

**Group No :- 18**  
**Vaghasiya Nikhil (i.d. :- 202003042)**  
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**Lab No.: 11(15-11-2021)**  
**Dairy product management system**

**Triggers :**

**❖ Trigger 1 :**

```
SET SEARCH_PATH TO DAIRY_MANAGEMANT_SYSTEM;

CREATE FUNCTION BILLING() RETURNS TRIGGER AS $A$
DECLARE
R1 RECORD;
R2 RECORD;
NUM INTEGER;
BEGIN
IF TG_OP='DELETE' OR TG_OP='UPDATE' THEN
    SELECT P_UNIT_PRICE , P_TAX , P_PROFIT, P_QUANTITY INTO R1
    FROM PRODUCT WHERE PRODUCT_ID=OLD.I_PRODUCT_ID;

    R1.P_UNIT_PRICE=R1.P_UNIT_PRICE*OLD.I_QUANTITY;
    R1.P_TAX=R1.P_TAX*OLD.I_QUANTITY;
    R1.P_PROFIT=R1.P_PROFIT*OLD.I_QUANTITY;

    UPDATE BILL SET
    B_TOTAL_AMOUNT=B_TOTAL_AMOUNT-R1.P_UNIT_PRICE,
    B_TOTAL_TAX=B_TOTAL_TAX-R1.P_TAX
    WHERE BILL_ID=OLD.I_BILL_ID;

    UPDATE TRANSPORT SET
    T_TOTAL_AMOUNT=T_TOTAL_AMOUNT-R1.P_UNIT_PRICE
    WHERE T_BILL_ID=OLD.I_BILL_ID;

    UPDATE PRODUCT SET
    P_QUANTITY=P_QUANTITY+OLD.I_QUANTITY
    WHERE PRODUCT_ID=OLD.I_PRODUCT_ID;

    SELECT O_CODE, B_DATE INTO R2 FROM BILL WHERE
    BILL_ID=OLD.I_BILL_ID;

    UPDATE SELLING_REPORT SET
    SR_TOTAL_QUANTITY=SR_TOTAL_QUANTITY-OLD.I_QUANTITY,
```

```

SR_TOTAL_AMOUNT=SR_TOTAL_AMOUNT-R1.P_UNIT_PRICE,
SR_TOTAL_PROFIT=SR_TOTAL_PROFIT-R1.P_PROFIT
WHERE SR_DATE=R2.B_DATE AND
SR_PRODUCT_CODE=OLD.I_PRODUCT_ID AND SR_OUTLET_CODE=R2.O_CODE;
RAISE NOTICE 'DELETE';

END IF;

IF TG_OP='INSERT' OR TG_OP='UPDATE' THEN
    SELECT P_UNIT_PRICE , P_TAX , P_PROFIT, P_QUANTITY INTO R1
    FROM PRODUCT WHERE PRODUCT_ID=NEW.I_PRODUCT_ID;

    IF R1.P_QUANTITY<NEW.I_QUANTITY THEN
        RAISE EXCEPTION 'INVALIDE QUANTITY';
    END IF;

    R1.P_UNIT_PRICE=R1.P_UNIT_PRICE*NEW.I_QUANTITY;
    R1.P_TAX=R1.P_TAX*NEW.I_QUANTITY;
    R1.P_PROFIT=R1.P_PROFIT*NEW.I_QUANTITY;

    UPDATE BILL SET
    B_TOTAL_AMOUNT=B_TOTAL_AMOUNT+R1.P_UNIT_PRICE,
    B_TOTAL_TAX=B_TOTAL_TAX+R1.P_TAX
    WHERE BILL_ID=NEW.I_BILL_ID;

    UPDATE TRANSPORT SET
    T_TOTAL_AMOUNT=T_TOTAL_AMOUNT+R1.P_UNIT_PRICE
    WHERE T_BILL_ID=NEW.I_BILL_ID;

    UPDATE PRODUCT SET
    P_QUANTITY=P_QUANTITY-NEW.I_QUANTITY
    WHERE PRODUCT_ID=NEW.I_PRODUCT_ID;

    SELECT O_CODE, B_DATE INTO R2 FROM BILL WHERE
BILL_ID=NEW.I_BILL_ID;

    SELECT COUNT(*) INTO NUM FROM SELLING_REPORT
    WHERE SR_DATE=R2.B_DATE AND
SR_PRODUCT_CODE=NEW.I_PRODUCT_ID AND SR_OUTLET_CODE=R2.O_CODE;

    IF NUM=0 THEN
        INSERT INTO SELLING_REPORT VALUES
(NEW.I_QUANTITY,R1.P_UNIT_PRICE,R1.P_PROFIT,R2.B_DATE,NEW.I_PRODUCT_ID,R2.O_CODE);
        RAISE NOTICE 'INSERT';
    END IF;

```

```

        ELSE
            UPDATE SELLING_REPORT SET

SR_TOTAL_QUANTITY=SR_TOTAL_QUANTITY+NEW.I_QUANTITY,
SR_TOTAL_AMOUNT=SR_TOTAL_AMOUNT+R1.P_UNIT_PRICE,
SR_TOTAL_PROFIT=SR_TOTAL_PROFIT+R1.P_PROFIT
WHERE SR_DATE=R2.B_DATE AND
SR_PRODUCT_CODE=NEW.I_PRODUCT_ID AND SR_OUTLET_CODE=R2.O_CODE;
RAISE NOTICE 'UPDATE';
        END IF;
    END IF;

    RETURN NULL;

END;
$A$ LANGUAGE plpgsql;

CREATE TRIGGER TRIGGER_TEMP1 AFTER DELETE OR INSERT OR UPDATE ON
INCLUDE_PRODUCT
FOR EACH ROW EXECUTE PROCEDURE BILLING();

```

**❖ Output :**

pgAdmin 4

Servers (3)    Databases (1)    Casts    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

Query Editor    Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output    Explain    Messages    Notifications

	b_total_amount	b_total_tax	b_date
1	60	0.5	2000-05-10

Successfully run. Total query runtime: 139 msec. 1 rows affected.

