Task 5 Filtering data

Directions

Write some SQL queries to return a lists 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.

1. **Queries:**

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

Code:

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

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

Code:

```
SELECT film_id, title, description FROM film WHERE length > 120 AND rental_rate > 2.99
```

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

Code:

```
SELECT film_id, title, description FROM film WHERE rental_duration BETWEEN 3 AND 7
```

(saved in excel as 1c1)

In this command we include 3 and 7, so the alternative could be:

Alternative:

```
SELECT film_id, title, description FROM film WHERE rental_duration <7 OR rental_duration > 3 AND NOT rental_duration <3
```

(saved in excel 1c2)

- Film replacement cost is less than 14.99

Code:

```
SELECT film_id, title, description FROM film WHERE replacement_cost <14.99
```

- Film rating is either PG or G

Code:

```
SELECT film_id, title, description FROM film WHERE rating='PG' OR rating='G'
```

Alternative:

```
SELECT * FROM film WHERE rating IN ('PG','G')
```

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 COUNT
- Average rental rate AVG
- Maximum rental duration and minimum rental duration MAX MIN

Code:

```
SELECT film_id, COUNT (film_id),AVG (rental_rate), MAX (rental_duration), MIN (rental_duration) FROM film GROUP BY film_id, rating IN ('PG','G')
```

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.

Code:

```
SELECT film_id, COUNT (film_id) AS count_of_movies ,AVG (rental_rate) AS average_rate, MAX (rental_duration) AS maximum_duration, MIN (rental_duration) AS minimum_duration FROM film GROUP BY film_id, rating IN ('PG','G')
```

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.

Code:

```
SELECT rating, COUNT (film_id) AS count_of_movies, AVG (rental_rate) AS
average_rate, MAX (rental_duration) AS maximum_duration, MIN (rental_duration)
AS minimum_duration FROM film

GROUP BY rating ORDER BY CASE

WHEN rating = 'G' THEN 'general audience'

WHEN rating = 'PG' THEN 'not suitable for children'

WHEN rating = 'PG-13' THEN 'parents strongly cautioned'

when rating = 'R' then 'restricted'

ELSE '17 and under not admitted'

END
```