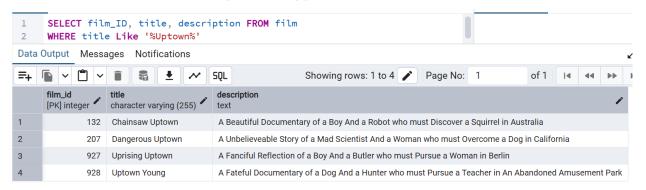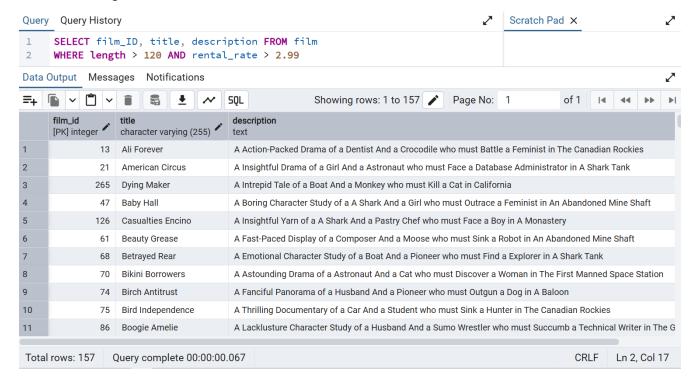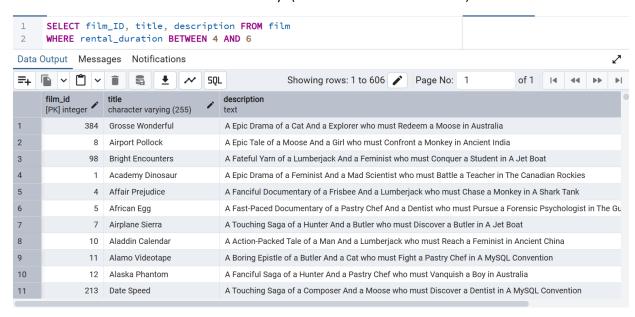# Filtering Data

1. Write SQL queries to return lists of films that meet the following conditions. Download your outputs for each query as CSV files using the pgadmin inbuilt functionality. Copy your query and results table (including the columns "film_ID," "title," and "description") into the corresponding CSV file.

- Film title contains the word *Uptown* in any position

```
1    SELECT film_ID, title, description FROM film
2    WHERE title Like '%Uptown%'
```

Data Output   Messages   Notifications

Showing rows: 1 to 4 ✏   Page No: 1   of 1

	film_id [PK] integer	title character varying (255)	description text
1	132	Chainsaw Uptown	A Beautiful Documentary of a Boy And a Robot who must Discover a Squirrel in Australia
2	207	Dangerous Uptown	A Unbelieveable Story of a Mad Scientist And a Woman who must Overcome a Dog in California
3	927	Uprising Uptown	A Fanciful Reflection of a Boy And a Butler who must Pursue a Woman in Berlin
4	928	Uptown Young	A Fateful Documentary of a Dog And a Hunter who must Pursue a Teacher in An Abandoned Amusement Park

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

Query   Query History   Scratch Pad ✕

```
1    SELECT film_ID, title, description FROM film
2    WHERE length > 120 AND rental_rate > 2.99
```

