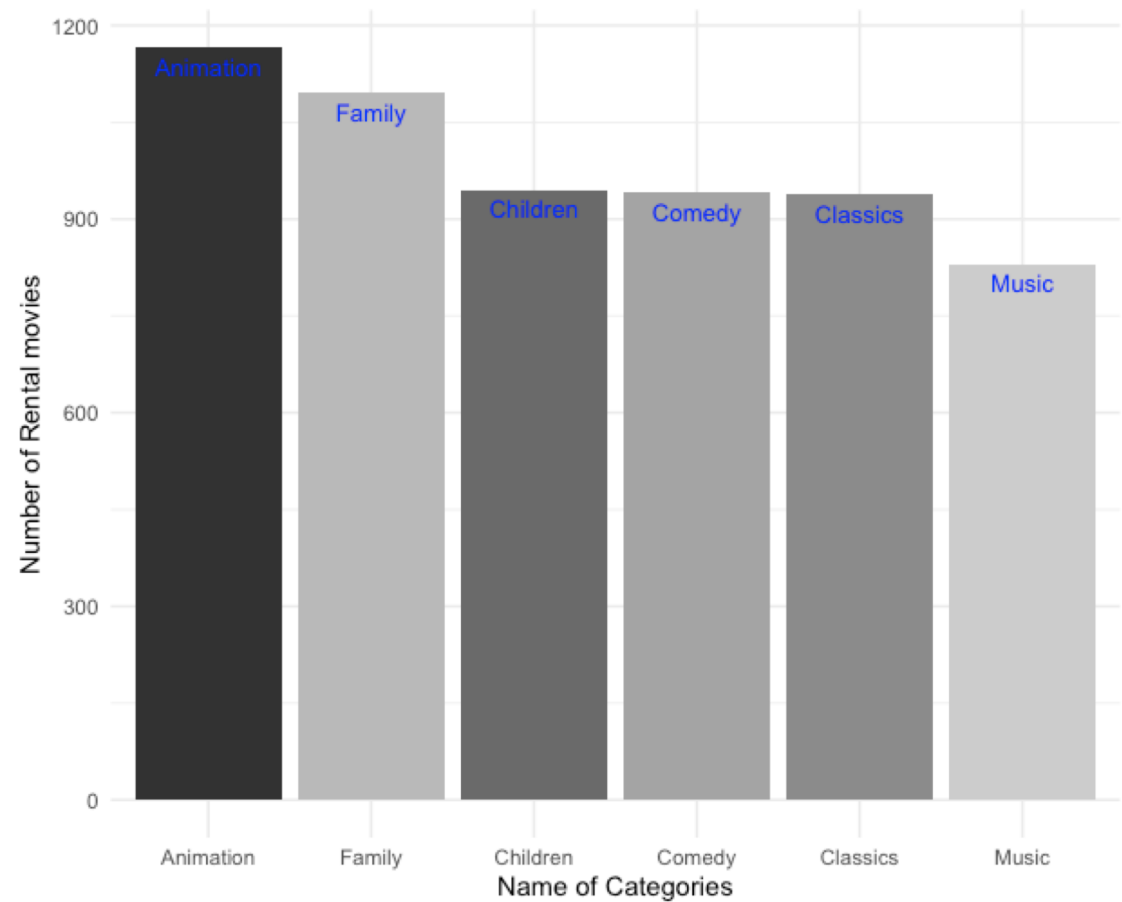


Question 1: Which genre of movies are the most popular between families?



