

3.5 Filtering Data Task

- Write some SQL queries to return a list of films that meet the following conditions. Your results tables should include the columns "film_ID," "title," and "description". 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.
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. That refers to all the substeps here.

- Film title contains the word Uptown in any position

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

Data output		Messages		Notifications	
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	film_id [PK] integer	title character varying (255)	description text		
1	132	Chainsaw Uptown	A Beautiful ...		
2	207	Dangerous Uptown	A Unbeliev...		
3	927	Uprising Uptown	A Fanciful ...		
4	928	Uptown Young	A Fateful D...		

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

Query		Query History	
1	SELECT	film_id, title, description	
2	FROM	film	
3	WHERE	length > 120 AND rental_rate > 2.99	

Data output		Messages		Notifications	
+	📄	📄	🗑️	📦	📶
	film_id [PK] integer	title character varying (255)	description text		
1	13	Alli Forever	A Action-Packed Drama of a Dentist And a		
2	21	American Circus	A Insightful Drama of a Girl And a Astronau		
3	265	Dying Maker	A Intrepid Tale of a Boat And a Monkey whc		
4	47	Baby Hall	A Boring Character Study of a A Shark And		
5	126	Casualties Encino	A Insightful Yarn of a A Shark And a Pastry		
6	61	Beauty Grease	A Fast-Paced Display of a Composer And a		
7	68	Betrayed Rear	A Emotional Character Study of a Boat And		
8	70	Bikini Borrowers	A Astounding Drama of a Astronaut And a		
9	74	Birch Antitrust	A Fanciful Panorama of a Husband And a P		
10	75	Bird Independence	A Thrilling Documentary of a Car And a Stu		
11	86	Boogie Amelle	A Lacklusture Character Study of a Husban		
12	88	Born Spinal	A Touching Epistle of a Frisbee And a Husb		
13	93	Brannigan Sunrise	A Amazing Epistle of a Moose And a Croco		

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

Query		Query History	
1	SELECT	film_id, title, description	
2	FROM	film	
3	WHERE	rental_duration>3 AND rental_duration<7	

Data output		Messages	Notifications
<div> </div>			
	film_id [PK] integer	title character varying (255)	description text
1	384	Grosse Wonderful	A Epic Drama of a Cat And a Explore
2	8	Airport Pollock	A Epic Tale of a Moose And a Girl wl
3	98	Bright Encounters	A Fateful Yarn of a Lumberjack And
4	1	Academy Dinosaur	A Epic Drama of a Feminist And a M
5	4	Affair Prejudice	A Fanciful Documentary of a Frisbee
6	5	African Egg	A Fast-Paced Documentary of a Pas
7	7	Airplane Sierra	A Touching Saga of a Hunter And a I
8	10	Aladdin Calendar	A Action-Packed Tale of a Man And
9	11	Alamo Videotape	A Boring Epistle of a Butler And a C
10	12	Alaska Phantom	A Fanciful Saga of a Hunter And a P
11	213	Date Speed	A Touching Saga of a Composer An

d) Film replacement cost is less than 14.99

Query		Query History	
1	SELECT	film_id, title, description	
2	FROM	film	
3	WHERE	replacement_cost < 14.99	

Data output		Messages	Notifications
<div> </div>			
	film_id [PK] integer	title character varying (255)	description text
1	98	Bright Encounters	A Fateful Yarn of a Lumberjack
2	2	Ace Goldfinger	A Astounding Epistle of a Datal
3	15	Alien Center	A Brilliant Drama of a Cat And i
4	22	Amistad Midsummer	A Emotional Character Study of
5	23	Anaconda Confessions	A Lacklusture Display of a Dent
6	27	Anonymous Human	A Amazing Reflection of a Data
7	29	Antitrust Tomatoes	A Fateful Yarn of a Womanizer
8	32	Apocalypse Flamingos	A Astounding Story of a Dog Ar
9	36	Argonauts Town	A Emotional Epistle of a Forens
10	39	Armageddon Lost	A Fast-Paced Tale of a Boat An
11	42	Artist Coldblooded	A Stunning Reflection of a Robi
12	46	Autumn Crow	A Beautiful Tale of a Dentist An
13	51	Balloon Homeward	A Insightful Panorama of a For

e) Film rating is either PG or G

Query

Query History

```

1 SELECT film_id, title, description
2 FROM film
3 WHERE rating IN ('PG', 'G')

```

Data output

Messages

Notifications

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	film_id [PK] integer	title character varying (255)	description text
1	1	Academy Dinosaur	A Epic Drama of a Feminist And a M
2	2	Ace Goldfinger	A Astounding Epistle of a Database
3	4	Affair Prejudice	A Fanciful Documentary of a Frisbee
4	5	African Egg	A Fast-Paced Documentary of a Pas
5	6	Agent Truman	A Intrepid Panorama of a Robot And
6	11	Alamo Videotape	A Boring Epistle of a Butler And a C
7	12	Alaska Phantom	A Fanciful Saga of a Hunter And a P
8	13	Ali Forever	A Action-Packed Drama of a Dentist
9	19	Amadeus Holy	A Emotional Display of a Pioneer An
10	22	Amistad Midsummer	A Emotional Character Study of a D

2. 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

1  SELECT rating,
2  COUNT(title),
3  AVG(rental_rate),
4  MAX(rental_duration),
5  MIN(rental_duration)
6  FROM film
7  WHERE rating IN ('PG', 'G')
8  GROUP BY rating
```

Data output Messages Notifications

	rating mpaa_rating	count bigint	avg numeric	max smallint	min smallint
1	G	178	2.888876404494382	7	3
2	PG	194	3.0518556701030928	7	3

3. 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 SELECT rating,
2 COUNT(title) AS count_of_movies,
3 AVG(rental_rate) AS average_movie_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
```

Data output

Messages

Notifications

	rating mpaa_rating	count_of_movies bigint	average_movie_rental_rate numeric	maximum_rental_duration smallint	minimum_rental_duration smallint
1	G	178	2.888876404494382	7	3
2	PG	194	3.0518556701030928	7	3

4. 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 3, but broken down by the rating column. Copy-paste your query and its output in your answers on a new sheet.

Query

Query History

1

SELECT rating,

2

COUNT(title) AS count_of_movies,

3

AVG(rental_rate) AS average_movie_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

Data output

Messages

Notifications

rating
mpaa_rating

count_of_movies
bigint

average_movie_rental_rate
numeric

maximum_rental_duration
smallint

minimum_rental_duration
smallint

1

G

178

2.888876404494382

7

3

2

PG

194

3.0518556701030928

7

3

5. Save all of your answers in the Excel file you created in step 1 and upload it here for your tutor to review.