Data Output   Messages   Notifications

Showing rows: 1 to 157 ✏   Page No: 1   of 1

	film_id [PK] integer	title character varying (255)	description text
1	13	Ali Forever	A Action-Packed Drama of a Dentist And a Crocodile who must Battle a Feminist in The Canadian Rockies
2	21	American Circus	A Insightful Drama of a Girl And a Astronaut who must Face a Database Administrator in A Shark Tank
3	265	Dying Maker	A Intrepid Tale of a Boat And a Monkey who must Kill a Cat in California
4	47	Baby Hall	A Boring Character Study of a A Shark And a Girl who must Outrace a Feminist in An Abandoned Mine Shaft
5	126	Casualties Encino	A Insightful Yarn of a A Shark And a Pastry Chef who must Face a Boy in A Monastery
6	61	Beauty Grease	A Fast-Paced Display of a Composer And a Moose who must Sink a Robot in An Abandoned Mine Shaft
7	68	Betrayed Rear	A Emotional Character Study of a Boat And a Pioneer who must Find a Explorer in A Shark Tank
8	70	Bikini Borrowers	A Astounding Drama of a Astronaut And a Cat who must Discover a Woman in The First Manned Space Station
9	74	Birch Antitrust	A Fanciful Panorama of a Husband And a Pioneer who must Outgun a Dog in A Baloon
10	75	Bird Independence	A Thrilling Documentary of a Car And a Student who must Sink a Hunter in The Canadian Rockies
11	86	Boogie Amelie	A Lacklusture Character Study of a Husband And a Sumo Wrestler who must Succumb a Technical Writer in The G

Total rows: 157   Query complete 00:00:00.067   CRLF   Ln 2, Col 17

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

```sql
SELECT film_ID, title, description FROM film
WHERE rental_duration BETWEEN 4 AND 6
```

Data Output   Messages   Notifications

Showing rows: 1 to 606   Page No: 1   of 1

	film_id [PK] integer	title character varying (255)	description text
1	384	Grosse Wonderful	A Epic Drama of a Cat And a Explorer who must Redeem a Moose in Australia
2	8	Airport Pollock	A Epic Tale of a Moose And a Girl who must Confront a Monkey in Ancient India
3	98	Bright Encounters	A Fateful Yarn of a Lumberjack And a Feminist who must Conquer a Student in A Jet Boat
4	1	Academy Dinosaur	A Epic Drama of a Feminist And a Mad Scientist who must Battle a Teacher in The Canadian Rockies
5	4	Affair Prejudice	A Fanciful Documentary of a Frisbee And a Lumberjack who must Chase a Monkey in A Shark Tank
6	5	African Egg	A Fast-Paced Documentary of a Pastry Chef And a Dentist who must Pursue a Forensic Psychologist in The Gu
7	7	Airplane Sierra	A Touching Saga of a Hunter And a Butler who must Discover a Butler in A Jet Boat
8	10	Aladdin Calendar	A Action-Packed Tale of a Man And a Lumberjack who must Reach a Feminist in Ancient China
9	11	Alamo Videotape	A Boring Epistle of a Butler And a Cat who must Fight a Pastry Chef in A MySQL Convention
10	12	Alaska Phantom	A Fanciful Saga of a Hunter And a Pastry Chef who must Vanquish a Boy in Australia
11	213	Date Speed	A Touching Saga of a Composer And a Moose who must Discover a Dentist in A MySQL Convention

- Film replacement cost is less than 14.99

Query   Query History   Scratch Pad ✕

```sql
SELECT film_ID, title, description FROM film
WHERE replacement_cost < 14.99
```

Data Output   Messages   Notifications

Showing rows: 1 to 249   Page No: 1   of 1

	film_id [PK] integer	title character varying (255)	description text
1	98	Bright Encounters	A Fateful Yarn of a Lumberjack And a Feminist who must Conquer a Student in A Jet Boat
2	2	Ace Goldfinger	A Astounding Epistle of a Database Administrator And a Explorer who must Find a Car in Ancient China
3	15	Alien Center	A Brilliant Drama of a Cat And a Mad Scientist who must Battle a Feminist in A MySQL Convention
4	22	Amistad Midsummer	A Emotional Character Study of a Dentist And a Crocodile who must Meet a Sumo Wrestler in California
5	23	Anaconda Confessions	A Lacklustre Display of a Dentist And a Dentist who must Fight a Girl in Australia
6	27	Anonymous Human	A Amazing Reflection of a Database Administrator And a Astronaut who must Outrace a Database Administrator i
7	29	Antitrust Tomatoes	A Fateful Yarn of a Womanizer And a Feminist who must Succumb a Database Administrator in Ancient India
8	32	Apocalypse Flamingos	A Astounding Story of a Dog And a Squirrel who must Defeat a Woman in An Abandoned Amusement Park
9	36	Argonauts Town	A Emotional Epistle of a Forensic Psychologist And a Butler who must Challenge a Waitress in An Abandoned Min
10	39	Armageddon Lost	A Fast-Paced Tale of a Boat And a Teacher who must Succumb a Composer in An Abandoned Mine Shaft
11	42	Artist Coldblooded	A Stunning Reflection of a Robot And a Moose who must Challenge a Woman in California