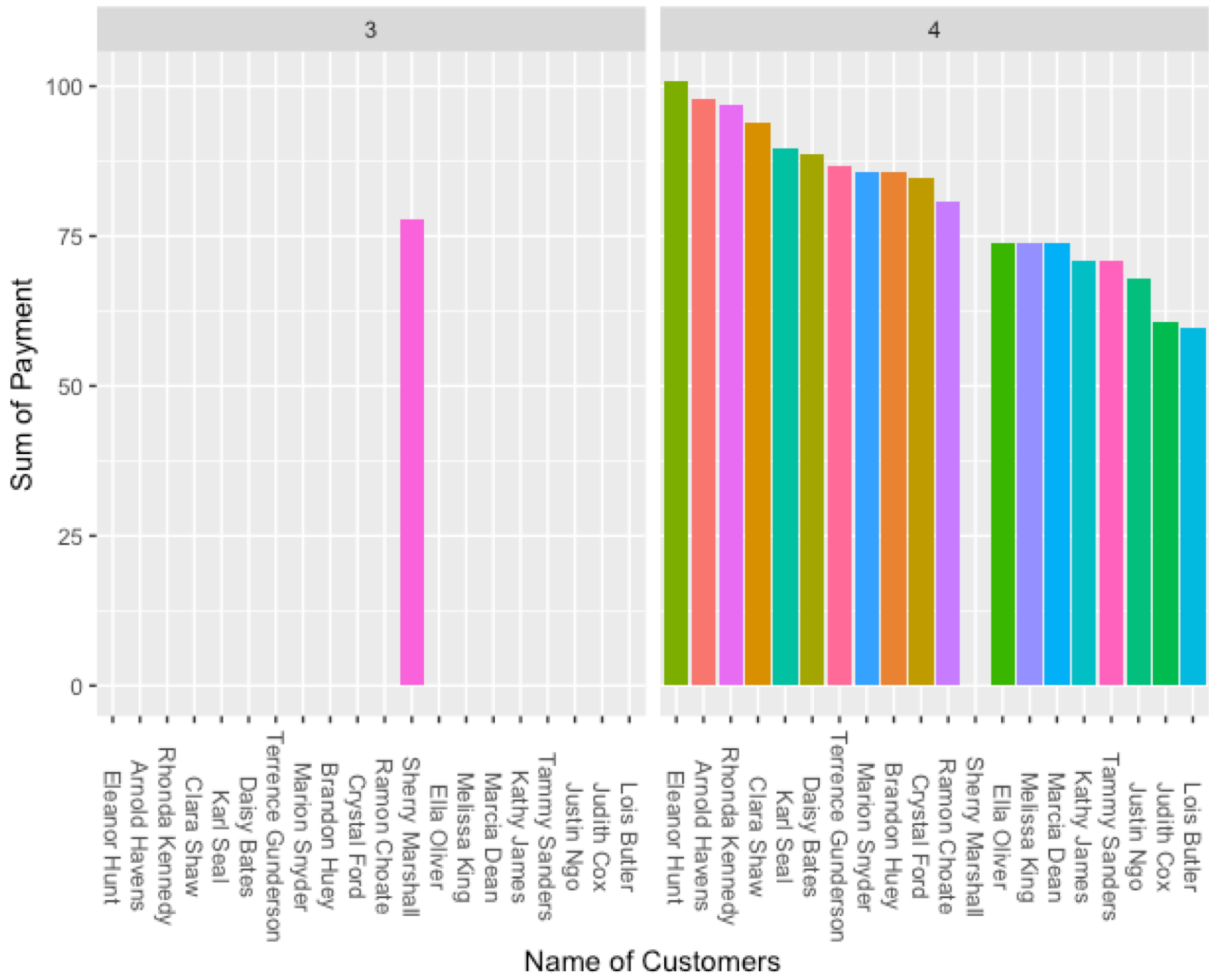
Name of category	Number of rental
Music	830
Classics	939
Comedy	941
Children	945
Family	1096
Animation	1166

Interpretation:

Here, I added a table and a figure to show the different genres and customers. Between the different genres it seems Animation and Family genres has the highest popularity, but musical genres has the lowest customers.

Question 2: What are the five main rental customers in the year 2007, and which month are most people renting the movies ?

payment_month	Full name	Payment	Sum of amount
4	Eleanor Hunt	22	100.78
4	Crystal Ford	21	84.79
4	Brandon Huey	20	85.80
4	Marcia Dean	20	73.80
4	Judith Cox	20	60.80
4	Tammy Sanders	20	70.80
4	Karl Seal	20	89.80
4	Melissa King	19	73.81
4	Arnold Havens	19	97.81
4	Justin Ngo	19	67.81
4	Daisy Bates	19	88.81
4	Rhonda Kennedy	19	96.81
4	Lois Butler	19	59.81
4	Terrence Gunderson	19	86.81
4	Ella Oliver	18	73.82
3	Sherry Marshall	18	77.82
4	Marion Snyder	18	85.82
4	Kathy James	18	70.82
4	Clara Shaw	18	93.82
4	Ramon Choate	18	80.82

