NAME: CHETAN PRAKASH

UID: 23BCS13776

SECTION: 23_KRG_1(B)

DATE : 22-SEP-2025

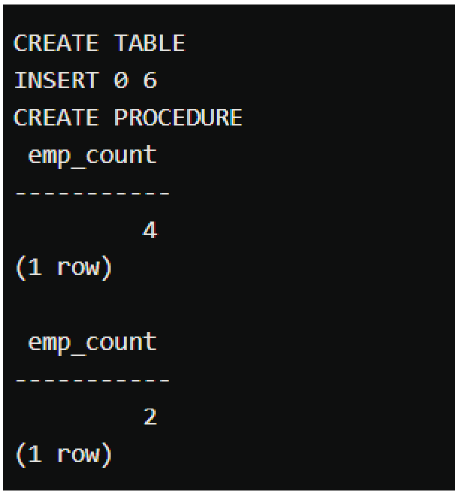
QUESTION 1: HR-Analytics: Employee count based on dynamic gender passing (Medium)

ANSWER:

```
CREATE TABLE employees (
   emp_id SERIAL PRIMARY KEY,
   emp_name TEXT NOT NULL,
   gender TEXT NOT NULL,
   department TEXT NOT NULL
);
INSERT INTO employees (emp_name, gender, department) VALUES
('Chetan', 'Male', 'IT'),
('Shivam', 'Male', 'Finance'),
('Yateen', 'Male', 'IT'),
('Amit', 'Male', 'Sales'),
('Anita', 'Female', 'HR'),
('Pooja', 'Female', 'Finance');

CREATE OR REPLACE PROCEDURE get_employee_count_by_gender(
   IN input_gender TEXT,
   OUT emp_count INT
)
LANGUAGE plpgsql
AS $$
BEGIN
   SELECT COUNT(*) INTO emp_count
   FROM employees
   WHERE gender = input_gender;
```

```
END;
$$;
CALL get_employee_count_by_gender('Male', NULL);
CALL get_employee_count_by_gender('Female', NULL);
```

OUTPUT:



```
CREATE TABLE
INSERT 0 6
CREATE PROCEDURE
 emp_count
-----------
         4
(1 row)

 emp_count
-----------
         2
(1 row)
```

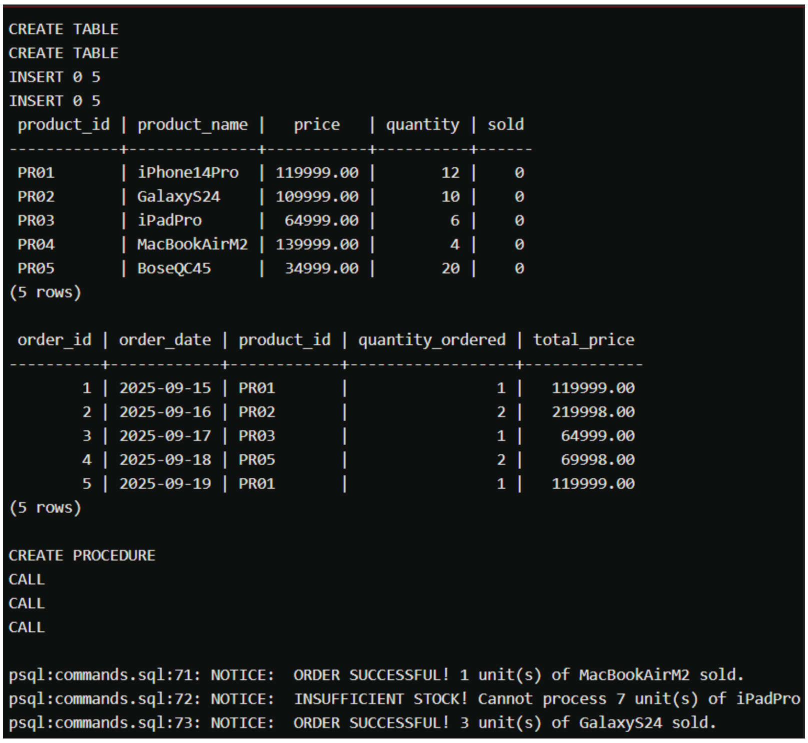
QUESTION 2: SmartStore Automated Purchase System (Hard)

