

Index

Sr. No.	Contents	Page No.
1	Annexure I– Micro Project Proposal	1-2
	1.Aims/Benefits of the Micro-Project	1
	2. Course Outcome Addressed	1
	3.Proposed Methodology	1
	4. Action Plan	2
	5. Resources Required	3
	6. Name of Team Members with Roll No.'s	3
2	Annexure II – Micro Project Report	3-8
	1.Rationale	4
	2.Aims/Benefits of the Micro-Project	4
	3.Course Outcome Achieved	4
	4. Literature Review	4
	5.Actual Methodology Followed	4
	5.1 Syntax	5
	5.2 Source code	5-6
	6.Actual Resources Used	6
	7.Outputs of Micro-Projects	7
	8. Skill developed / Learning out of this Micro-Project	8
	9. Applications of this Micro-Project	8

Micro Project Proposal

TRIGGER ON GIVEN DATABASE

1.Aims/Benefits of the Micro-Project:

- Produce additional checking during insert, update or delete operations on the affected table.
- Implement referential integrity across databases. You can read more about this in this tip: [SQL Server Referential Integrity Across Databases Using Triggers](#).
- They allow us to control what actually happens when one performs an insert, update, or delete on a view that accesses multiple tables.
- You can calculate aggregated columns in a table using triggers

2.Course Outcome Addressed:

- CO-1: Create and Manage Database using SQL Commands.
- CO-2: Apply triggers on database and also create the procedure.
- CO-3: Create function according to condition.

3.Proposed Methodology:

A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs. For example, a trigger can be invoked when a row is inserted into a specified table or when certain table columns are being updated.

4. Action Plan:

Sr. No.	Details of Activity	Planned Start date	Planned Finish date	Name of Responsible Team Members
1	Search the information of database	14-09-2022 3:30 – 5:30 PM	16-09-2022 3:30 – 5:30 PM	Akshay Dashrath Gitte
2	Collect the information of trigger	19-09-2022 3:30 – 5:30 PM	23-09-2022 3:30 – 5:30 PM	
3	Analysis of different information	26-09-2022 3:30 – 5:30 PM	29-09-2022 3:30 – 5:30 PM	
4	Analysis of information	03-10-2022 3:30 – 5:30 PM	06-10-2022 3:30 – 5:30 PM	Harsh Moreshwar Kale
5	Compression of Database	10-10-2022 3:30 – 5:30 PM	13-10-2022 3:30 – 5:30 PM	
6	Features of Database	20-10-2022 3:30 – 5:30 PM	01-11-2022 3:30 – 5:30 PM	
7	Advantages and drawback of trigger	03-11-2022 3:30 – 5:30 PM	07-11-2022 3:30 – 5:30 PM	Sujit Sudhakar Sukane
8	Final report of project	14-11-2022 3:30 – 5:30 PM	17-11-2022 3:30 – 5:30 PM	

5. Resources Required:

Sr. No.	Name of resource / material	Specification	Quantity	Remarks
1	Computer	WINDOWS 11,8GB RAM	1	
2	Operating System	WINDOWS 11	1	
3	Software	Oracle Database 10G	1	
4	Browser	Google Chrome	1	

6. Names of Team Members with Roll No.'s:

Sr. No.	Enrollment No.	Name of Team Member	Roll No.
1	2110950049	Akshay Dashrath Gitte	01
2	2110950051	Harsh Moreshwar Kale	03
3	2210950151	Sujit Sudhakar Sukane	60

Mr. Lokre A. P

Name and Signature of the Teacher

Micro-Project Report

TRIGGER ON GIVEN DATABASE

1. Rationale:

The main purpose of triggers is to automate execution of code when an event occurs. In other words, if you need a certain piece of code to always be executed in response to an event, the best option is to use triggers. Mostly because they guarantee that the code will be executed or the event that fired the trigger will fail.

2. Aims/Benefits of the Micro-Project:

- Produce additional checking during insert, update or delete operations on the affected table.
- They allow us to control what actually happens when one performs an insert, update, or delete on a view that accesses multiple tables.
- You can calculate aggregated columns in a table using triggers

3. Course Outcomes Achieved:

- CO-1: Create and Manage Database using SQL Commands.
- CO-2: Apply triggers on database and also create the procedure.
- CO-3: Create function according to condition.

4. Literature Review:

Triggers are stored programs, which are automatically executed or fired when some events occur. Triggers are in fact written to be executed in response to any of the following events.

5.Actual Methodology followed

5.1 Syntax:

- Create trigger before update:-

```
CREATE [ OR REPLACE ] TRIGGER trigger_name
BEFORE UPDATE
ON table_name
[ FOR EACH ROW ]
DECLARE
-- variable declarations
BEGIN
-- trigger code
EXCEPTION
```

5.2Source Code:

- Create trigger before update:-

The screenshot shows the Oracle Database Express Edition interface. The browser address bar indicates the URL: 127.0.0.1:8080/apex/f?p=4500:1003:1611946025462458::NO::: The page title is "ORACLE Database Express Edition". The user is logged in as "AKSHAY". The breadcrumb navigation shows "Home > SQL > SQL Commands". The "Autocommit" checkbox is checked, and the "Display" value is set to "10000". The "Save" and "Run" buttons are visible. The SQL command text area contains the following code:

```
create or replace trigger diff
before insert OR update OR delete
on emp
for each row
declare
sal_difference number;
begin
```

Below the SQL command area, there are tabs for "Results", "Explain", "Describe", "Saved SQL", and "History". The "Results" tab is currently selected. At the bottom, there is a "Find" search bar with a "Go" button. The footer shows "Time" and "SQL" tabs, and a "Schema" button.