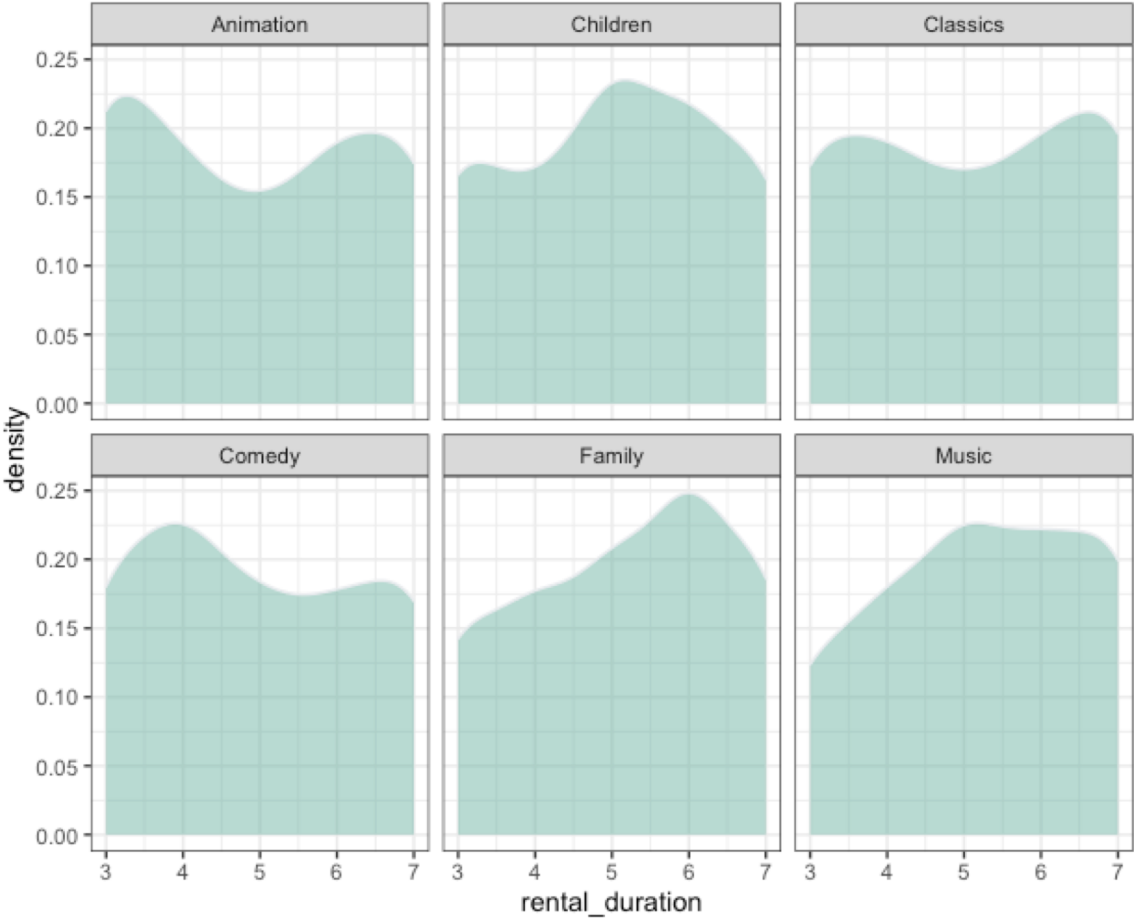


Interpretation:

Based on our data, It seems we have the highest renting and renting the movies in the April, and the most faithful customers was Eleanor Hunt, Crystal Ford, Brandon Huey. Also, in the March Sherry Marshall is the only person with highest payment for the movie.

Question 3: 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.

title	name	rental_duration	quartile	quintile	percentile
Blood Argonauts	Family	3	4	5	89
Velvet Terminator	Comedy	3	4	5	100
Lovely Jingle	Classics	3	4	5	100
Tomorrow Hustler	Classics	3	4	5	100
Fight Jawbreaker	Animation	3	4	5	99
Scarface Bang	Children	3	4	5	99
Insects Stone	Animation	3	4	5	99
Gables Metropolis	Family	3	4	5	98
Magic Mallrats	Children	3	4	5	98
Harper Dying	Animation	3	4	5	98
Baked Cleopatra	Family	3	4	5	97
Packer Madigan	Animation	3	4	5	97
Casper Dragonfly	Children	3	4	5	97
Miracle Virtual	Animation	3	4	5	96
Words Hunter	Music	3	4	5	96
King Evolution	Family	3	4	5	96
Alone Trip	Music	3	4	5	95
Arizona Bang	Classics	3	4	5	95
Bilko Anonymous	Family	3	4	5	95



