

## Task 3.5 Filtering Data

- Write some SQL queries to return a lists of films that meet the following conditions. (Hint: These queries are not building upon each other, they are separate! Hence, when running the query for 1b. you don't need to take into account 1a, for example.) Your results tables should include the columns "film\_ID," "title," and "description".
  - Film title contains the word *Uptown* in any position

```
1 SELECT film_id, title, description
2 FROM film
3 WHERE title LIKE '%Uptown%'
```

film_id	title	description
132	Chainsaw Uptown	A Beautiful Documentary of a Boy And a Robot who must Discover a Squirrel in
207	Dangerous Uptown	A Unbelievable Story of a Mad Scientist And a Woman who must Overcome a
927	Uprising Uptown	A Fanciful Reflection of a Boy And a Butler who must Pursue a Woman in Berlin
928	Uptown Young	A Fateful Documentary of a Dog And a Hunter who must Pursue a Teacher in A

- Film length is more than 120 minutes and rental rate is more than 2.99

```
1 SELECT film_id, title, description, rating, length
2 FROM film
3 WHERE film.length > 120
4 AND rental_rate > 2.99
```

film_id	title	description	rating	length
13	Ali Forever	A Action-Packed Drama of a Dentis...	PG	150
21	American Circus	A Insightful Drama of a Girl And a A...	PG	129
265	Dying Maker	A Intrepid Tale of a Boat And a Mon...	PG	168
47	Baby Hall	A Boring Character Study of a A Sh...	NC-17	153
126	Casualties Encino	A Insightful Yarn of a A Shark And a...	G	179
61	Beauty Grease	A Fast-Paced Display of a Compos...	G	175
68	Betrayed Rear	A Emotional Character Study of a B...	NC-17	122

- Rental duration is between 3 and 7 days (where 3 and 7 aren't inclusive)

```
1 SELECT film_id, title, description, rental_duration
2 FROM film
3 WHERE rental_duration > '3'
4 AND rental_duration < '7';
```

film_id	title	description	rental_duration
384	Grosse Wonderful	A Epic Drama of a Cat And a Explor...	5
8	Airport Pollock	A Epic Tale of a Moose And a Girl wh...	6
98	Bright Encounters	A Fateful Yarn of a Lumberjack And a...	4
1	Academy Dinosaur	A Epic Drama of a Feminist And a Ma...	6
4	Affair Prejudice	A Fanciful Documentary of a Frisbee ...	5
5	African Egg	A Fast-Paced Documentary of a Pastr...	6
7	Airplane Sierra	A Touching Saga of a Hunter And a B...	6
10	Aladdin Calendar	A Action-Packed Tale of a Man And a ...	6
11	Alamo Videotape	A Boring Epistle of a Butler And a Cat...	6

d. Film replacement cost is less than 14.99

Query Query History	
<pre> 1 SELECT film_id, title, description, replacement_cost 2 FROM film 3 WHERE replacement_cost &lt; '14.99'</pre>	
Data Output Messages Explain X Notifications	
film_id [PK] integer	title character varying (255)
1	98
2	2
3	15
4	22
5	23
6	27
7	29

e. Film rating is either PG or G

Query Query History	
<pre> 1 SELECT film_id, title, description, rating 2 FROM film 3 WHERE rating = 'PG' OR rating = 'G'</pre>	
Data Output Messages Explain X Notifications	
film_id [PK] integer	title character varying (255)
1	1
2	2
3	4
4	5
5	6
6	11
7	12

- Download your SQL queries outputs as CSV files using the pgadmin inbuilt functionality. Merge them into one Excel file (.xlsx) and create a separate sheet for each query (label them 1a, 1b, 1c, etc.). You'll use this file for all further questions in this Task too.

**DONE**

- The query you wrote in step 1e returned a list of movies that meet certain criteria (film rating is either PG or G). The inventory team has asked for the following information about this list.
  - Count of the movies
  - Average rental rate
  - Maximum rental duration and minimum rental duration

Query Query History	
<pre> 1 SELECT rating, 2 COUNT (title) AS count_of_movies, 3 AVG (rental_rate) AS average_rental_rate, 4 MAX (rental_duration) AS maximum_rental_duration, 5 MIN (rental_duration) AS minimum_rental_duration 6 FROM film 7 WHERE rating IN ('PG','G') 8 GROUP BY rating;</pre>	
Data Output Messages Explain X Notifications	
rating mpaa_rating	count_of_movies bigint
1	PG
2	G

- To make the output easier for your coworkers to understand, give your aggregate columns the following aliases: “count of movies,” “average movie rental rate,” “maximum rental duration”, and “minimum rental duration”. Run the query and transfer the result into your Excel file on a new sheet as well as the code you used to get there.

Query

Query History

1

2

3

4

5

6

7

8

SELECT rating,

COUNT (title) AS count\_of\_movies,

AVG (rental\_rate) AS average\_rental\_rate,

MAX (rental\_duration) AS maximum\_rental\_duration,

MIN (rental\_duration) AS minimum\_rental\_duration

FROM film

WHERE rating IN ('PG', 'G')

GROUP BY rating;

Data Output

Messages

Explain x

Notifications

rating  
mpaa\_rating

count\_of\_movies  
bigint

average\_rental\_rate  
numeric

maximum\_rental\_duration  
smallint

minimum\_rental\_duration  
smallint

1

PG

194

3.0518556701030928

7

3

2

G

182

2.935054945054945

7

3

- The customer team would like to see the fields you calculated in step 3 grouped by rating. The totals in your results table should look the same as in step 4 but broken down by the rating column. Copy-paste your query and its output in your answers on a new sheet.
- Save all of your answers in the Excel file you created in step 2 and upload it here for your tutor to review.