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Servers (3)    Databases (1)    Casts    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

Query Editor    Query History

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1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output    Explain    Messages    Notifications

	p.quantity
1	85

Successfully run. Total query runtime: 142 msec. 1 rows affected.

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Servers (3)    Databases (1)    Casts    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
```

Data Output Explain Messages Notifications

	sr_total_amount	sr_total_quantity	sr_total_profit
1	10	1	1

Successfully run. Total query runtime: 138 msec. 1 rows affected.

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Servers (3)    MC212    Databases (1)    Casts    Catalogs    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
```

Data Output Explain Messages Notifications

	total_amount
1	40

Successfully run. Total query runtime: 130 msec. 1 rows affected.

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Servers (3) | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | billing() | set\_date() | Types | Views | public | quiz3\_company | xt | Subscriptions | Login/Group Roles

Query Editor | Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output | Explain | Messages | Notifications

NOTICE: UPDATE  
INSERT 0 1

Query returned successfully in 131 msec.

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Servers (3) | MC212 | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | billing() | set\_date() | Types | Views | public | quiz3\_company | xt | Subscriptions | Login/Group Roles

Query Editor | Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
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6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
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11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output | Explain | Messages | Notifications

b_total_amount	b_total_tax
double precision	real
1	70
	1

✓ Successfully run. Total query runtime: 126 msec. 1 rows affected.

pgAdmin 4

Servers (3) MC212 Databases (1) postres

- Databases (1)
  - postres

Query Editor    Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
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8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
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12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output Explain Messages Notifications

p.quantity	integer
	84

Successfully run. Total query runtime: 190 msec. 1 rows affected.

pgAdmin 4

Servers (3) MC212 Databases (1) postres

- Databases (1)
  - postres

Query Editor    Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output Explain Messages Notifications

sr.total_amount	double precision	sr.total_quantity	integer	sr.total_profit	real
	1	20	2	2	2

Successfully run. Total query runtime: 125 msec. 1 rows affected.

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Servers (3) | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | billing() | set\_date() | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents trigger.sql DML.sql DDL.sql postgres/postgres@MC212 \* DDL.sql

Query Editor Query History

```
1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
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3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
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6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
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12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
```

Data Output Explain Messages Notifications

t_total_amount	double precision
1	50

Successfully run. Total query runtime: 122 msec. 1 rows affected.

Type here to search

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pgAdmin 4

Servers (3) | MC212 | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | billing() | set\_date() | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents trigger.sql DML.sql DDL.sql postgres/postgres@MC212 \* DDL.sql

Query Editor Query History

```
1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
```

NOTICE: DELETE  
DELETE 1

Query returned successfully in 125 msec.

Type here to search

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pgAdmin 4

Servers (3) MC212 Databases (1) postgres Casts Catalogs Event Triggers Extensions Foreign Data Wrappers Languages Publications Schemas (6) acad company dairy.management\_system Collations Domains FTS Configurations FTS Dictionaries Aa FTS Parsers FTS Templates Foreign Tables Functions Materialized Views Procedures Sequences Tables Trigger Functions (2) billing() setDate() Types Views public quiz3\_company xit Subscriptions Login/Group Roles

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents trigger.sql DML.sql DDL.sql

Query Editor Query History

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3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
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14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
```

Data Output Explain Messages Notifications

	b_total_amount	b_total_tax
1	60	0.5

Successfully run. Total query runtime: 141 msec. 1 rows affected.

Type here to search

22°C Smoke 0243 PM 15-11-2021

The screenshot shows the pgAdmin 4 interface. On the left, the 'Servers' tree view is expanded to show 'MC212' and its 'dairy.management\_system' database. The 'Tables' node under the database is selected. In the center, the 'Query Editor' tab is active, displaying a multi-line SQL script. The script performs several database operations: setting the search path, selecting data from BILL, PRODUCT, SELLING\_REPORT, and TRANSPORT tables, inserting a row into INCLUDE\_PRODUCT, deleting a row from INCLUDE\_PRODUCT, and finally performing another set of selects. Below the editor, the 'Data Output' tab is selected, showing a single row of results in a table. The first column is empty, the second is 'b\_total\_amount' with value '60', and the third is 'b\_total\_tax' with value '0.5'. A green success message at the bottom right indicates the query was run successfully with a runtime of 141 msec and affected 1 row. The system tray at the bottom right shows the date and time as 15-11-2021, 0243 PM, and the temperature as 22°C.

pgAdmin 4

Servers (3)    Databases (1)    Casts    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    billing()    set\_date()    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output Explain Messages Notifications

	p.quantity
1	85

Successfully run. Total query runtime: 118 msec. 1 rows affected.

pgAdmin 4

Servers (3)    MC212    Databases (1)    Casts    Catalogs    Event Triggers    Extensions    Foreign Data Wrappers    Languages    Publications    Schemas (6)    acad    company    dairy.management\_system    Collations    Domains    FTS Configurations    FTS Dictionaries    Aa FTS Parsers    FTS Templates    Foreign Tables    Functions    Materialized Views    Procedures    Sequences    Tables    Trigger Functions (2)    billing()    set\_date()    Types    Views    public    quiz3\_company    xit    Subscriptions    Login/Group Roles

