Question 1

We want to understand more about the movies that families are watching. The following categories are considered family movies: Animation, Children, Classics, Comedy, Family and Music. Create a query that lists each movie, the film category it is classified in, and the number of times it has been rented out. **Only show movies that were rented more than 25 times.**

SQL query for Question 1

**WITH familyMovies**

**AS (**

**SELECT f.film\_id AS film\_id**

**,title AS film\_title**

**,name AS category\_name**

**FROM film f**

**JOIN film\_category fc ON f.film\_id = fc.film\_id**

**JOIN category c ON fc.category\_id = c.category\_id**

**WHERE name IN (**

**'Animation'**

**,'Children'**

**,'Classics'**

**,'Comedy'**

**,'Family'**

**,'Music'**

**)**

**)**

**SELECT (category\_name || ' - ' || film\_title) AS categoryAndFilm**

**,COUNT(rental\_id) AS rental\_count**

**FROM rental r**

**JOIN inventory i ON r.inventory\_id = i.inventory\_id**

**JOIN familyMovies fm ON i.film\_id = fm.film\_id**

**GROUP BY 1**

**HAVING COUNT(rental\_id) >= 25**

**ORDER BY 2 DESC**

Question 2

Write a query that returns the store ID for the store, the year and month and the number of rental orders each store has fulfilled for that month. **Are there any months where more rental orders are placed across stores?**

SQL query for Question 2

**SELECT s1.store\_id AS store**

**,DATE\_PART('month', r.rental\_date) || '/' || DATE\_PART('year', r.rental\_date) AS rentalMonthAndYear**

**,COUNT(rental\_id) AS count\_rentals**

**FROM store AS s1**

**JOIN staff AS s2 ON s1.store\_id = s2.store\_id**

**JOIN rental r ON s2.staff\_id = r.staff\_id**

**GROUP BY 1 ,2**

**ORDER BY 1 ,2 DESC**

**Question 3**

Identify the top 10 highest paying customers overall and then **calculate the # of payments/amount of payments they did in each month across history.**

SQL query for Question 3

**WITH tab1**

**AS (**

**SELECT c.customer\_id**

**,p.amount**

**,p.payment\_date**

**FROM customer AS c**

**JOIN payment AS p ON c.customer\_id = p.customer\_id**

**)**

**,tab2**

**AS (**

**SELECT t1.customer\_id**

**,SUM(t1.amount) AS amt**

**FROM tab1 t1**

**GROUP BY 1**

**ORDER BY 2 DESC**

**LIMIT 10**

**)**

**SELECT DATE\_PART('month', t1.payment\_date) || '/' || DATE\_PART('year', t1.payment\_date) AS payment\_month**

**,COUNT(\*) AS num\_of\_payments**

**,SUM(t1.amount) AS amount\_of\_payments**

**FROM tab1 t1**

**JOIN tab2 t2 ON t1.customer\_id = t2.customer\_id**

**GROUP BY 1**

**ORDER BY 1**

**Question 4**

What is the average number of days between rental dates for the top 10 rented movies of all times?

SQL query for Question 4

**WITH filmCount**

**AS (**

**SELECT f.film\_id**

**,f.title**

**,COUNT(rental\_id) AS count\_rentals**

**FROM film f**

**JOIN inventory i ON f.film\_id = i.film\_id**

**JOIN rental r ON i.inventory\_id = r.inventory\_id**

**GROUP BY 1,2**

**ORDER BY 3 DESC**

**LIMIT 10**

**)**

**,filmDetailsTopTen**

**AS (**

**SELECT fc.title**

**,DATE\_TRUNC('day', r.rental\_date) AS rentalDay**

**FROM filmCount fc**

**JOIN inventory i ON fc.film\_id = i.film\_id**

**JOIN rental r ON i.inventory\_id = r.inventory\_id**

**)**

**,filmTopTenDiff**

**AS (**

**SELECT \***

**,LEAD(rentalDay) OVER (**

**PARTITION BY title ORDER BY rentalDay**

**) AS nextRentalDay**

**FROM filmDetailsTopTen**

**)**

**SELECT title**

**,AVG(DATE\_PART('day', nextRentalDay - rentalDay)) AS numDays**

**FROM filmTopTenDiff**

**GROUP BY title**

**ORDER BY 1**