Total rows: 249   Query complete 00:00:00.069   CRLF   Ln 2, Col 31

- Film rating is either PG or G

```
1    SELECT film_ID, title, description FROM film
2    WHERE RATING in ('PG', 'G')
```

Data Output   Messages   Notifications

Showing rows: 1 to 372   Page No: 1   of 1

	film_id [PK] integer	title character varying (255)	description text
1	1	Academy Dinosaur	A Epic Drama of a Feminist And a Mad Scientist who must Battle a Teacher in The Canadian Rockies
2	2	Ace Goldfinger	A Astounding Epistle of a Database Administrator And a Explorer who must Find a Car in Ancient China
3	4	Affair Prejudice	A Fanciful Documentary of a Frisbee And a Lumberjack who must Chase a Monkey in A Shark Tank
4	5	African Egg	A Fast-Paced Documentary of a Pastry Chef And a Dentist who must Pursue a Forensic Psychologist in The Gulf o
5	6	Agent Truman	A Intrepid Panorama of a Robot And a Boy who must Escape a Sumo Wrestler in Ancient China
6	11	Alamo Videotape	A Boring Epistle of a Butler And a Cat who must Fight a Pastry Chef in A MySQL Convention
7	12	Alaska Phantom	A Fanciful Saga of a Hunter And a Pastry Chef who must Vanquish a Boy in Australia
8	13	Ali Forever	A Action-Packed Drama of a Dentist And a Crocodile who must Battle a Feminist in The Canadian Rockies
9	19	Amadeus Holy	A Emotional Display of a Pioneer And a Technical Writer who must Battle a Man in A Baloon
10	22	Amistad Midsummer	A Emotional Character Study of a Dentist And a Crocodile who must Meet a Sumo Wrestler in California
11	25	Angels Life	A Thoughtful Display of a Woman And a Astronaut who must Battle a Robot in Berlin

Total rows: 372   Query complete 00:00:00.071   CRLF   Ln 2, Col 26

3. The query you wrote in step 1e returned a list of movies with a film rating of either PG or G. The inventory team has asked for more information about this list: count of the movies, average rental rate, and maximum and minimum rental durations. Run the query and transfer the code you used and your results onto a new sheet in your Excel file. To make the output easier for your coworkers to understand, give your aggregate columns the following aliases:

     a. "count of movies"
     b. "average movie rental rate"
     c. "maximum rental duration"
     d. "minimum rental duration"

Query   Query History

```
1    SELECT count(film_id) AS count_of_movies,
2    AVG(rental_rate) AS avg_rental_rate,
3    MAX(rental_duration) AS max_rental_duration,
4    MIN(rental_duration) AS min_rental_duration
5    FROM film
6    WHERE rating IN ('PG','G')
```

Data Output   Messages   Notifications

Showing rows: 1 to 1

	count_of_movies bigint	avg_rental_rate numeric	max_rental_duration smallint	min_rental_duration smallint
1	372	2.9738709677419355	7	3

4. The customer team wants to see the fields you calculated in step 3 grouped by rating. The totals in your results table should look the same but broken down by the rating column. Copy-paste your query and its output onto a new sheet.

Query   Query History

```
1    SELECT count(film_id) AS count_of_movies,
2    AVG(rental_rate) AS avg_rental_rate,
3    MAX(rental_duration) AS max_rental_duration,
4    MIN(rental_duration) AS min_rental_duration
5    FROM film
6    GROUP BY rating
7    HAVING rating IN ('PG','G')
```

Data Output   Messages   Notifications

Showing rows: 1 to 2

	count_of_movies 🔒 bigint	avg_rental_rate 🔒 numeric	max_rental_duration 🔒 smallint	min_rental_duration 🔒 smallint
1	178	2.8888764044943820	7	3
2	194	3.0518556701030928	7	3