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PBSL Lab

Assignment · 07 (Group A)

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Title: Database Triggers. (All types: Row level & statement level triggers, before & after triggers)

Problem Statements:

Write a database trigger on Library table. The system should keep track of the records that are being updated / deleted.
The old value of updated / deleted records should be added in Library_Audit table.

Objectives:

a) Understand the concepts of row level & statement level trigger.
b) Understand the concepts of initiated against event.

Theory Concepts:

1) Database trigger is a PL/SQL program unit, which gets fired automatically whenever the data event such as DML / DDL system event.
2) Triggers are associated with a specific table & are fired automatically whenever the table gets manipulated in predictive way.
3) The database trigger has the following components
   i) Triggering event
   ii) Triggering constraint
   iii) Triggering Action.

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4) Triggering types:

i) Statement trigger: trigger action is executed once for the manipulation operation that fires the trigger.

ii) Row Trigger: trigger action is performed repeatedly for each row of the table that is affected by the manipulation operation that fires the trigger.

5) Triggering times:

i) Before the triggering event: triggering action is performed before the operation that fires the trigger is executed.

ii) After the triggering event: triggering action is performed after the operation that fires the trigger is executed

6) Triggering events:

i) DELETE TRIGGER

ii) UPDATE TRIGGER

iii) INSERT TRIGGER

General Syntax:

```
Creat [or replace] TRIGGER <trigger_name>
<BEFORE | AFTER>
DELETE @ INSERT @ UPDATE of <column_na>
ON <table_name>
[for each row [when <condition>]
Begn.
...
...
End;
```

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⇒ Dropping trigger

Syntax: DROP trigger <triggername>

Testcases & output:

The triggers are created for library table & tested on several testcases.

The code & output screenshots are attached separately.

Conclusion:

In this assignment I learned about trigger, their types., also implemented trigger on a table & performed various queries.