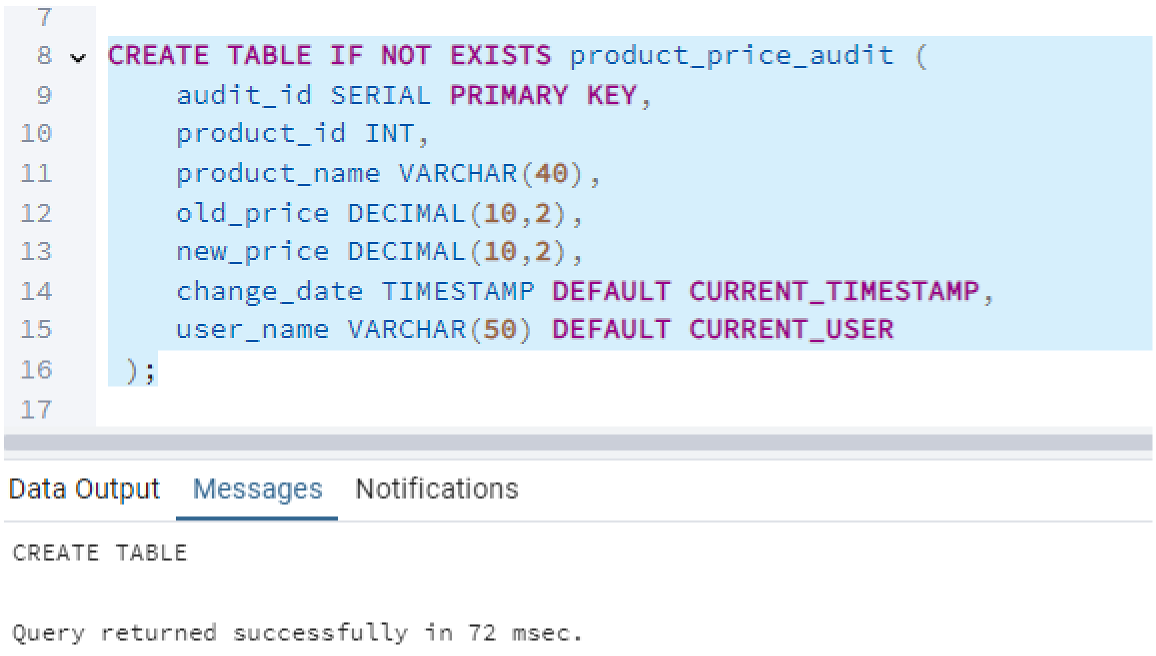
DAY 9 ASSIGNMENT

1. Create AFTER UPDATE trigger to track product price changes.

   Step 1: Create product_price_audit table with below columns. CREATE TABLE IF NOT EXISTS 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);

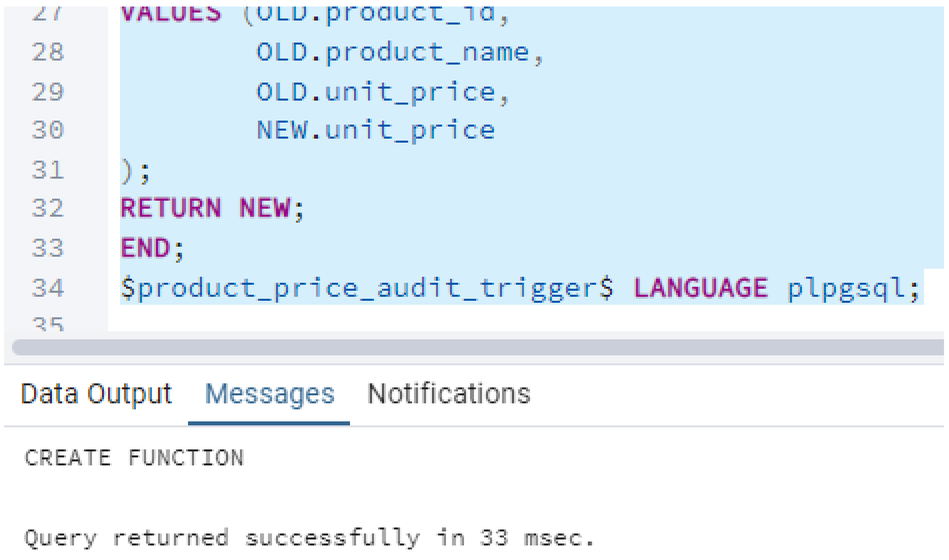


```sql

CREATE TABLE IF NOT EXISTS 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
 );

