Using SQL to explore a database related to movie rentals.

Specifications:

- Writing SQL code to run SQL queries and answer interesting questions about the database. As part of the project I will run SQL queries and build visualizations to showcase the output of my queries queries.

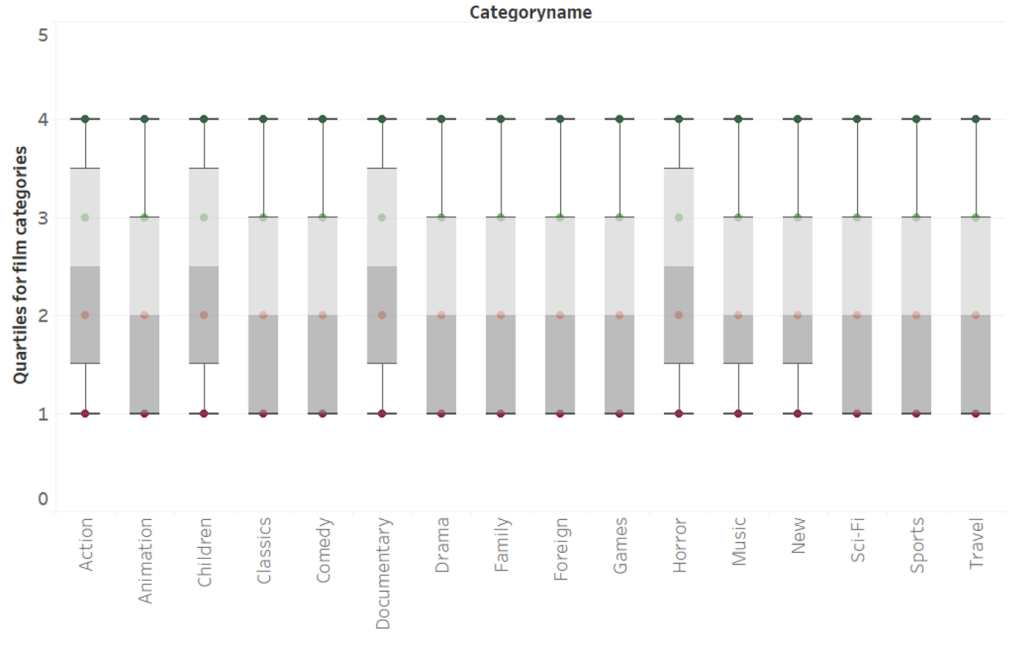
Link to projects

- This was part of the projects for R programming for data science in Udacity

Okorie Oluchukwu C

What were the rental duration of films in quartiles across categories?

A box plot showing the range of quartiles of the rental duration of film categories



We can see that generally films in the following categories have a higher rental duration:

- Children
- Documentary
- Horror

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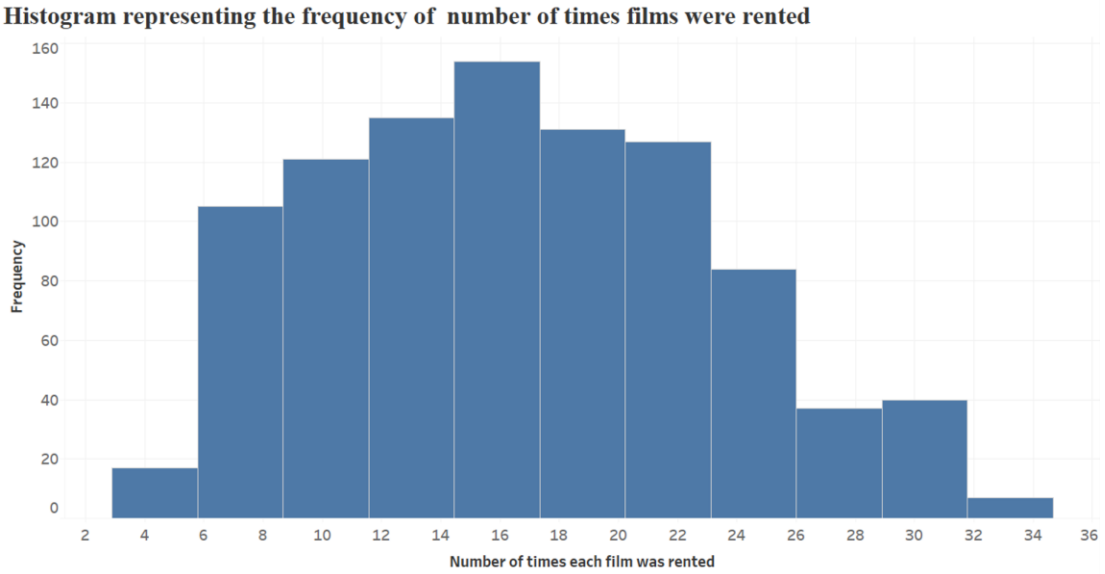
What are the frequency of rental counts of films across film categories



We can see that most frequent number of times films were rented was between 16-18 times,while films were rented 32-34 times the least

