**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.

**Solution:**

SELECT f.title, c.name, COUNT(r.rental\_id)

FROM film\_category fc

JOIN category c

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

JOIN film f

ON f.film\_id = fc.film\_id

JOIN inventory i

ON i.film\_id = f.film\_id

JOIN rental r

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

WHERE c.name IN ('Animation', 'Children', 'Classics', 'Comedy', 'Family', 'Music')

GROUP BY 1, 2

ORDER BY 2, 1;

**Question 2**

Now we need to know how the length of rental duration of these family-friendly movies compares to the duration that all movies are rented for. Can you provide a table with the movie titles and divide them into 4 levels (first\_quarter, second\_quarter, third\_quarter, and final\_quarter) based on the quartiles (25%, 50%, 75%) of the rental duration for movies across all categories? Make sure to also indicate the category that these family-friendly movies fall into.

**Solution:**

SELECT f.title, c.name, f.rental\_duration, NTILE(4) OVER (ORDER BY f.rental\_duration) AS standard\_quartile

FROM film\_category fc

JOIN category c

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

JOIN film f

ON f.film\_id = fc.film\_id

WHERE c.name IN ('Animation', 'Children', 'Classics', 'Comedy', 'Family', 'Music')

ORDER BY 3;

**Question 3**

Finally, provide a table with the family-friendly film category, each of the quartiles, and the corresponding count of movies within each combination of film category for each corresponding rental duration category. The resulting table should have three columns:

Category

Rental length category

Count

**Solution:**

SELECT t1.name, t1.standard\_quartile, COUNT(t1.standard\_quartile)

FROM

(SELECT f.title, c.name , f.rental\_duration, NTILE(4) OVER (ORDER BY f.rental\_duration) AS standard\_quartile

FROM film\_category fc

JOIN category c

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

JOIN film f

ON f.film\_id = fc.film\_id

WHERE c.name IN ('Animation', 'Children', 'Classics', 'Comedy', 'Family', 'Music')) t1

GROUP BY 1, 2

ORDER BY 1, 2;

**Question 4**

We would like to know who were our top 10 paying customers, how many payments they made on a monthly basis during 2007, and what was the amount of the monthly payments. Can you write a query to capture the customer name, month and year of payment, and total payment amount for each month by these top 10 paying customers?

***Solution:***

SELECT DATE\_TRUNC('month', p.payment\_date) pay\_month, c.first\_name || ' ' || c.last\_name AS full\_name, COUNT(p.amount) AS pay\_countpermon, SUM(p.amount) AS pay\_amount

FROM customer c

JOIN payment p

ON p.customer\_id = c.customer\_id

WHERE c.first\_name || ' ' || c.last\_name IN

(SELECT t1.full\_name

FROM

(SELECT c.first\_name || ' ' || c.last\_name AS full\_name, SUM(p.amount) as amount\_total

FROM customer c

JOIN payment p

ON p.customer\_id = c.customer\_id

GROUP BY 1

ORDER BY 2 DESC

LIMIT 10) t1) AND (p.payment\_date BETWEEN '2007-01-01' AND '2008-01-01')

GROUP BY 2, 1

ORDER BY 2, 1, 3;