ANSWER:

```
CREATE TABLE products (
   product_id VARCHAR(10) PRIMARY KEY,
   product_name VARCHAR(50) NOT NULL,
   price NUMERIC(10,2) NOT NULL,
   quantity INT NOT NULL,
   sold INT DEFAULT 0
);
CREATE TABLE orders (
   order_id SERIAL PRIMARY KEY,
   order_date DATE NOT NULL,
   product_id VARCHAR(10) NOT NULL,
   quantity_ordered INT NOT NULL,
   total_price NUMERIC(10,2) NOT NULL,
   FOREIGN KEY (product_id) REFERENCES products(product_id)
);
INSERT INTO products (product_id, product_name, price, quantity, sold) VALUES
```

```
('PR01', 'iPhone14Pro', 119999.00, 12, 0),
('PR02', 'GalaxyS24', 109999.00, 10, 0),
('PR03', 'iPadPro', 64999.00, 6, 0),
('PR04', 'MacBookAirM2', 139999.00, 4, 0),
('PR05', 'BoseQC45', 34999.00, 20, 0);

INSERT INTO orders (order_date, product_id, quantity_ordered, total_price) VALUES
('2025-09-15', 'PR01', 1, 119999.00),
('2025-09-16', 'PR02', 2, 219998.00),
('2025-09-17', 'PR03', 1, 64999.00),
('2025-09-18', 'PR05', 2, 69998.00),
('2025-09-19', 'PR01', 1, 119999.00);

SELECT * FROM products;
SELECT * FROM orders;
CREATE OR REPLACE PROCEDURE purchase_product(
    IN p_name VARCHAR,
    IN p_qty INT
)
LANGUAGE plpgsql
AS $$
DECLARE
    p_id VARCHAR(10);
    p_price NUMERIC(10,2);
    available_count INT;
BEGIN
    SELECT COUNT(*) INTO available_count
    FROM products
    WHERE product_name = p_name
      AND quantity >= p_qty;
    IF available_count > 0 THEN
        SELECT product_id, price INTO p_id, p_price
        FROM products
        WHERE product_name = p_name;
        INSERT INTO orders (order_date, product_id, quantity_ordered, total_price)
        VALUES (CURRENT_DATE, p_id, p_qty, (p_price * p_qty));

        UPDATE products
        SET quantity = quantity - p_qty,
            sold = sold + p_qty
        WHERE product_id = p_id;

        RAISE NOTICE 'ORDER SUCCESSFUL! % unit(s) of % sold.', p_qty, p_name;
    ELSE
        RAISE NOTICE 'INSUFFICIENT STOCK! Cannot process % unit(s) of %.', p_qty,
p_name;
    END IF;
END;
$$;
CALL purchase_product('MacBookAirM2', 1);
CALL purchase_product('iPadPro', 7);
CALL purchase_product('GalaxyS24', 3);
```

OUTPUT:



```
CREATE TABLE
CREATE TABLE
INSERT 0 5
INSERT 0 5
 product_id | product_name |   price   | quantity | sold
------------+--------------+-----------+----------+------
 PR01       | iPhone14Pro  | 119999.00 |       12 |    0
 PR02       | GalaxyS24    | 109999.00 |       10 |    0
 PR03       | iPadPro      |  64999.00 |        6 |    0
 PR04       | MacBookAirM2 | 139999.00 |        4 |    0
 PR05       | BoseQC45     |  34999.00 |       20 |    0
(5 rows)

 order_id | order_date | product_id | quantity_ordered | total_price
----------+------------+------------+------------------+-------------
        1 | 2025-09-15 | PR01       |                1 |   119999.00
        2 | 2025-09-16 | PR02       |                2 |   219998.00
        3 | 2025-09-17 | PR03       |                1 |    64999.00
        4 | 2025-09-18 | PR05       |                2 |    69998.00
        5 | 2025-09-19 | PR01       |                1 |   119999.00
(5 rows)

CREATE PROCEDURE
CALL
CALL
CALL

psql:commands.sql:71: NOTICE:  ORDER SUCCESSFUL! 1 unit(s) of MacBookAirM2 sold.
psql:commands.sql:72: NOTICE:  INSUFFICIENT STOCK! Cannot process 7 unit(s) of iPadPro
psql:commands.sql:73: NOTICE:  ORDER SUCCESSFUL! 3 unit(s) of GalaxyS24 sold.
```