```

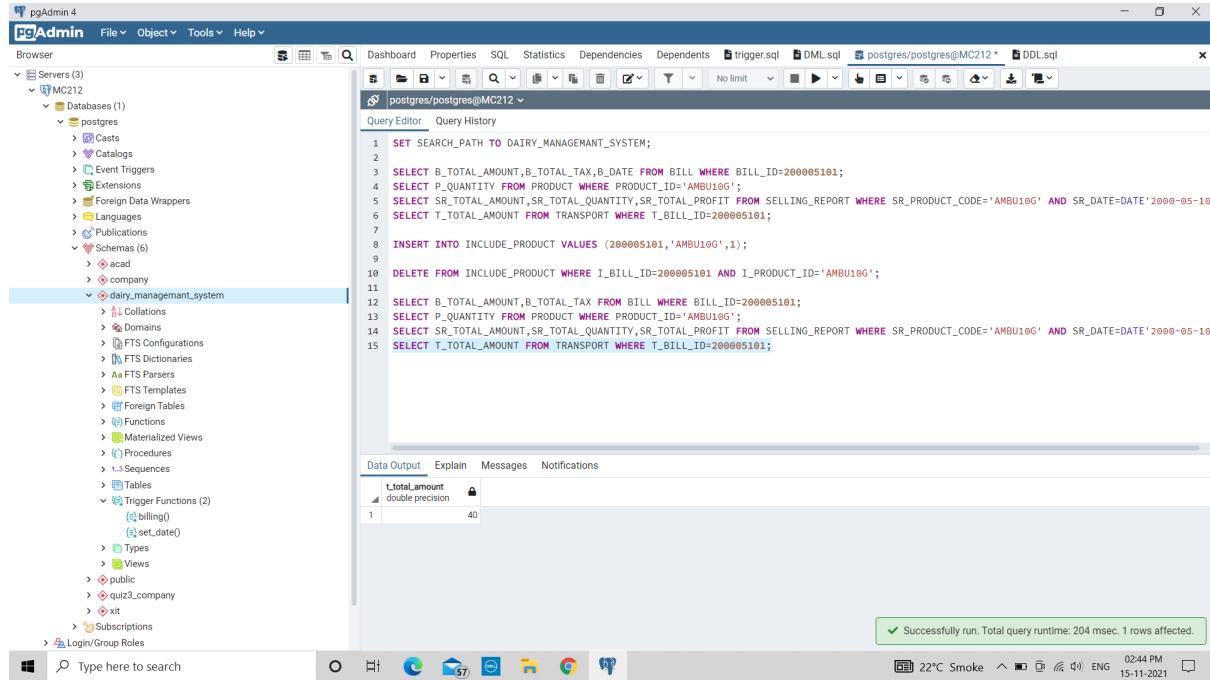
1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX,B_DATE FROM BILL WHERE BILL_ID=200005101;
4 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
5 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
6 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;
7
8 INSERT INTO INCLUDE_PRODUCT VALUES (200005101,'AMBU10G',1);
9
10 DELETE FROM INCLUDE_PRODUCT WHERE T_BILL_ID=200005101 AND I_PRODUCT_ID='AMBU10G';
11
12 SELECT B_TOTAL_AMOUNT,B_TOTAL_TAX FROM BILL WHERE BILL_ID=200005101;
13 SELECT P_QUANTITY FROM PRODUCT WHERE PRODUCT_ID='AMBU10G';
14 SELECT SR_TOTAL_AMOUNT,SR_TOTAL_QUANTITY,SR_TOTAL_PROFIT FROM SELLING_REPORT WHERE SR_PRODUCT_CODE='AMBU10G' AND SR_DATE=DATE'2000-05-10'
15 SELECT T_TOTAL_AMOUNT FROM TRANSPORT WHERE T_BILL_ID=200005101;

```

Data Output Explain Messages Notifications

	sr_total_amount	sr_total_quantity	sr_total_profit
1	10	1	1

Successfully run. Total query runtime: 128 msec. 1 rows affected.



### ❖ Trigger 2:

```
CREATE FUNCTION SET_DATE() RETURNS TRIGGER AS $A$  
BEGIN
```

```
    IF TG_TABLE_NAME='worker' THEN  
        NEW.W_JOINING_DATE=CURRENT_DATE;  
    ELSEIF TG_TABLE_NAME='bill' THEN  
        NEW.B_DATE=CURRENT_DATE;  
    ELSEIF TG_TABLE_NAME='transport' THEN  
        NEW.T_DATE=CURRENT_DATE;  
    ELSEIF TG_TABLE_NAME='selling_report' THEN  
        NEW.SR_DATE=CURRENT_DATE;  
    ELSEIF TG_TABLE_NAME='purchase_report' THEN  
        NEW.PR_DATE=CURRENT_DATE;  
    END IF;  
    RAISE NOTICE '%',TG_TABLE_NAME;  
    RETURN NEW;
```

