**Assignment 9**

**Day 9**

1.      Create AFTER UPDATE trigger to track product price changes

·       Create product\_price\_audit table with below columns:

audit\_id SERIAL PRIMARY KEY,

    product\_id INT,

    product\_name VARCHAR(40),

    old\_price DECIMAL(10,2),

    new\_price DECIMAL(10,2),

    change\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    user\_name VARCHAR(50) DEFAULT CURRENT\_USER

·       Create a trigger function with the below logic:

  INSERT INTO product\_price\_audit (

        product\_id,

        product\_name,

        old\_price,

        new\_price

    )

    VALUES (

        OLD.product\_id,

        OLD.product\_name,

        OLD.unit\_price,

        NEW.unit\_price

    );

·       Create a row level trigger for below event:

           AFTER UPDATE OF unit\_price ON products

·        Test the trigger by updating the product price by 10% to any one product\_id.

--1. To create product\_price\_audit table

CREATE TABLE product\_price\_audit (

audit\_id SERIAL PRIMARY KEY,

product\_id INT,

product\_name VARCHAR(40),

old\_price DECIMAL(10,2),

new\_price DECIMAL(10,2),

change\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

user\_name VARCHAR(50) DEFAULT CURRENT\_USER

);

SELECT \* FROM product\_price\_audit;

--2. To create the trigger function

CREATE OR REPLACE FUNCTION track\_price\_changes()

RETURNS TRIGGER AS $$

BEGIN

IF OLD.unit\_price <> NEW.unit\_price THEN

INSERT INTO product\_price\_audit (

product\_id,

product\_name,

old\_price,

new\_price

)

VALUES (

OLD.product\_id,

OLD.product\_name,

OLD.unit\_price,

NEW.unit\_price

);

END IF;

RETURN NEW;

END;

$$ LANGUAGE plpgsql;

-- 3. Create the AFTER UPDATE trigger

CREATE TRIGGER trg\_track\_price\_changes

AFTER UPDATE OF unit\_price ON products

FOR EACH ROW

EXECUTE FUNCTION track\_price\_changes();

--4. To test the trigger: Update a product price by 10%

--To update product\_id = 1:

UPDATE products

SET unit\_price = unit\_price \* 1.10

WHERE product\_id = 1;

-- 5. To check if audit was recorded

SELECT \* FROM product\_price\_audit

ORDER BY change\_date DESC;

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2.      Create stored procedure  using IN and INOUT parameters to assign tasks to employees

·       Parameters:

IN p\_employee\_id INT,

IN p\_task\_name VARCHAR(50),

 INOUT p\_task\_count INT DEFAULT 0

·       Inside Logic: Create table employee\_tasks:

 CREATE TABLE IF NOT EXISTS employee\_tasks (

        task\_id SERIAL PRIMARY KEY,

        employee\_id INT,

        task\_name VARCHAR(50),

        assigned\_date DATE DEFAULT CURRENT\_DATE

    );

·       Insert employee\_id, task\_name  into employee\_tasks

·       Count total tasks for employee and put the total count into p\_task\_count .

·       Raise NOTICE message:  
 RAISE NOTICE 'Task "%" assigned to employee %. Total tasks: %',

        p\_task\_name, p\_employee\_id, p\_task\_count;

After creating stored procedure test by calling it:

 CALL assign\_task(1, 'Review Reports');

You should see the entry in employee\_tasks table.

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