

## Trigger

- Trigger is a database object.
- Trigger can be executed implicitly for any DML operation on table.
- It can be used to take audit information of table data.

### Example#1

Write a trigger to insert the employee name in uppercase in employee table before insert operation?

```
DELIMITER //
CREATE TRIGGER uppercase_courses_insert BEFORE INSERT ON employees
FOR EACH ROW
BEGIN
    SET NEW.employee_name = UPPER(NEW.employee_name);
END//
DELIMITER ;
```

```
SHOW triggers;
```

```
DROP TRIGGER uppercase_courses_insert;
```

```
SELECT * FROM employees;
```

```
INSERT into employees(employee_name) values('ram');
```

### Example#2

Write a trigger to maintain audit transaction details of employee table data?

```
CREATE TABLE audit_employees (
    audit_id INT AUTO_INCREMENT PRIMARY KEY,
    action VARCHAR(50),
    employee_id INT,
    employee_name VARCHAR(255),
    salary decimal(8,2),
    department_id int,
    timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
```

```
desc employees;
```

```
DELIMITER //
```

```
CREATE TRIGGER audit_employees_inert
```

```
AFTER INSERT ON employees
```

```
FOR EACH ROW
```

```
BEGIN
```

```
    INSERT INTO audit_employees (action, employee_id, employee_name, salary,  
department_id)
```

```
    VALUES ('INSERT', NEW.employee_id, NEW.employee_name, NEW.salary,  
NEW.department_id);
```

```
END;
```

```
CREATE TRIGGER audit_employees_update
```

```
AFTER UPDATE ON employees
```

```
FOR EACH ROW
```

```
BEGIN
```

```
    INSERT INTO audit_employees (action, employee_id, employee_name, salary,  
department_id)
```

```
    VALUES ('UPDATE', NEW.employee_id, NEW.employee_name, NEW.salary,  
NEW.department_id);
```

```
END;
```

```
CREATE TRIGGER audit_employees_delete
```

```
AFTER DELETE ON employees
```

```
FOR EACH ROW
```

```
BEGIN
```

```
    INSERT INTO audit_employees (action, employee_id, employee_name, salary,  
department_id)
```

```
    VALUES ('DELETE', OLD.employee_id, OLD.employee_name, OLD.salary, OLD.department_id);  
END //
```

```
DELIMITER ;
```

```
SHOW triggers;
```

```
DROP TRIGGER uppercase_courses_insert;
```

```
SELECT * FROM employees;
```

```
SELECT * FROM audit_employees;
```

```
truncate table employees;
```

```
INSERT into employees values(101,'ram',40000,1);
```

```
INSERT into employees values(102,'raj',40000,2);
```

```
INSERT into employees values(103,'rahul',40000,1);
```

```
DELETE FROM employees WHERE employee_id=102;
```

```
UPDATE employees SET employee_name='Tushar' WHERE employee_id=103;
```