1. **Create a TRIGGER BEFORE/AFTER UPDATE on employee table FOR EACH ROW/statement.**

* **BEFORE UPDATE**: The trigger will execute before the update occurs.
* **AFTER UPDATE**: The trigger will execute after the update occurs.
* **FOR EACH ROW**: Ensures that the trigger is executed for each row affected by the UPDATE statement.

**BEFORE UPDATE:**

**mysql>**

CREATE TABLE employees (

employee\_id INT PRIMARY KEY,

first\_name VARCHAR(100),

last\_name VARCHAR(100),

salary DECIMAL(10, 2),

department\_id INT

);

CREATE TABLE salary\_changes (

change\_id INT AUTO\_INCREMENT PRIMARY KEY,

employee\_id INT,

old\_salary DECIMAL(10, 2),

new\_salary DECIMAL(10, 2),

change\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

**mysql>**

INSERT INTO employees (employee\_id, first\_name, last\_name, salary, department\_id)

VALUES

(1, 'John', 'Doe', 50000, 10),

(2, 'Jane', 'Smith', 55000, 10),

(3, 'Jim', 'Brown', 60000, 20),

(4, 'Jack', 'Davis', 45000, 10);

**mysql>**

SELECT \* FROM employees;

**mysql>**

DELIMITER $$

CREATE TRIGGER before\_employee\_update

BEFORE UPDATE ON employees

FOR EACH ROW

BEGIN

-- Check if salary is being changed

IF OLD.salary != NEW.salary THEN

-- Insert a record into the salary changes table

INSERT INTO salary\_changes (employee\_id, old\_salary, new\_salary)

VALUES (OLD.employee\_id, OLD.salary, NEW.salary);

END IF;

END $$

DELIMITER ;

**mysql>**

UPDATE employees

SET salary = 55000

WHERE employee\_id = 1;

