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11-17-23

## Exercise 3.4

1. A: 

```
SELECT film_id  
title  
FROM film
```

The screenshot shows a PostgreSQL client window with the title 'Rockbuster/postgres@PostgreSQL 16\*'. The query editor on the left contains the following SQL query:

```
1 SELECT film_id  
2 title  
3 FROM film
```

The 'Data Output' tab on the right displays the results of the query. The results are presented in a table with two columns: 'film\_id' and 'title'. The 'film\_id' column is of type 'integer' and is locked. The 'title' column is of type 'text' and is also locked. The table contains 45 rows of data, numbered 1 through 45 in the first column. The status bar at the bottom indicates 'Total rows: 1000 of 1000', 'Query complete 00:00:00.064', and 'Ln 3, Col 10'.

film_id	title
1	133
2	384
3	8
4	98
5	1
6	2
7	3
8	4
9	6
10	7
11	9
12	10
13	11
14	12
15	213
16	13
17	14
18	15
19	16
20	17
21	18
22	19
23	20
24	21
25	22
26	23
27	24
28	25
29	26
30	27
31	28
32	29
33	30
34	31
35	32
36	33
37	34
38	35
39	36
40	37
41	38
42	39
43	40
44	41
45	42

Properties SQL Rockbuster/postgres@PostgreSQL 16\*

Rockbuster/postgres@PostgreSQL 16

No limit

Query History

Open File Alt O

```
1 EXPLAIN
2 SELECT film_id
3 title
4 FROM film
```

Data Output Messages Notifications

QUERY PLAN

text

1 Seq Scan on film (cost=0.00..98.00 rows=1000 width=...

Total rows: 1 of 1 Query complete 00:00:00.040 Ln 4, Col 10

B: When I ran the EXPLAIN function from the original it did come back slower. My guess is that the query didn't have to load as many columns and in turn came back faster than the original.

PropertiesSQLRockbuster/postgres@PostgreSQL 16\*

Rockbuster/postgres@PostgreSQL 16

The session is idle and there is no current transaction.

QueryQuery History

1SELECT\*  
2FROM film  
3ORDER BY title ASC  
4,release\_year DESC  
5,rental\_duration DESC  
6

Data OutputMessagesNotifications

	film_id [PK] integer	title character varying (255)	description text
1	1	Academy Dinosaur	A Epic Drama c
2	2	Ace Goldfinger	A Astounding E
3	3	Adaptation Holes	A Astounding F
4	4	Affair Prejudice	A Fanciful Doc
5	5	African Egg	A Fast-Paced C
6	6	Agent Truman	A Intrepid Panc
7	7	Airplane Sierra	A Touching Sai
8	8	Airport Pollock	A Epic Tale of i
9	9	Alabama Devil	A Thoughtful P
10	10	Aladdin Calendar	A Action-Packe
11	11	Alamo Videotape	A Boring Epistl
12	12	Alaska Phantom	A Fanciful Sag
13	13	Ali Forever	A Action-Packe
14	14	Alice Fantasia	A Emotional Dr
15	15	Alien Center	A Brilliant Dran
16	16	Alley Evolution	A Fast-Paced C
17	17	Alone Trip	A Fast-Paced C
18	18	Alter Victory	A Thoughtful D
19	19	Amadeus Holy	A Emotional Di
20	20	Amelie Hellfighters	A Boring Dram
21	21	American Circus	A Insightful Dr
22	22	Amistad Midsummer	A Emotional Cl
23	23	Anaconda Confessions	A Lacklusture I
24	24	Analyze Hoosiers	A Thoughtful D
25	25	Angels Life	A Thoughtful D
26	26	Annie Identity	A Amazing Par
27	27	Anonymous Human	A Amazing Ref
28	28	Anthem Luke	A Touching Pai
29	29	Antitrust Tomatoes	A Fateful Yarn
30	30	Anything Savannah	A Epic Story of
31	31	Apache Divine	A Awe-Inspirin
32	32	Apocalypse Flamingos	A Astounding S
33	33	Apollo Teen	A Action-Packe
34	34	Arabia Dogma	A Touching Epi
35	35	Arachnophobia Rollercoaster	A Action-Packe
36	36	Argonauts Town	A Emotional Ep
37	37	Arizona Bang	A Brilliant Panc
38	38	Ark Ridgemont	A Beautiful Yar
39	39	Armageddon Lost	A Fast-Paced T
40	40	Army Flintstones	A Boring Saga
41	41	Arsenic Independence	A Fanciful Doc
42	42	Artist Coldblooded	A Stunning Ref
43	43	Atlantis Cause	A Thrilling Yarr
44	44	Attacks Hate	A Fast-Paced F

Total rows: 1000 of 1000Query complete 00:00:00.128Ln 4, Col 2

2.

Properties SQL Exercise 3.4.sql\*

Rockbuster/postgres@PostgreSQL 16

The session is idle and there is no current transaction.

Query Query History Data Output Messages Notifications

```
1 SELECT rating,  
2 AVG (rental_rate)  
3 FROM film  
4 GROUP BY rating  
5
```

	rating mpaa_rating	avg numeric
1	PG	3.0518556701030928
2	R	2.9387179487179487
3	NC-17	2.9709523809523810
4	PG-13	3.0348430493273543
5	G	2.8888764044943820

Total rows: 5 of 5 Query complete 00:00:00.063 Ln 4, Col 16

3. A:
- ```
SELECT rating,  
AVG (rental_rate)  
FROM film  
GROUP BY rating
```

PropertiesSQLExercise 3.4.sql\*

Rockbuster/postgres@PostgreSQL 16

The session is idle and there is no current transaction.

QueryQuery History

1SELECT rating,  
2MAX (rental\_rate),  
3MIN (rental\_rate)  
4FROM film  
5GROUP BY rating  
6

Data OutputMessagesNotifications

|   | rating      | max     | min     |
|---|-------------|---------|---------|
|   | mpaa_rating | numeric | numeric |
| 1 | PG          | 4.99    | 0.99    |
| 2 | R           | 4.99    | 0.99    |
| 3 | NC-17       | 4.99    | 0.99    |
| 4 | PG-13       | 4.99    | 0.99    |
| 5 | G           | 4.99    | 0.99    |

B:

Total rows: 5 of 5Query complete 00:00:00.073Ln 3, Col 17

```
SELECT rating,  
MAX (rental_rate),  
MIN (rental_rate)  
FROM film  
GROUP BY rating
```

4. A: First the data engineer will need to extract the data, next they will need to transform the data to make it readable for our team to properly understand. Finally, they will need to load it to a database for us to clean and give proper reports.

B: One of the main problems I see with this is that it is specifically being extracted from the Android app. Since that is the case if any of our engineers were using macbooks, the data would not translate correctly since Apple and Android use different languages in their programs. While yes the engineers could use windows, the same problem would arise if it was the Apple app as opposed to the Android one.