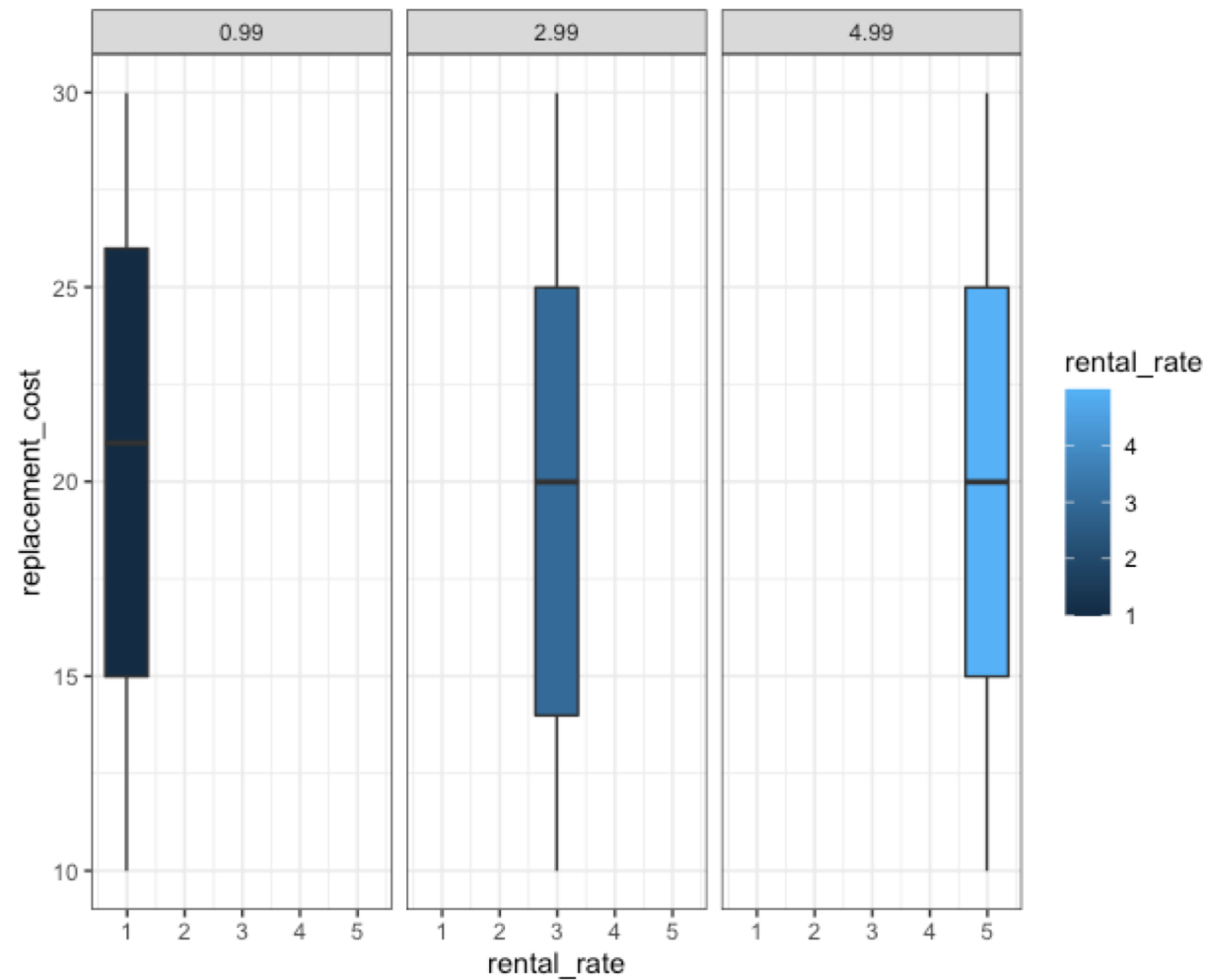
Top include just 19 rows

Interpretation:

Here I have a figure and table with quantile, quartile and percentile. Based on our data, It seems the family, music and children genres have the highest rental durations between 5 and 7. and rental durations in Animation and comedy genres has the lowest rental durations.

Question 4: Is there any relationship between the replacement cost and Rental rate in 2006?

Film id	Release year	Rental rate	Replacement cost
1	2006	0.99	20.99
2	2006	4.99	12.99
3	2006	2.99	18.99
4	2006	2.99	26.99
5	2006	2.99	22.99
6	2006	2.99	17.99
7	2006	4.99	28.99
8	2006	4.99	15.99
9	2006	2.99	21.99
10	2006	4.99	24.99



Interpretation:

Here I have a figure and table including rental rate and replacement cost. Based on these data, it seems higher replacement cost is equal to lower rental rate. In addition, higher rental rate (5) is equal to lower replacement cost. So, people prefer lower replacement cost when rent movies.