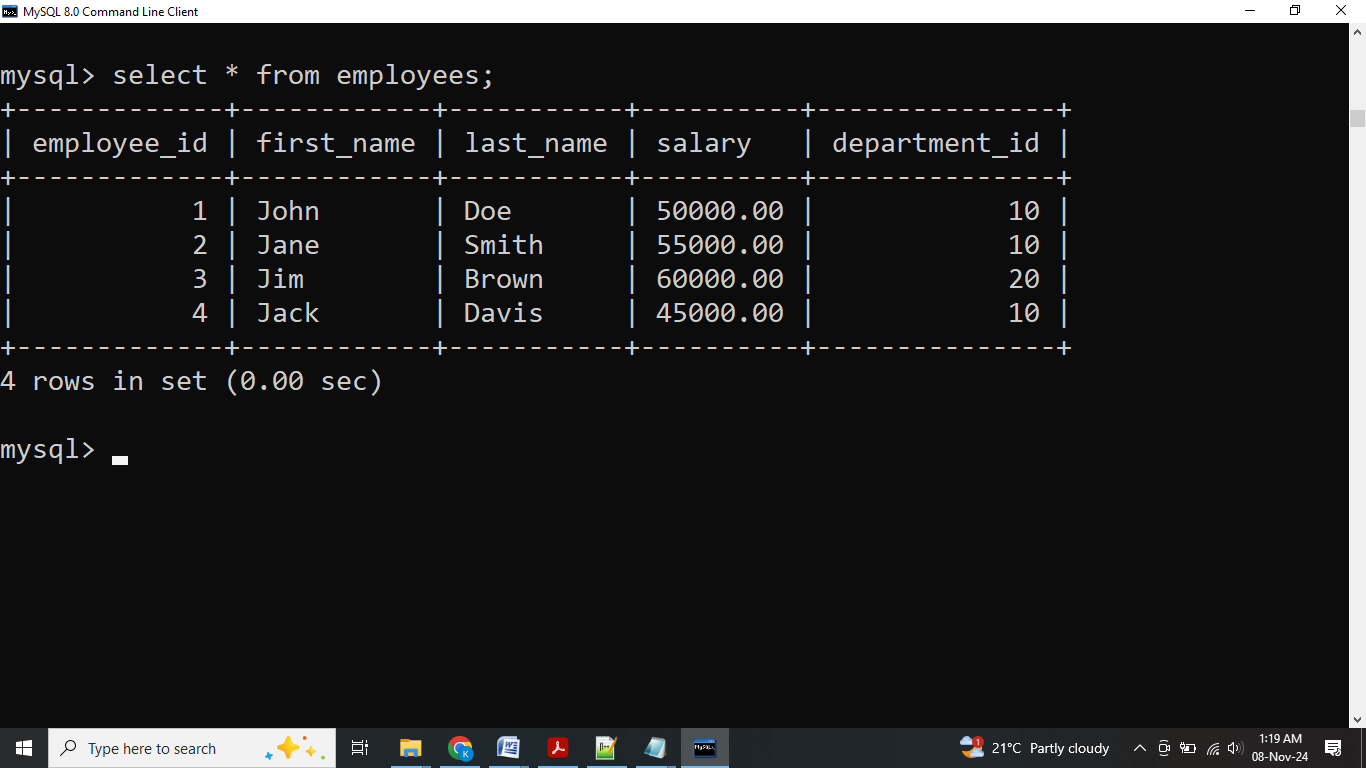
**mysql>**

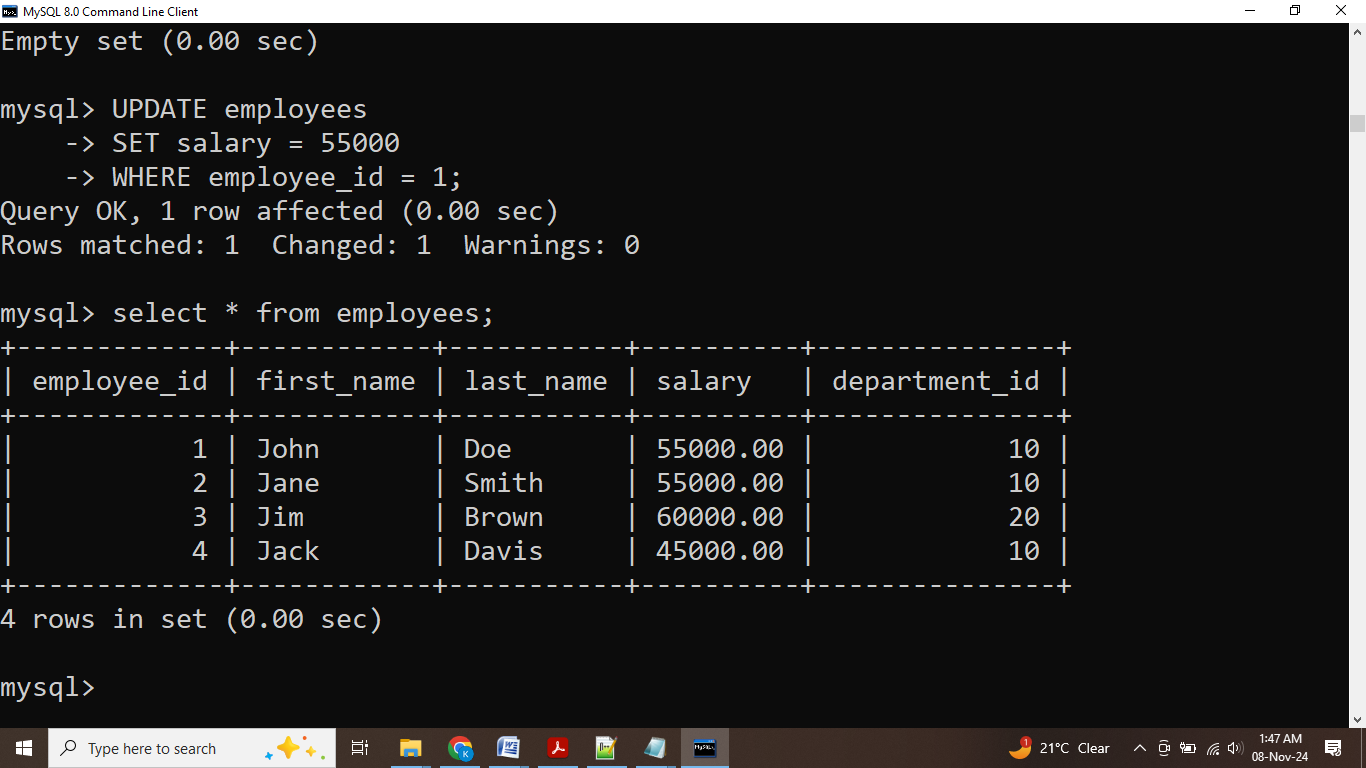
SELECT \* FROM employees;