```

```
CREATE TABLE

Query returned successfully in 72 msec.
```

Step 2: Create a trigger function with the below logic.

```
CREATE OR REPLACE FUNCTION product_price_audit_function()
 Returns trigger AS $product_price_audit_trigger$
 BEGIN
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
 );
RETURN NEW;
 END;
$product_price_audit_trigger$ LANGUAGE plpgsql;
```

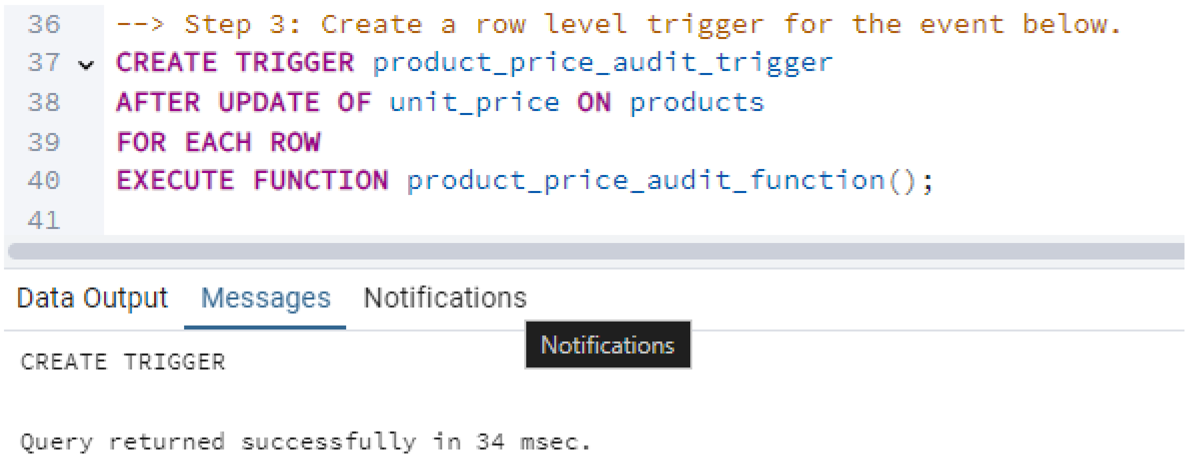


```
VALUES (OLD.product_id,
        OLD.product_name,
        OLD.unit_price,
        NEW.unit_price
);
RETURN NEW;
END;
$product_price_audit_trigger$ LANGUAGE plpgsql;
```

```
CREATE FUNCTION

Query returned successfully in 33 msec.
```

Step 3: Create a row level trigger for the event below.

CREATE TRIGGER product_price_audit_trigger AFTER UPDATE OF unit_price ON products FOR EACH ROW EXECUTE FUNCTION product_price_audit_function();

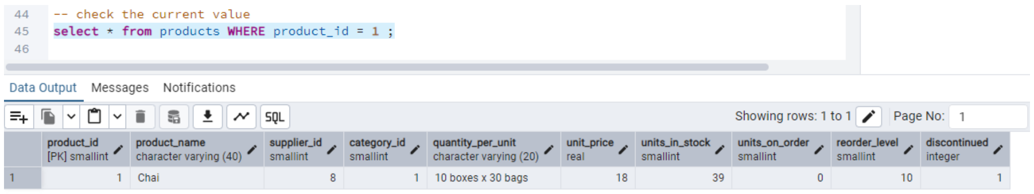


```
--> Step 3: Create a row level trigger for the event below.
CREATE TRIGGER product_price_audit_trigger
AFTER UPDATE OF unit_price ON products
FOR EACH ROW
EXECUTE FUNCTION product_price_audit_function();
```

```
CREATE TRIGGER

Query returned successfully in 34 msec.
```

Step 4: Test the trigger by updating the product price by 10% to any one product_id.

