/update/delete} on table_name
for each row
trigger_body

Trigger body can access values of column being affected by DML statement.

To distinguish b/w the value of column before & after the DML has fired use new & old modifiers

| Trigger Event | OLD | NEW |
|---------------|-----|-----|
| insert | × | ✓ |
| update | ✓ | ✓ |
| delete | ✓ | ✓ |

Dropping trigger

Syntax: drop trigger trigger_name

Conclusion:-

Successfully implemented the concept of triggers to maintain record of changes in library table.