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:1611946025462458::NO::

Home > SQL > SQL Commands

☒ Autocommit
 Display 10000
 Save Run

```

begin
sal_difference:=:new.sal-:old.sal;
dbms_output.put_line('new sal:':new.sal);
dbms_output.put_line('old sal:':old.sal);
dbms_output.put_line('salary difference is:':sal_difference);
end;
/

```

[Results](#)
[Explain](#)
[Describe](#)
[Saved SQL](#)
[History](#)

Trigger created.

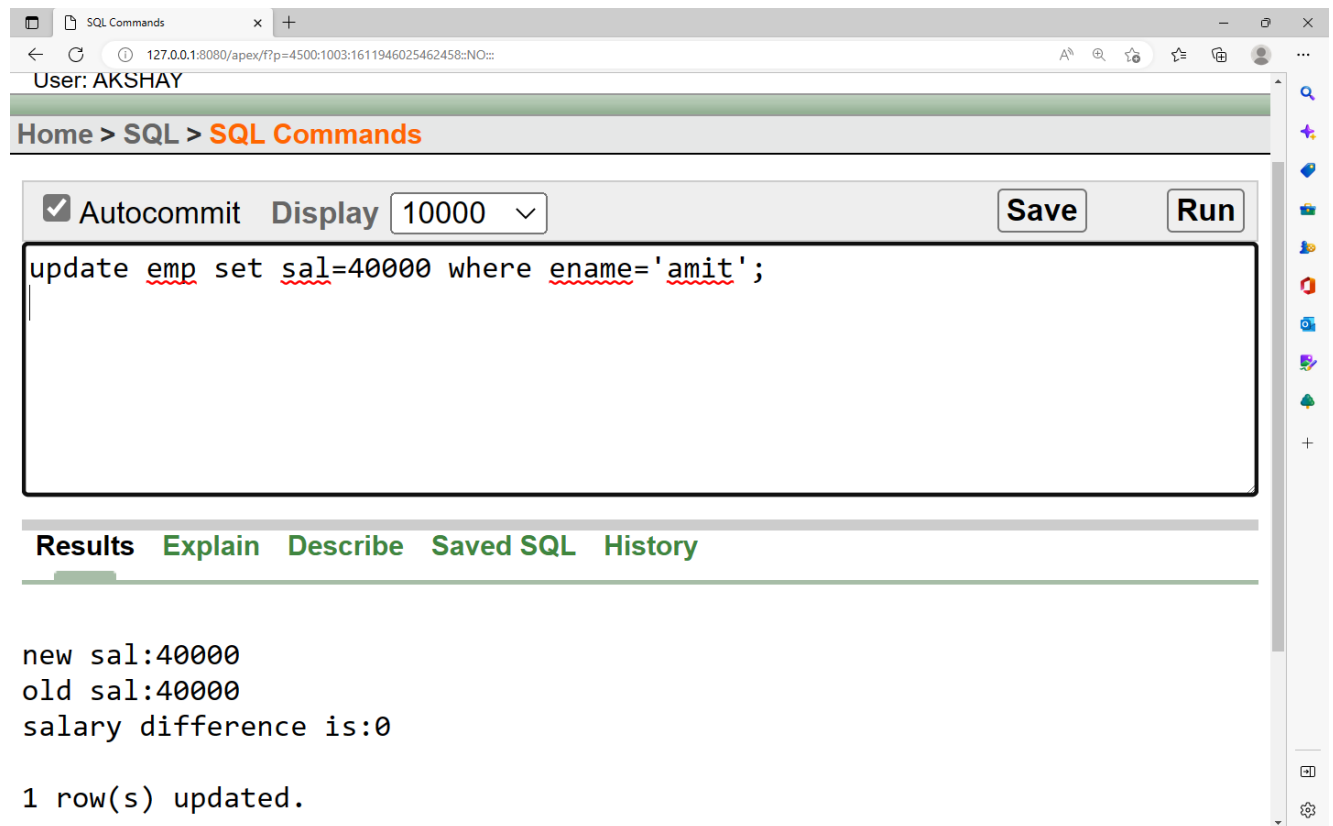
0.01 seconds

Application Express 2.1.0.00.39

6.Actual Resources Used:

Sr. No.	Name of resource / material	Specification	Quantity	Remarks
1	Computer	WINDOWS 11,8 GB RAM	1	
2	Operating System	WINDOWS 11	1	
3	Software	Oracle Database 10G	1	
4	Browser	Google Chrome	1	

7.Outputs of Micro-Projects:



The screenshot shows the Oracle SQL Developer interface. At the top, the browser address bar displays the URL `127.0.0.1:8080/apex/f?p=4500:1003:1611946025462458::NO::`. The user is identified as **User: AKSHAY**. The breadcrumb navigation shows **Home > SQL > SQL Commands**. The main editing area contains the SQL command: `update emp set sal=40000 where ename='amit';`. Above the command editor, there is a checkbox for **Autocommit** (checked), a **Display** dropdown menu set to `10000`, and **Save** and **Run** buttons. Below the command editor, a tabbed interface shows **Results** as the active tab, with other tabs being **Explain**, **Describe**, **Saved SQL**, and **History**. The results pane displays the following output: `new sal:40000`, `old sal:40000`, `salary difference is:0`, and `1 row(s) updated.`

7.Skill developed / Learning out of this Micro-Project:

- You can call stored procedures and functions from inside a trigger.
- You can use triggers to implement referential integrity across databases.

Unfortunately, SQL Server doesn't allow the creation of constraints between objects on different databases, but by using triggers you can simulate the behavior of constraints.

8.Applications of this Micro-Project:

By using a trigger you can keep track of the changes on a given table by writing a log record with information about the user that made the change and what was changed.