```
END;
```

```
$A$ LANGUAGE plpgsql;
```

```
CREATE TRIGGER TRIGGER_TEMP2 BEFORE INSERT ON WORKER  
FOR EACH ROW EXECUTE PROCEDURE SET_DATE();
```

```
CREATE TRIGGER TRIGGER_TEMP2 BEFORE INSERT ON BILL  
FOR EACH ROW EXECUTE PROCEDURE SET_DATE();
```

```
CREATE TRIGGER TRIGGER_TEMP2 BEFORE INSERT ON TRANSPORT
```

FOR EACH ROW EXECUTE PROCEDURE SET\_DATE();

CREATE TRIGGER TRIGGER\_TEMP2 BEFORE INSERT ON SELLING\_REPORT  
FOR EACH ROW EXECUTE PROCEDURE SET\_DATE();

CREATE TRIGGER TRIGGER\_TEMP2 BEFORE INSERT ON PURCHASE\_REPORT  
FOR EACH ROW EXECUTE PROCEDURE SET\_DATE();

### ❖ Output:

The screenshot displays two instances of pgAdmin 4. Both instances show a connection to the 'postgres' database on 'MC212'. The left instance shows the execution of a script containing 14 SQL statements. The right instance shows the results of the same script, including notices and a success message. The bottom part of the screenshot shows the data inserted into the 'BILL' table.

**Script Content (Left Instance):**

```
1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 INSERT INTO BILL VALUES (200711100,'CASH',30,1.6,DATE'2007-11-15',9764563421,'GD3');
4 INSERT INTO SELLING_REPORT VALUES (53,1855,148,4,DATE'2008-02-01','SEB6.9','GD1');
5 INSERT INTO PURCHASE_REPORT VALUES (DATE'2008-09-12','CASH',5500,10001010,'GD1');
6 INSERT INTO TRANSPORT VALUES (19801,'HARSH','PATEL',DATE'2008-05-10','SHAPAR, RAJKOT',50,'HARSH','RAMAVAT',9030104011,200711100,22);
7 INSERT INTO WORKER VALUES (33,'SURESH','JANJANIYA','AMBEDKAR HALL 150FT RING ROAD RAJKOT',DATE'1979-10-10',DATE'2004-05-01',12000);
8
9
10 SELECT *FROM BILL WHERE B_DATE=CURRENT_DATE;
11 SELECT *FROM TRANSPORT WHERE T_DATE=CURRENT_DATE;
12 SELECT *FROM SELLING_REPORT WHERE SR_DATE=CURRENT_DATE;
13 SELECT *FROM PURCHASE_REPORT WHERE PR_DATE=CURRENT_DATE;
14 SELECT *FROM WORKER WHERE W_JOINING_DATE=CURRENT_DATE;
```

**Execution Results (Left Instance):**

```
NOTICE: bill
NOTICE: selling_report
NOTICE: purchase_report
NOTICE: transport
NOTICE: worker
INSERT 0 1

Query returned successfully in 125 msec.
```

**Execution Results (Right Instance):**

```
✓ Query returned successfully in 125 msec.
```

**BILL Table Data (Bottom):**

bill_id	b.payment_type	b.total_amount	b.total_tax	b.date	c.mo_no	o.code
1	CASH	30	1.6	2021-11-15	9764563421	GD3

pgAdmin 4

Servers (3) | Databases (1) | Casts | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

File | Object | Tools | Help

Dashboard | Properties | SQL | Statistics | Dependencies | Dependents | trigger.sql | DML.sql | postgres/postgres@MC212 \* | DDL.sql

Query Editor | Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 INSERT INTO BILL VALUES ('200711100','CASH',30,1.6,DATE'2007-11-15',9764563421,'GD3');
4 INSERT INTO SELLING_REPORT VALUES (53,1855,148.4,DATE'2008-02-01','SEB6.9','GD1');
5 INSERT INTO PURCHASE_REPORT VALUES (DATE'2008-09-12','CASH',5500,10001010,'GD1');
6 INSERT INTO TRANSPORT VALUES (19001,'HARSH','PATEL',DATE'2008-05-10','SHAPAR, RAJKOT',50,'HARSH','RAMAVAT',9030104011,200711100,22);
7 INSERT INTO WORKER VALUES (33,'SURESH','JANJANIYA','AAMBEDKAR-HALL 150FT RING ROAD RAJKOT',DATE'1979-10-10',DATE'2004-05-01',12000);

8
9
10 SELECT *FROM BILL WHERE B_DATE=CURRENT_DATE;
11 SELECT *FROM TRANSPORT WHERE T_DATE=CURRENT_DATE;
12 SELECT *FROM SELLING_REPORT WHERE SR_DATE=CURRENT_DATE;
13 SELECT *FROM PURCHASE_REPORT WHERE PR_DATE=CURRENT_DATE;
14 SELECT *FROM WORKER WHERE W_JOINING_DATE=CURRENT_DATE;

```

Data Output Explain Messages Notifications

transport_id	driver_first_name	driver_last_name	t_date	address_text	t_total_amount	merchant_first_name	merchant_last_name	merch_name
1	19001	HARSH	PATEL	2021-11-15	SHAPAR, RA...	50	HARSH	RAMAVAT

Successfully run. Total query runtime: 133 msec. 1 rows affected.

pgAdmin 4

Servers (3) | MC212 | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

File | Object | Tools | Help

Dashboard | Properties | SQL | Statistics | Dependencies | Dependents | trigger.sql | DML.sql | postgres/postgres@MC212 \* | DDL.sql