Check the unit_price current value for product_id = 1 Select * from products WHERE product_id = 1 ;

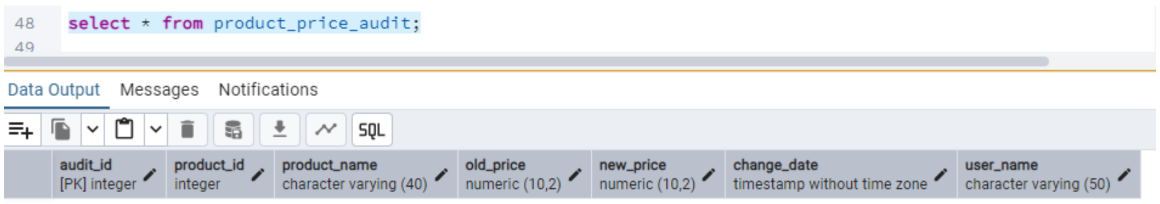


```
-- check the current value
select * from products WHERE product_id = 1 ;
```

Showing rows: 1 to 1 Page No: 1

	product_id [PK] smallint	product_name character varying (40)	supplier_id smallint	category_id smallint	quantity_per_unit character varying (20)	unit_price real	units_in_stock smallint	units_on_order smallint	reorder_level smallint	discontinued integer
1	1	Chai	8	1	10 boxes x 30 bags	18	39	0	10	1

Check the audit table-----EMPTY table select * from product_price_audit;

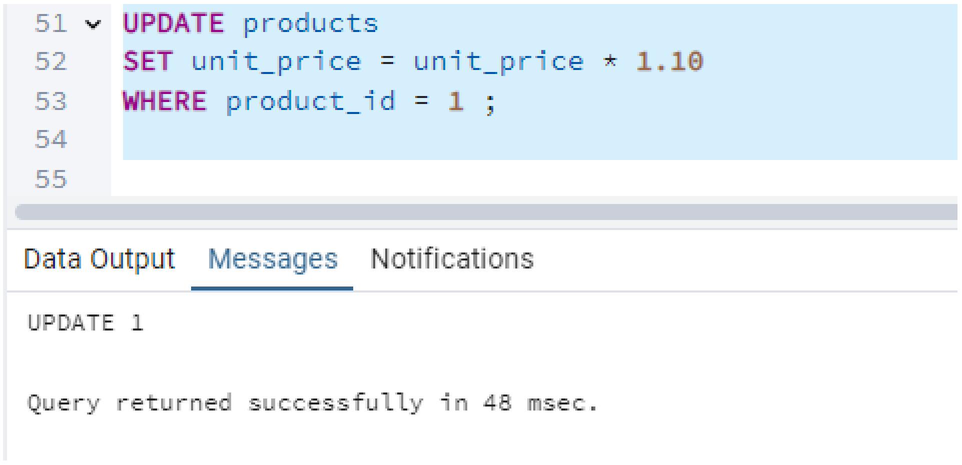


```
select * from product_price_audit;
```

	audit_id [PK] integer	product_id integer	product_name character varying (40)	old_price numeric (10,2)	new_price numeric (10,2)	change_date timestamp without time zone	user_name character varying (50)

