

DMD HW4 - SQL Queries

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I configured a PostgreSQL database with some test data. In order to avoid quotes in my queries, I changed tables and columns names from CamelCase to underscore_syntax. That's why they differ from the ones used in assignment PDF. I hope this is not an issue.

1

```
SELECT movie_name
FROM movies
WHERE NOT EXISTS (
    SELECT *
    FROM movie_supplier
    LEFT JOIN suppliers
        ON movie_supplier.supplier_id = suppliers.supplier_id
    WHERE supplier_name IN ('PIXAR', 'LOINSGATE')
    AND movie_supplier.movie_id = movies.movie_id
);
```

2

```
SELECT movie_name
FROM movies, inventory
WHERE movies.movie_id = inventory.movie_id
AND tape_id IN (
    SELECT tape_id
    FROM rentals
    WHERE duration = (
        SELECT MAX(duration)
        FROM rentals
    )
);
```

3

```
SELECT supplier_name
FROM suppliers
WHERE suppliers.supplier_id NOT IN (
    SELECT ms.supplier_id
    FROM movie_supplier AS ms, inventory AS i
    WHERE NOT EXISTS (
        SELECT *
        FROM inventory, movie_supplier
        WHERE movie_supplier.movie_id = inventory.movie_id
        AND movie_supplier.supplier_id = ms.supplier_id
        AND inventory.movie_id = i.movie_id
    )
);
```

4

```
SELECT
    suppliers.supplier_name,
    COUNT(inventory.movie_id)
FROM suppliers
    LEFT OUTER JOIN (
        inventory
        LEFT JOIN movie_supplier
            ON inventory.movie_id = movie_supplier.movie_id
    )
    ON suppliers.supplier_id = movie_supplier.supplier_id
GROUP BY suppliers.supplier_name;
```

5

```
SELECT DISTINCT movie_name
FROM movies, orders
WHERE movies.movie_id = orders.movie_id
AND (
    SELECT SUM(copies)
    FROM orders
    WHERE movie_id = movies.movie_id
    GROUP BY movie_id
) > 4;
```

6

```
SELECT *
FROM customers, rentals
WHERE customers.cust_id = rentals.customer_id
AND (
    rentals.tape_id IN (
        SELECT inventory.tape_id
        FROM inventory, movie_supplier
        WHERE inventory.movie_id = movie_supplier.movie_id
        AND movie_supplier.supplier_id IN (
            SELECT supplier_id
            FROM suppliers
            WHERE supplier_name = 'VWS_Video'
        )
    )
OR rentals.tape_id IN (
    SELECT inventory.tape_id
    FROM inventory, movies
    WHERE inventory.movie_id = movies.movie_id
    AND movies.movie_name = 'Fatal_Attraction_1987'
)
);
```

7

```
SELECT
    movies.movie_name,
    COUNT(movies.movie_name)
FROM movies
LEFT JOIN inventory
    ON movies.movie_id = inventory.movie_id
GROUP BY movies.movie_name
HAVING COUNT(movies.movie_name) > 1;
```

8

```
SELECT
    first_name,
    last_name
FROM customers
LEFT JOIN rentals
    ON customers.cust_id = rentals.customer_id
WHERE rentals.duration > INTERVAL '5_days';
```

9

```
SELECT supplier_name
FROM suppliers
  LEFT JOIN movie_supplier
    ON suppliers.supplier_id = movie_supplier.supplier_id
WHERE movie_supplier.movie_id = (
  SELECT movie_id
  FROM movies
  WHERE movie_name = 'Almost_Angels_1962'
)
AND movie_supplier.price = (
  SELECT MIN(price)
  FROM movie_supplier
  WHERE movie_id = (
    SELECT movie_id
    FROM movies
    WHERE movie_name = 'Almost_Angels_1962'
  )
);
```

10

```
SELECT movie_name
FROM movies
WHERE movie_id NOT IN (
  SELECT movie_id
  FROM inventory
);
```