Query Editor | Query History

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 INSERT INTO BILL VALUES ('200711100','CASH',30,1.6,DATE'2007-11-15',9764563421,'GD3');
4 INSERT INTO SELLING_REPORT VALUES (53,1855,148.4,DATE'2008-02-01','SEB6.9','GD1');
5 INSERT INTO PURCHASE_REPORT VALUES (DATE'2008-09-12','CASH',5500,10001010,'GD1');
6 INSERT INTO TRANSPORT VALUES (19001,'HARSH','PATEL',DATE'2008-05-10','SHAPAR, RAJKOT',50,'HARSH','RAMAVAT',9030104011,200711100,22);
7 INSERT INTO WORKER VALUES (33,'SURESH','JANJANIYA','AAMBEDKAR-HALL 150FT RING ROAD RAJKOT',DATE'1979-10-10',DATE'2004-05-01',12000);

8
9
10 SELECT *FROM BILL WHERE B_DATE=CURRENT_DATE;
11 SELECT *FROM TRANSPORT WHERE T_DATE=CURRENT_DATE;
12 SELECT *FROM SELLING_REPORT WHERE SR_DATE=CURRENT_DATE;
13 SELECT *FROM PURCHASE_REPORT WHERE PR_DATE=CURRENT_DATE;
14 SELECT *FROM WORKER WHERE W_JOINING_DATE=CURRENT_DATE;

```

Data Output Explain Messages Notifications

sr_total_quantity	sr_total_amount	sr_total_profit	sr_date	sr_product_code	sr_outlet_code	
1	53	1855	148.4	2021-11-15	SEB6.9	GD1

Successfully run. Total query runtime: 82 msec. 1 rows affected.

**pgAdmin 4**

Servers (3) MC212 Databases (1) postres Casts Catalogs Event Triggers Extensions Foreign Data Wrappers Languages Publications Schemas (6) acad company dairy\_management\_system Collations Domains FTS Configurations FTS Dictionaries Aa FTS Parsers FTS Templates Foreign Tables Functions Materialized Views Procedures Sequences Tables Trigger Functions (2) billing() set\_date Types Views public quiz3\_company xit Subscriptions Login/Group Roles

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 INSERT INTO BILL VALUES ('200711100','CASH',30,1.6,DATE'2007-11-15',9764563421,'GD3');
4 INSERT INTO SELLING_REPORT VALUES (53,1855,148.4,DATE'2008-02-01','SEB6.9','GD1');
5 INSERT INTO PURCHASE_REPORT VALUES (DATE'2008-09-12','CASH',5500,10001010,'GD1');
6 INSERT INTO TRANSPORT VALUES (19001,'HARSH','PATEL',DATE'2008-05-10','SHAPAR, RAJKOT',50,'HARSH','RAMAVAT',9030104011,200711100,22);
7 INSERT INTO WORKER VALUES (33,'SURESH','JANJANIYA','AAMBEDKAR-HALL 156FT RING ROAD RAJKOT',DATE'1979-10-10',DATE'2004-05-01',12000);

8
9
10 SELECT *FROM BILL WHERE B_DATE=CURRENT_DATE;
11 SELECT *FROM TRANSPORT WHERE T_DATE=CURRENT_DATE;
12 SELECT *FROM SELLING_REPORT WHERE SR_DATE=CURRENT_DATE;
13 SELECT *FROM PURCHASE_REPORT WHERE PR_DATE=CURRENT_DATE;
14 SELECT *FROM WORKER WHERE W_JOINING_DATE=CURRENT_DATE;

```

Data Output Explain Messages Notifications

pr_date	payment_type	pr_total_amount	seller_id	outlet_code
2021-11-15	CASH	5500	10001010	GD1

Successfully run. Total query runtime: 137 msec. 1 rows affected.

22°C Smoke 02:54 PM 15-11-2021

**pgAdmin 4**

Servers (3) MC212 Databases (1) postres Casts Catalogs Event Triggers Extensions Foreign Data Wrappers Languages Publications Schemas (6) acad company dairy\_management\_system Collations Domains FTS Configurations FTS Dictionaries Aa FTS Parsers FTS Templates Foreign Tables Functions Materialized Views Procedures Sequences Tables Trigger Functions (2) billing() set\_date Types Views public quiz3\_company xit Subscriptions Login/Group Roles

```

1 SET SEARCH_PATH TO DAIRY_MANAGEMENT_SYSTEM;
2
3 INSERT INTO BILL VALUES ('200711100','CASH',30,1.6,DATE'2007-11-15',9764563421,'GD3');
4 INSERT INTO SELLING_REPORT VALUES (53,1855,148.4,DATE'2008-02-01','SEB6.9','GD1');
5 INSERT INTO PURCHASE_REPORT VALUES (DATE'2008-09-12','CASH',5500,10001010,'GD1');
6 INSERT INTO TRANSPORT VALUES (19001,'HARSH','PATEL',DATE'2008-05-10','SHAPAR, RAJKOT',50,'HARSH','RAMAVAT',9030104011,200711100,22);
7 INSERT INTO WORKER VALUES (33,'SURESH','JANJANIYA','AAMBEDKAR-HALL 156FT RING ROAD RAJKOT',DATE'1979-10-10',DATE'2004-05-01',12000);

8
9
10 SELECT *FROM BILL WHERE B_DATE=CURRENT_DATE;
11 SELECT *FROM TRANSPORT WHERE T_DATE=CURRENT_DATE;
12 SELECT *FROM SELLING_REPORT WHERE SR_DATE=CURRENT_DATE;
13 SELECT *FROM PURCHASE_REPORT WHERE PR_DATE=CURRENT_DATE;
14 SELECT *FROM WORKER WHERE W_JOINING_DATE=CURRENT_DATE;

```

Data Output Explain Messages Notifications

worker_id	w_first_name	w_last_name	w_address	w_birth_date	w_joining_date	w_salary
33	SURESH	JANJANIYA	AAMBEDKAR-H...	1979-10-10	2021-11-15	12000

Successfully run. Total query runtime: 133 msec. 1 rows affected.