Now update the unit_price for product_id =1

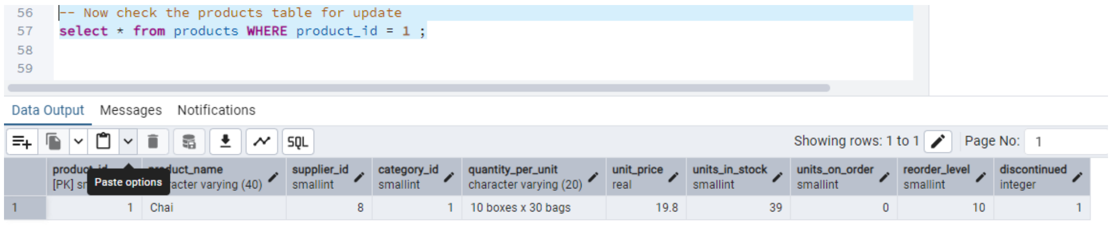
UPDATE products
SET unit_price = unit_price * 1.10
WHERE product_id = 1 ;



```
UPDATE products
SET unit_price = unit_price * 1.10
WHERE product_id = 1 ;
```

```
UPDATE 1

Query returned successfully in 48 msec.
```

Now check the products table for update select * from products WHERE product_id = 1 ;



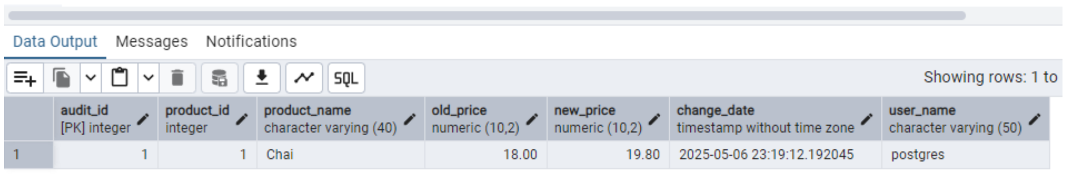
```
-- Now check the products table for update
select * from products WHERE product_id = 1 ;
```

Showing rows: 1 to 1 Page No: 1

	produc[illegible] [PK] s[illegible]	[illegible]uct_name [illegible]acter varying (40)	supplier_id smallint	category_id smallint	quantity_per_unit character varying (20)	unit_price real	units_in_stock smallint	units_on_order smallint	reorder_level smallint	discontinued integer
1	1	Chai	8	1	10 boxes x 30 bags	19.8	39	0	10	1

Now check the audit table also for updates

select * from product_price_audit;

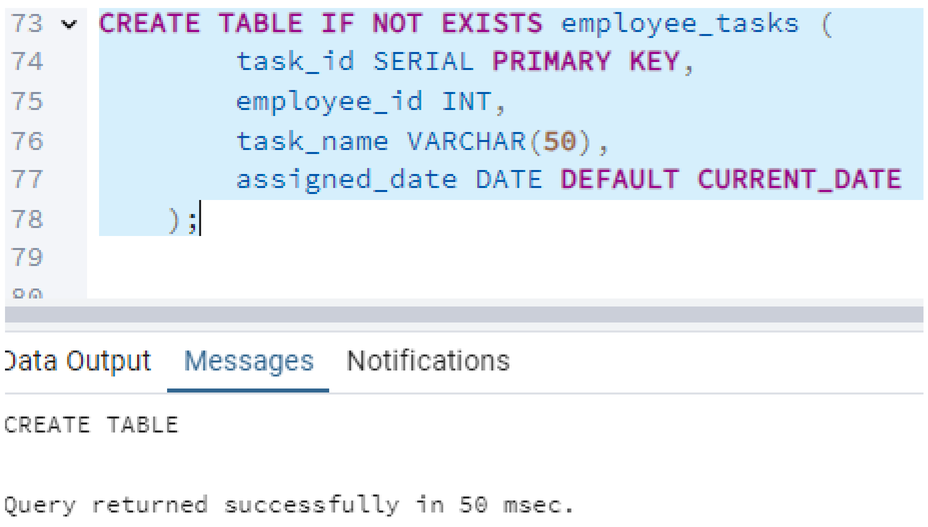


Showing rows: 1 to

	audit_id [PK] integer	product_id integer	product_name character varying (40)	old_price numeric (10,2)	new_price numeric (10,2)	change_date timestamp without time zone	user_name character varying (50)
1	1	1	Chai	18.00	19.80	2025-05-06 23:19:12.192045	postgres

