

Assignment 5: DVDRental Queries

This assignment focuses on practicing SQL query operations using the **DVDRental sample database**.

The tasks involve filtering data with WHERE conditions, sorting results using ORDER BY, and limiting query outputs with LIMIT and OFFSET. Additionally, pattern matching with the LIKE operator and conditional filtering based on specific column values are applied.

These queries help strengthen understanding of data filtering, sorting logic, and result set control in SQL, which are essential skills for working with relational databases.

Query 1:

Description: Lists the top 5 longest films from the film table where the title ends with the letter 'n'. This query demonstrates filtering with pattern matching and ordering results by film length in descending order.

The screenshot shows a PostgreSQL client interface with the following details:

- Query History:** A tab showing the executed SQL query:

```
1 SELECT * FROM film
2 WHERE title LIKE '%n'
3 ORDER BY length DESC
4 LIMIT 5;
```
- Data Output:** A table displaying the results of the query. The table has 10 columns: title, description, release_year, language_id, rental_duration, rental_rate, length, replacement_cost, rating, and last_update. The rows are numbered 1 to 5. The columns "title" and "length" are highlighted with red boxes.
- Table Data:**

	title	description	release_year	language_id	rental_duration	rental_rate	length	replacement_cost	rating	last_update
1	Soldiers Evolution	A Lacklustur...	2006	1	7	4.99	185	27.99	R	2013-05-26 14:30:00
2	Sorority Queen	A Fast-Pace...	2006	1	6	0.99	184	17.99	NC-17	2013-05-26 14:30:00
3	King Evolution	A Action-Pac...	2006	1	3	4.99	184	24.99	NC-17	2013-05-26 14:30:00
4	Frontier Cabin	A Emotional ...	2006	1	6	4.99	183	14.99	PG-13	2013-05-26 14:30:00
5	Wife Turn	A Awe-Inspir...	2006	1	3	4.99	183	27.99	NC-17	2013-05-26 14:30:00
- Bottom Status Bar:** Shows "Total rows: 5" and "Query complete 00:00:00.480".
- Bottom Right:** Buttons for CRLF and Ln 4, Col 9.

Query 2:

Description: This query shows films from the film table whose titles end with the letter '**n**', selecting the second group of 5 shortest films. The query uses pattern matching, sorts films by length in ascending order, and skips the first 5 results.

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

- Query Editor:** Contains the following SQL code:

```
1 SELECT * FROM film
2 WHERE title LIKE '%n'
3 ORDER BY length ASC
4 OFFSET 5
5 LIMIT 5;
```
- Data Output:** Shows the results of the query, displaying 5 rows of film data. The columns are: film_id, title, description, release_year, language_id, rental_duration, rental_rate, length, replacement_cost, rating, and last_update. The rows are numbered 1 to 5. Red boxes highlight the 'film_id' column, the 'title' column, and the 'length' column.
- Status Bar:** Shows "Total rows: 5" and "Query complete 00:00:00.160".

film_id	title	description	release_year	language_id	rental_duration	rental_rate	length	replacement_cost	rating	last_update
1	Jekyll Frogmen	A Fa...	2006	1	4	2.99	58	22.99	PG	2013-0
2	Daughter Madigan	A B...	2006	1	3	4.99	59	13.99	PG-13	2013-0
3	Room Roman	A A...	2006	1	7	0.99	60	27.99	PG	2013-0
4	Camelot Vacation	A To...	2006	1	3	0.99	61	26.99	NC-17	2013-0
5	Birds Perdition	A B...	2006	1	5	4.99	61	15.99	G	2013-0

Query 3:

Description: Query 3 shows the first 4 customers from store_id = 1, ordered by their last names in descending order. This query demonstrates filtering by a specific column and sorting results alphabetically in reverse order.

The screenshot shows the pgAdmin 4 interface. The top bar displays the connection information: public.film/try/postgres@PostgreSQL 18*. Below the toolbar, there are tabs for 'Query' (selected), 'Query History', and 'Scratch Pad'. The main area contains the following SQL code:

```
1  SELECT last_name, store_id
2  FROM customer
3  WHERE store_id = 1
4  ORDER BY last_name DESC
5  LIMIT 4;
```

The 'Data Output' tab is selected, showing the results of the query:

	last_name	store_id
1	Young	1
2	Yanez	1
3	Wyman	1
4	Woods	1

The results table has a red border around its header row. At the bottom of the pgAdmin window, status bars show 'Total rows: 4', 'Query complete 00:00:00.083', 'CRLF', and 'Ln 5, Col 9'.