22°C Smoke 02:54 PM 15-11-2021

## Views :

### ❖ View 1:

```
SET SEARCH_PATH TO DAIRY_MANAGEMANT_SYSTEM;
```

### ❖ View 2:

```
CREATE VIEW WORKER_VIEW AS
SELECT WORKER_ID,W_FIRST_NAME || '' || W_LAST_NAME AS
NAME,W_ADDRESS AS ADDRESS,W_BIRTH_DATE AS
BIRTH_DATE,W_JOINING_DATE AS JOINING_DATE FROM WORKER;
```

❖ View 3:

```
CREATE VIEW MANAGER_VIEW AS  
SELECT M_WORKER_ID AS MANAGER_ID,M_USER_NAME AS USER_NAME  
FROM MANAGER;
```

❖ View 4:

```
CREATE VIEW PRODUCT_VIEW AS  
SELECT P_NAME AS PRODUCT_NAME,P_COMPANY_NAME AS  
PRODUCT_COMPANY,P_TAX AS GST_TAX,P_UNIT_PRICE AS PRICE,P_QUANTITY  
AS TOTAL_PRESENT_QUANTITY,P_SELLER_ID AS SELLER_ID FROM PRODUCT;
```

❖ View 5:

```
CREATE VIEW CUSTOMER_BILLED_PRODUCTS AS  
SELECT C_FIRST_NAME || '' || C_LAST_NAME AS NAME,C_LOCALITY || '' ||  
C_CITY || ' PINCODE - ' || C_PINCODE AS ADDRESS,C_MOBILE_NO AS  
MOBILE_NO,  
R1.P_NAME AS PRODUCT_NAME,R1.P_COMPANY_NAME AS  
PRODUCT_COMPANY,  
R1.BILL_ID,R1.B_TOTAL_AMOUNT AS TOTAL_PAYMENT,R1.B_PAYMENT_TYPE  
AS PAYMENT_TYPE FROM  
CUSTOMER JOIN (SELECT *FROM BILL JOIN  
(SELECT *FROM INCLUDE_PRODUCT JOIN PRODUCT ON  
I_PRODUCT_ID=PRODUCT_ID) AS R2 ON BILL_ID=R2.I_BILL_ID)  
AS R1 ON C_MOBILE_NO=C_MO_NO;
```

❖ View 6:

```
CREATE VIEW CUSTOMER_FEEDBACK AS  
SELECT C_FIRST_NAME || '' || C_LAST_NAME AS NAME,C_LOCALITY || '' ||  
C_CITY || ' PINCODE - ' || C_PINCODE AS ADDRESS,C_MOBILE_NO AS  
MOBILE_NO,  
P_NAME AS PRODUCT_NAME,P_COMPANY_NAME AS PRODUCT_COMPANY,  
F_TITLE AS FEEDBACK_TITLE,F_RATING AS RATING,F_COMMENT AS  
COMMENT FROM CUSTOMER JOIN (SELECT *FROM FEEDBACK JOIN PRODUCT  
ON F_TITLE=PRODUCT_ID) AS R1 ON C_MOBILE_NO=CUSTOMER_MO_NO;
```

❖ View 7:

```
CREATE VIEW WORKER_OUTLET AS  
SELECT WORKER_ID,W_FIRST_NAME || '' || W_LAST_NAME AS NAME,  
OUTLET_CODE,O_ADDRESS AS OUTLET_ADDRESS FROM WORKER JOIN  
(SELECT *FROM WORKING JOIN OUTLET ON W_OUTLET_ID=OUTLET_CODE) AS  
R ON WORKER_ID=W_WORKER_ID;
```

❖ View 8:

```
CREATE VIEW TRANSPORT_PRODUCT AS
```

```

SELECT TRANSPORT_ID, DRIVER_FIRST_NAME || '' || DRIVER_LAST_NAME AS
DRIVER_NAME, T_DATE AS TRANSPORT_DATE, ADDRESS,
MERCHANT_FIRST_NAME || '' || MERCHANT_LAST_NAME AS
MERCHANT_NAME, MERCHANT_MO_NO AS MERCHANT_MOBILE_NUMBER,
R1.P_NAME AS PRODUCT_NAME,R1.P_COMPANY_NAME AS
PRODUCT_COMPANY,
R1.BILL_ID,R1.B_TOTAL_AMOUNT AS TOTAL_PAYMENT,R1.B_PAYMENT_TYPE
AS PAYMENT_TYPE FROM TRANSPORT JOIN
(SELECT *FROM BILL JOIN (SELECT *FROM INCLUDE_PRODUCT JOIN PRODUCT
ON I_PRODUCT_ID=PRODUCT_ID) AS R2 ON BILL_ID=R2.I_BILL_ID)
AS R1 ON T_BILL_ID=BILL_ID;