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

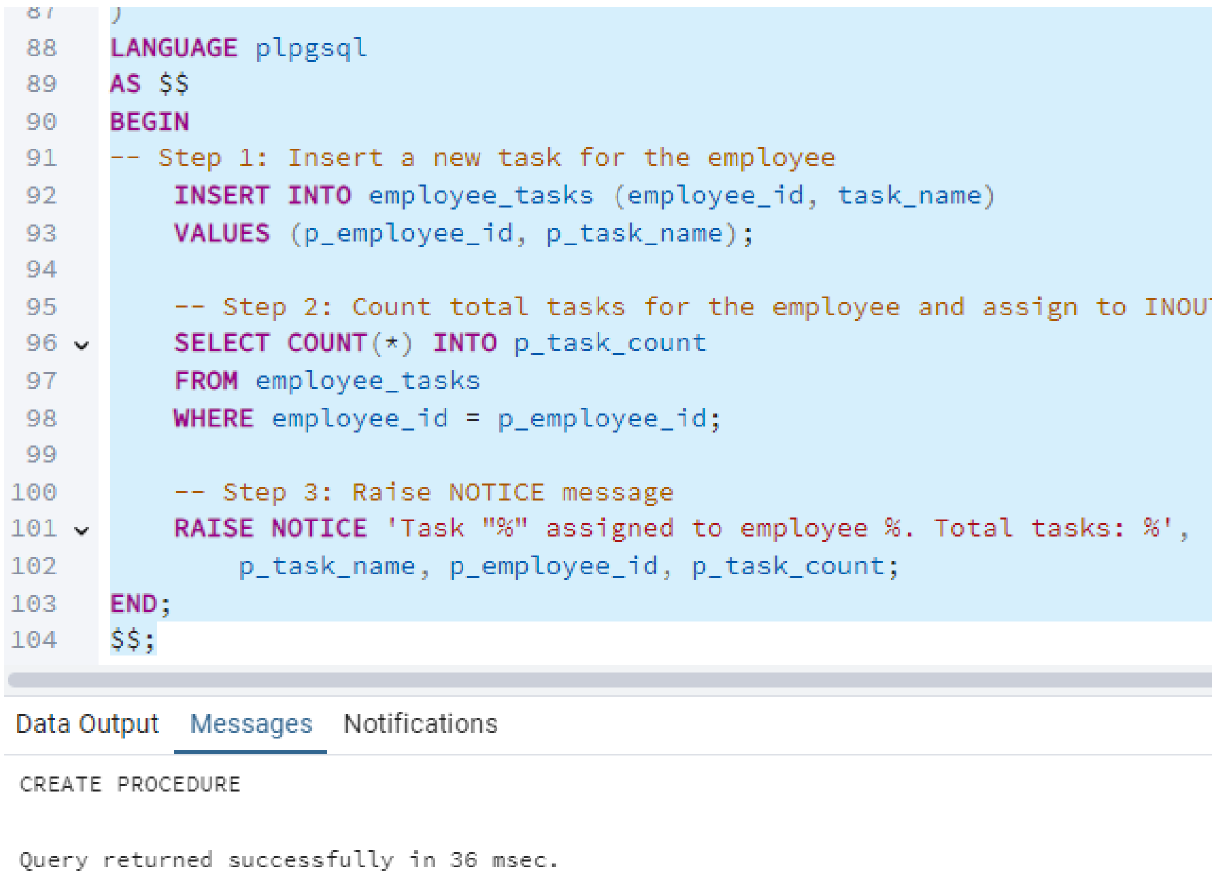
Step 1: Create table employee_tasks



```
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
    );
```

```
CREATE TABLE

Query returned successfully in 50 msec.
```

