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Class: TY CSE CORE 3 Batch A

Exp - 3

TRIGGER

Aim:

- To understand Trigger
- Implement Trigger

Prerequisite: Oracle, SQL

Outcome: Students will be able to create trigger for a desired event.

Theory:

Stored Program which are automatically fired or executed when some event occur such as DML or DDL or DB operation.

Syntax:

```
Create or Replace Trigger trigger-name  
Before| After | —Instead of Insert | update | Delete  
Of colName  
On tableName  
Referencing old as O new as N  
For each row  
When (condition)  
Declare  
      -----  
Begin  
      -----  
Exception  
      -----  
End;
```

Example:

Create or Replace Trigger display_salary_change

Before Insert or update or Delete

On tableName

Referencing old as new as

For each row

When (new.id>0)

Declare

salary_difference number;

Begin

salary_difference:= :new.salary- :old.salary;

dbms_output.put_line('salary difference is: ' || salary_difference)

End;

Practice Exercise

1	Create following tables student(id number,name varchar2(25),programme varchar2(25)) student1(s_id number,s_name varchar2(25),programme varchar2(25))																		
2	Insert following data in student table: <table><tr><th>Id</th><th>name</th><th>programme</th></tr><tr><td>1</td><td>rohan</td><td>diploma</td></tr><tr><td>2</td><td>anu</td><td>MA</td></tr><tr><td>3</td><td>robert</td><td>diploma</td></tr><tr><td>4</td><td>tom</td><td>btech</td></tr><tr><td>5</td><td>sunny</td><td>diploma</td></tr></table>	Id	name	programme	1	rohan	diploma	2	anu	MA	3	robert	diploma	4	tom	btech	5	sunny	diploma
Id	name	programme																	
1	rohan	diploma																	
2	anu	MA																	
3	robert	diploma																	
4	tom	btech																	
5	sunny	diploma																	
3	Create a trigger which fires for every update done on student table attributes on student1 table and print the values.																		

Instructions:

1. Write and execute the query in Oracle SQL server/ SQL* Plus.
2. Paste the snapshot of the output in input & output section.

Part B

Code and Output:

1.

```
mysql> create table student
-> (
-> id integer primary key not null unique auto_increment,
-> name varchar(25) not null,
-> programme varchar(25) not null
-> );
Query OK, 0 rows affected (0.04 sec)

mysql> create table student1
-> (
-> s_id integer primary key not null unique auto_increment,
-> s_name varchar(25) not null,
-> programme varchar(25) not null
-> );
Query OK, 0 rows affected (0.02 sec)

mysql> desc student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int  | NO   | PRI | NULL    | auto_increment |
| name  | varchar(25) | NO | | NULL    |
| programme | varchar(25) | NO | | NULL    |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> desc student1;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| s_id  | int  | NO   | PRI | NULL    | auto_increment |
| s_name | varchar(25) | NO | | NULL    |
| programme | varchar(25) | NO | | NULL    |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

2.

```
mysql> insert into student
-> (name, programme)
-> values
-> ("rohan","diploma"),
-> ("anu","MA"),
-> ("robert","diploma"),
-> ("tom","btech"),
-> ("sunny","diploma");
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from student;
+----+-----+-----+
| id | name  | programme |
+----+-----+-----+
| 1  | rohan | diploma   |
| 2  | anu   | MA        |
| 3  | robert| diploma   |
| 4  | tom   | btech     |
| 5  | sunny | diploma   |
+----+-----+-----+
5 rows in set (0.00 sec)
```

3.

```
mysql> delimiter #
mysql> create trigger studentupdate after update on student
-> for each row
-> begin
-> insert into student1(s_id,s_name,programme)values(new.id,new.name,new.programme);
-> end#
Query OK, 0 rows affected (0.02 sec)

mysql> delimiter ;
mysql>
mysql> update student set name = "Bryce" where id = 4;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from student;
+----+-----+-----+
| id | name  | programme |
+----+-----+-----+
| 1  | rohan | diploma   |
| 2  | anu   | MA        |
| 3  | robert| diploma   |
| 4  | Bryce | btech     |
| 5  | sunny | diploma   |
| 6  | abc   | mn        |
+----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from student1;
+----+-----+-----+
| s_id | s_name | programme |
+----+-----+-----+
| 4    | Bryce | btech     |
+----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

Observation & Learning:
Write your observation and learning after performing the task.
Conclusion:
Write statement of conclusion here.