```

### **Functions :**

#### **❖ Function 1:**

```

SET SEARCH_PATH TO dairy_managemant_system;
CREATE FUNCTION PROMOTION() RETURNS BOOL AS $A$
DECLARE
    R1 RECORD;
BEGIN
    FOR R1 IN SELECT *FROM WORKER WHERE
    (CURRENT_DATE-W_JOINING_DATE)/365>2
    LOOP
        UPDATE WORKER SET
        W_SALARY=W_SALARY+200*(CURRENT_DATE-W_JOINING_DATE)/365
        WHERE WORKER_ID=R1.WORKER_ID;
    END LOOP;
    RETURN TRUE;
END;
$A$ LANGUAGE plpgsql;

```

#### **❖ Output :**

pgAdmin 4

Servers (3) | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

Query Editor | Dashboard | Properties | SQL | Statistics | Dependencies | Dependents | trigger.sql | DML.sql | postgres/postg... | DDL.sql | function.sql

```

8 * LOOP
9     UPDATE WORKER SET
10        W_SALARY=W_SALARY+200*(CURRENT_DATE-W_JOINING_DATE)/365
11        WHERE WORKER_ID=R1.WORKER_ID;
12    END LOOP;
13    RETURN TRUE;
14 END;
15 $AS LANGUAGE plpgsql;
16
17
18 DROP FUNCTION PROMOTION
19 SELECT * FROM WORKER WHERE (CURRENT_DATE-W_JOINING_DATE)/365>2;
20 SELECT PROMOTION();

```

Data Output | Explain | Messages | Notifications

DROP FUNCTION

Query returned successfully in 168 msec.

✓ Query returned successfully in 168 msec.

Type here to search

22°C Smoke 02:56 PM 15-11-2021

pgAdmin 4

Servers (3) | Databases (1) | Casts | Catalogs | Event Triggers | Extensions | Foreign Data Wrappers | Languages | Publications | Schemas (6) | acad | company | dairy.management\_system | Collations | Domains | FTS Configurations | FTS Dictionaries | Aa FTS Parsers | FTS Templates | Foreign Tables | Functions | Materialized Views | Procedures | Sequences | Tables | Trigger Functions (2) | Types | Views | public | quiz3\_company | xit | Subscriptions | Login/Group Roles

Query Editor | Dashboard | Properties | SQL | Statistics | Dependencies | Dependents | trigger.sql | DML.sql | postgres/postg... | DDL.sql | function.sql

```

8 * LOOP
9     UPDATE WORKER SET
10        W_SALARY=W_SALARY+200*(CURRENT_DATE-W_JOINING_DATE)/365
11        WHERE WORKER_ID=R1.WORKER_ID;
12    END LOOP;
13    RETURN TRUE;
14 END;
15 $AS LANGUAGE plpgsql;
16
17
18 DROP FUNCTION PROMOTION
19 SELECT * FROM WORKER WHERE (CURRENT_DATE-W_JOINING_DATE)/365>2;
20 SELECT PROMOTION();

```

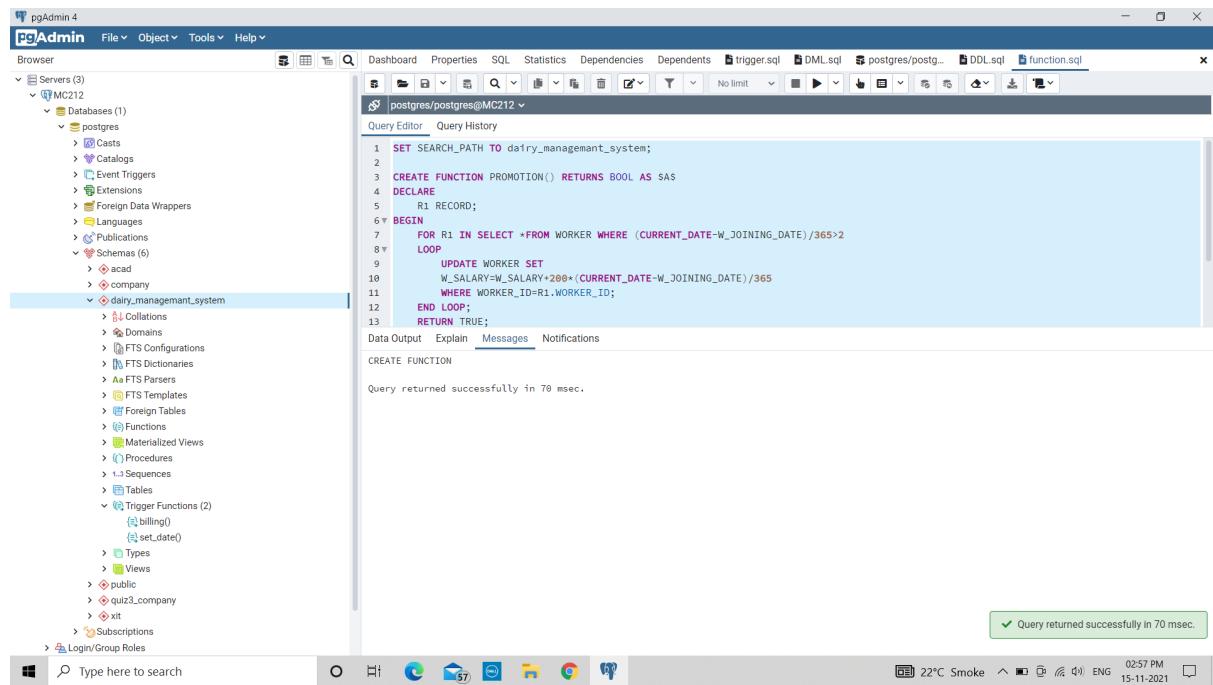
Data Output | Explain | Messages | Notifications