Step 2: Create a Stored Procedure



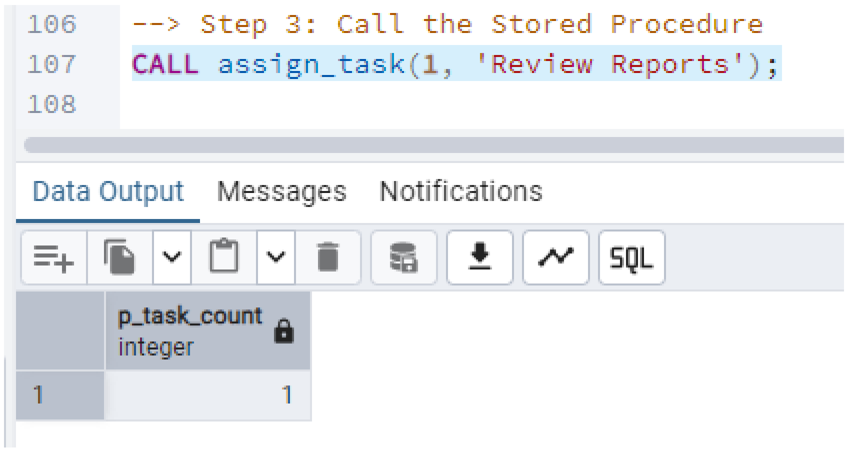
```
)
LANGUAGE plpgsql
AS $$
BEGIN
-- Step 1: Insert a new task for the employee
    INSERT INTO employee_tasks (employee_id, task_name)
    VALUES (p_employee_id, p_task_name);

    -- Step 2: Count total tasks for the employee and assign to INOU
    SELECT COUNT(*) INTO p_task_count
    FROM employee_tasks
    WHERE employee_id = p_employee_id;

    -- Step 3: Raise NOTICE message
    RAISE NOTICE 'Task "%" assigned to employee %. Total tasks: %',
        p_task_name, p_employee_id, p_task_count;
END;
$$;
```

Data Output Messages Notifications

```
CREATE PROCEDURE

Query returned successfully in 36 msec.
```

Step 3: Call the Stored Procedure

CALL assign_task(1, 'Review Reports');

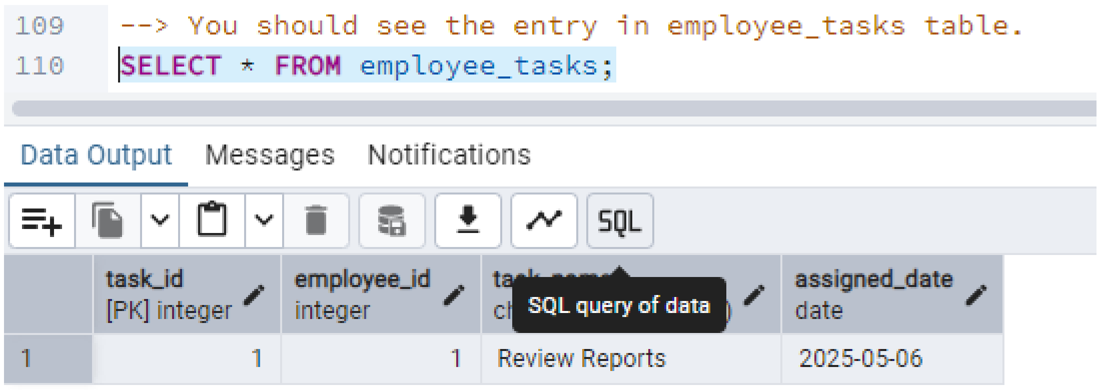


```
--> Step 3: Call the Stored Procedure
CALL assign_task(1, 'Review Reports');
```

Data Output Messages Notifications

	p_task_count integer
1	1

You should see the entry in employee_tasks table.



```
--> You should see the entry in employee_tasks table.
SELECT * FROM employee_tasks;
```

	task_id [PK] integer	employee_id integer	ta ch	assigned_date date
1	1	1	Review Reports	2025-05-06