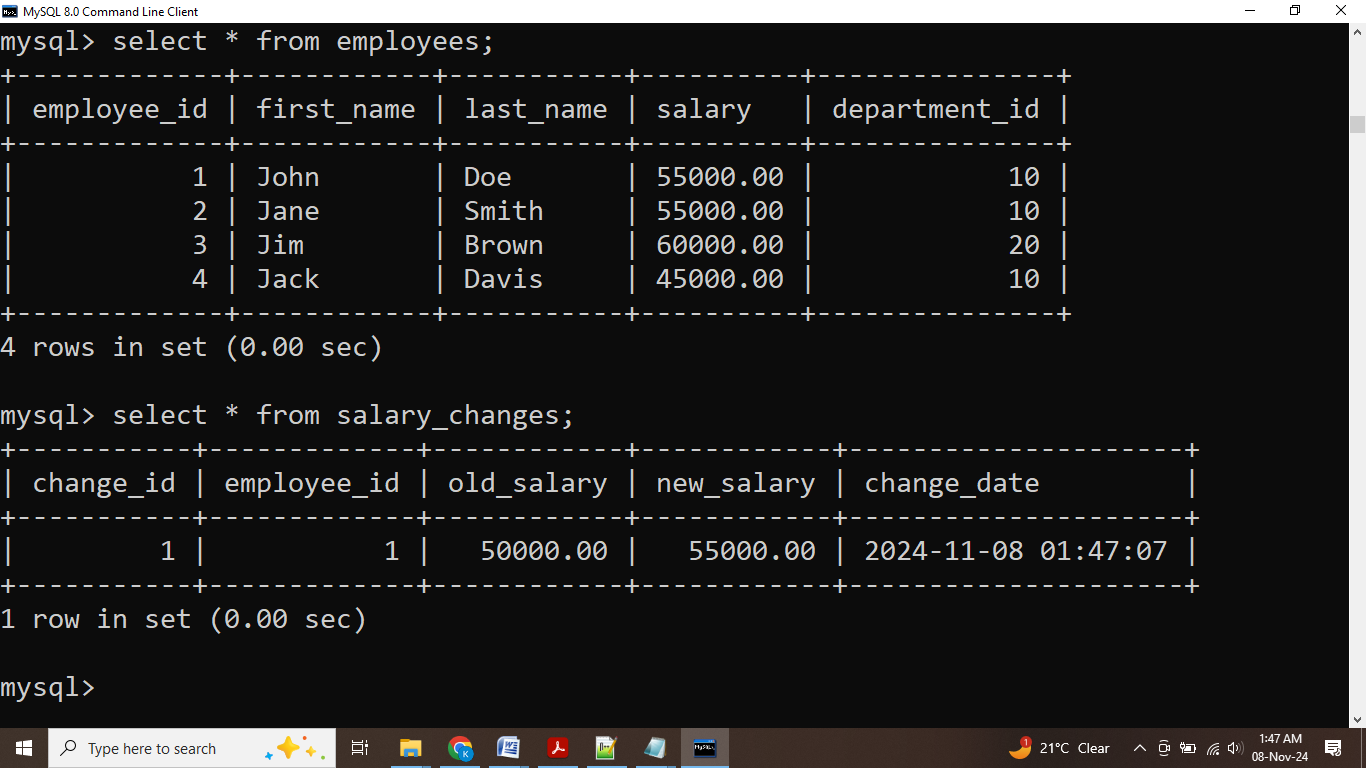
**mysql>**

SELECT \* FROM salary\_changes;

**OUTPUT:**







**AFTER UPDATE**:

**mysql>**

DELIMITER $$

CREATE TRIGGER after\_employee\_update

AFTER UPDATE ON employees

FOR EACH ROW

BEGIN

-- Check if salary is being changed

IF OLD.salary != NEW.salary THEN

-- Insert a record into the salary changes table

INSERT INTO salary\_changes (employee\_id, old\_salary, new\_salary)

VALUES (OLD.employee\_id, NEW.salary, NEW.salary);

END IF;

END $$

DELIMITER ;

**mysql>**

UPDATE employees

SET salary = 90000

WHERE employee\_id = 1;

**mysql>**

SELECT \* FROM employees;

**mysql>**

SELECT \* FROM salary\_changes;

**OUTPUT:**