worker_id	w_first_name	w_last_name	w_address	w_birth_date	w_joining_date	w_salary	
1	21	JAY	PATEL	UMIYA-CHOWK...	1973-02-06	1999-05-01	95074
2	22	KARAN	KUNJERA	BALAJI-HALLC...	1979-01-05	1999-05-01	58848
3	23	SURESH	JANJANIYA	AAMBEDKARH...	1979-01-10	1999-05-01	54320
4	24	ARJUN	SINGH	BALAJI-HALLC...	1982-01-05	1999-05-01	54320
5	25	YASHIK	AGARWAL	NANA-MOVA M...	1989-01-02	2001-05-01	82238
6	26	RAJ	SHARMA	INDIRA CIRCLE...	1983-01-05	2001-05-01	8223
7	27	UTAM	PATEL	DHEBAR ROAD...	1983-04-17	2001-05-01	49343
8	29	LAUT	PATEL	MAVADI CHOW...	1983-05-19	2004-05-01	74022
9	30	JAY	THUMMAR	KOTHARIYA RO...	1983-04-17	2004-05-01	42291
10	31	ARJUN	SINGH	BALAJI-HALLC...	1982-01-05	2004-05-01	42291
11	1	YAGNIK	DETHARIYA	UMIYA-CHOWK...	1979-01-01	1999-05-01	[null]
12	32	SURESH	JANJANIYA	AAMBEDKARH...	1979-10-10	2004-05-01	45818

✓ Successfully run. Total query runtime: 157 msec. 12 rows affected.

Type here to search

22°C Smoke 02:56 PM 15-11-2021



```

CREATE OR REPLACE FUNCTION PROMOTION()
RETURNS boolean AS $$
DECLARE
    R1 WORKER%ROWTYPE;
BEGIN
    LOOP
        UPDATE WORKER SET
            W_SALARY=W_SALARY+200*(CURRENT_DATE-W_JOINING_DATE)/365
        WHERE WORKER_ID=R1.WORKER_ID;
        EXIT WHEN R1.WORKER_ID IS NULL;
    END LOOP;
    RETURN TRUE;
END;
$$ LANGUAGE plpgsql;

```

The screenshot shows the pgAdmin 4 interface with two windows. The top window displays the function definition and its execution results. The bottom window shows the same function definition and displays the updated data in the WORKER table.

worker_id	w_first_name	w_last_name	w_address	w_birth_date	w_joining_date	w_salary
1	YAGNICK	DETHARIYA	UMIYA-CHOWK...	1970-01-01	1999-05-01	[null]
2	SURESH	JANJANIYA	AAMBEDKARH...	1979-10-10	2004-05-01	49328
3	JAY	PATEL	UMIYA-CHOWK...	1973-02-06	1999-05-01	99585
4	KARAN	KUNJERA	BALAJI-HALLC...	1979-01-05	1999-05-01	63359
5	SURESH	JANJANIYA	AAMBEDKARH...	1979-01-10	1999-05-01	58831
6	ARJUN	SINGH	BALAJI-HALLC...	1982-01-05	1999-05-01	58831
7	YASHIK	AGARWAL	NANA-MOVA M...	1983-01-02	2001-05-01	86349
8	RAJ	SHARMA	INDIRA CIRCLE...	1983-01-05	2001-05-01	12334
9	UTAM	PATEL	DHEBAR ROAD...	1983-04-17	2001-05-01	53454
10	LALIT	PATEL	MAVADI CHOW...	1983-05-19	2004-05-01	77532
11	JAY	THUMMAR	KOTHARIYA RO...	1983-04-17	2004-05-01	45801
12	ARJUN	SINGH	BALAJI-HALLC...	1982-01-05	2004-05-01	45801

## Store Procedure:-

```

CREATE PROCEDURE PRO1(IN O1 VARCHAR(5),IN Y INTEGER,INOUT C1
INTEGER) LANGUAGE plpgsql AS $A$  

DECLARE  

    R1 RECORD;  

BEGIN  

    FOR R1 IN SELECT *FROM WORKER  

    LOOP

```

```

IF(R1.WORKER_ID IN (SELECT W_WORKER_ID FROM WORKING
WHERE W_OUTLET_ID=01) AND (CURRENT_DATE-R1.W_JOINING_DATE)/365>Y)
THEN

```

```

    C1=C1+1;
    END IF;
    END LOOP;
END; $A$;

```

The screenshot shows the pgAdmin 4 interface with the following details:

- Servers:** PostgreSQL 13 - postgres
- Databases:** postgres
- Query Editor:** Contains the following PostgreSQL code for a stored procedure named PRO1:
 

```

CREATE PROCEDURE PRO1(IN O1 VARCHAR(5),IN Y INTEGER,INOUT C1 INTEGER) LANGUAGE plpgsql AS $AS
DECLARE
  R1 RECORD;
BEGIN
  FOR R1 IN SELECT *FROM WORKER
  LOOP
    IF(R1.WORKER_ID IN (SELECT W_WORKER_ID FROM WORKING WHERE W_OUTLET_ID=01) AND (CURRENT_DATE-R1.W_JOINING_DATE)/365>Y) THEN
      C1=C1+1;
    END IF;
  END LOOP;
  END; $AS;
      
```
- Data Output:** Shows the result of the query `SELECT c1`:
 

c1
integer
1
4
- Status Bar:** Successfully run. Total query runtime: 101 msec. 1 rows affected.