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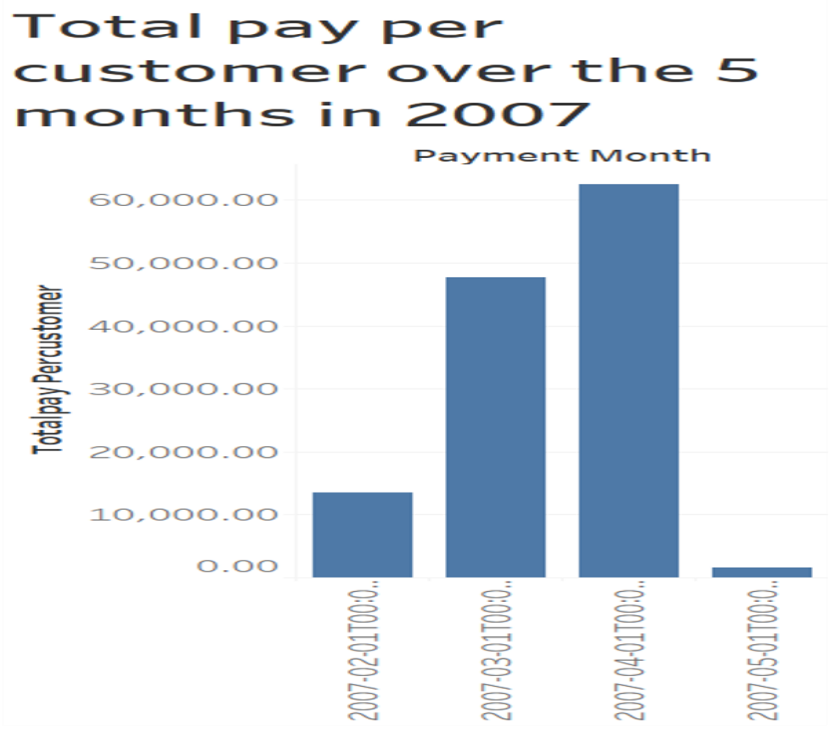
What is the total amount of money paid by customers in the months in 2007?



We can see that april was the month recording the highest payment per customer with customers paying upto $60,000

Okorie Oluchukwu C

What are the full names of the Top ten paying customers?

We can see that the top paying customers were more in march and april ,2007

Okorie Oluchukwu C

SQL Queries

Question 1:What were the rental duration of films in quartiles across..

```
SELECT
  filmtitle,
  categoryname,
  standard_quartile,
  rentalduration,

  CASE
    WHEN standard_quartile = 1 THEN 'First quartile'
    WHEN standard_quartile = 2 THEN 'Second quartile'
    WHEN standard_quartile = 3 THEN 'Third quartile'
    ELSE 'Final quartile'
  END AS movie_level
FROM (SELECT
  f.title filmtitle,
  c.name categoryname,
  f.rental_duration rentalduration,
  NTILE(4) OVER (PARTITION BY c.name ORDER BY
f.rental_duration) AS standard_quartile
FROM category c
JOIN film_category fc
  ON c.category_id = fc.category_id
JOIN film f
  ON f.film_id = fc.film_id) sub;
```

/*Question 2:What are the frequency of rental counts of films across film categories*/

```
SELECT
  categoryname,
  filmtitle,
  COUNT(*) rental_count
FROM (SELECT
  f.title filmtitle,
  rental_id rentalid,
  c.name categoryname
FROM category c
JOIN film_category fc
  ON c.category_id = fc.category_id
JOIN film f
  ON fc.film_id = f.film_id
JOIN inventory i
  ON f.film_id = i.film_id
JOIN rental r
  ON i.inventory_id = r.inventory_id
GROUP BY 1,
        2,
        3
ORDER BY 2) sub
GROUP BY 1,
        2
ORDER BY categoryname
```

SQL Queries

```
/*Question 3:What are the full names of the
Top ten paying customers?

SELECT c.first_name,
       c.last_name,
       c.first_name || ' ' || c.last_name AS
full_name,

DATE_TRUNC('month',p.payment_date)pay
ment_month,
       p.amount
FROM  payment p
JOIN  customer c
ON     c.customer_id = p.customer_id
ORDER BY p.amount DESC
LIMIT 10;
```

```
/*Question 4:What are the full names of the Top ten paying customers?
SELECT customerid,
       full_name,
       payment_month,
       MAX(amountpay) OVER (PARTITION BY full_name ORDER BY
payment_month) AS  totalpay_percustomer,
       COUNT(payid) OVER (PARTITION BY full_name ORDER BY
payment_month) AS    totalcount_percustomer
FROM (SELECT
       c.customer_id customerid,
       p.payment_id payid,
       c.first_name,
       c.last_name,
      c.first_name || ' ' || c.last_name AS  full_name,
      DATE_TRUNC('month',p.payment_date) payment_month,
      p.amount amountpay
FROM  payment p
JOIN  customer c
ON    c.customer_id = p.customer_id
GROUP BY 1,2,3,5
ORDER BY amountPAY DESC)t1
ORDER BY amountpay;
```