



MOVIE RENTAL DATA ANALYSIS

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OBJECTIVE

Use MySql to find the movies that are most popular and help the business in it growth



INTRODUCTION

Movie Rental Data Analysis MovieOnRent is a chain of movie rental stores operating in a certain country. It has a vast collection of movies in DVD and Blue Ray disc formats. The management of the company wants to analyze what kind of movies are most often rented, which genres they belong to, and which actors appeared in them. It will help the management stock up the inventory as per audience's preferences for improved business.

BUSINESS PROBLEMS

1. Display the full names of actors available in the database.
2.
 - i. Display the number of times each first name appears in the database.
 - ii. What is the count of actors that have unique first names in the database? Display the first names of all these actors.
3.
 - i. Display the number of times each last name appears in the database.
 - ii. Display all unique last names in the database.
4.
 - i. Display the list of records for the movies with the rating "R".
 - ii. Display the list of records for the movies that are not rated "R".
 - iii. Display the list of records for the movies that are suitable for audience below 13 years of age.
5.
 - i. Display the list of records for the movies where the replacement cost is up to \$11.
 - ii. Display the list of records for the movies where the replacement cost is between \$11 and \$20.
 - iii. Display the list of records for the all movies in descending order of their replacement costs

6. Display the names of the top 3 movies with the greatest number of actors.
7. Display the titles of the movies starting with the letters 'K' and 'Q'.
8. Display the names of all actors who appeared in the film "Agent Truman".
9. Identify all the movies categorized as family films.
10.
 - i. Display the maximum, minimum, and average rental rates of movies based on their ratings. The output must be sorted in descending order of the average rental rates.
 - ii. Display the movies in descending order of their rental frequencies, so the management can maintain more copies of those movies.
11. In how many film categories, the difference between the average film replacement cost ((disc - DVD/Blue Ray) and the average film rental rate is greater than \$15?

Display the list of all film categories identified above, along with the corresponding average film replacement cost and average film rental rate.
12. Display the film categories in which the number of movies is greater than 70.

3

- i. Display the number of times each last name appears in the database.
- ii. Display all unique last names in the database.

Q
U
E
R
Y

```
SELECT
    last_name, COUNT(*) AS Number_of_occurance
FROM
    actor
GROUP BY last_name
ORDER BY Number_of_occurance DESC;
```

O
U
T
P
U
T

last_name	Number_of_occurance
KILMER	5
NOLTE	4
TEMPLE	4
AKROYD	3
ALLEN	3
BERRY	3
DAVIS	3
DEGENERES	3
GARLAND	3
GUINNESS	3
HARRIS	3
HOFFMAN	3

KILMER is the last name which occurs the most number of times (5 times)

Q
U
E
R
Y

```
SELECT DISTINCT
    last_name
FROM
    actor;
```

O
U
T
P
U
T

last_name
AKROYD
ALLEN
ASTAIRE
BACALL
BAILEY
BALE
BALL
BARRYMORE
BASINGER
BENING
BERGEN

There are a total of 121 unique last names

4

- Display the list of records for the movies with the rating "R".
- Display the list of records for the movies that are not rated "R".
- Display the list of records for the movies that are suitable for audience below 13 years of age.

Q
U
E
R
Y

```
SELECT
  title
FROM
  film
WHERE
  rating = 'R';
```

O
U
T
P
U
T

title
AIRPORT POLLOCK
ALONE TRIP
AMELIE HELLFIGHTERS
AMERICAN CIRCUS
ANACONDA CONFESSIONS
ANALYZE HOOSIERS
ANYTHING SAVANNAH
APOCALYPSE FLAMINGOS
ARMY FLINTSTONES
BADMAN DAWN
BANGER PINOCCHIO
BEAR COUNTRY

There are a total of 128 movies that are rated 'R'

Q
U
E
R
Y

```
SELECT
  title
FROM
  film
WHERE
  rating != 'R';
```

O
U
T
P
U
T

title
ACADEMY DINOSAUR
ACE GOLDFINGER
ADAPTATION HOLES
AFFAIR PREJUDICE
AFRICAN EGG
AGENT TRUMAN
AIRPLANE SIERRA
ALABAMA DEVIL
ALADDIN CALENDAR
ALAMO VIDEOTAPE
ALASKA PHANTOM

There are a total of 805 movies that are not rated 'R'

Q
U
E
R
Y

```
SELECT
  title
FROM
  film
WHERE
  rating IN ('G', 'PG');
```

O
U
T
P
U
T

title
ACADEMY DINOSAUR
ACE GOLDFINGER
AFFAIR PREJUDICE
AFRICAN EGG
AGENT TRUMAN
ALAMO VIDEOTAPE
ALASKA PHANTOM
ALI FOREVER
AMADEUS HOLY
AMISTAD MIDSUMMER
ANGELS LIFE

There are a total of 372 movies that are suitable for children below 13

- Display the list of records for the movies where the replacement cost is up to \$11.
- Display the list of records for the movies where the replacement cost is between \$11 and \$20.
- Display the list of records for the all movies in descending order of their replacement costs

Q
U
E
R
Y

```
SELECT
*
FROM
film
WHERE
replacement_cost <= 11
ORDER BY replacement_cost
```

Q
U
E
R
Y

```
SELECT
*
FROM
film
WHERE
replacement_cost BETWEEN 11 AND 20
ORDER BY replacement_cost DESC
```

Q
U
E
R
Y

```
SELECT
*
FROM
film
ORDER BY replacement_cost DESC;
```

O
U
T
P
U
T

film_id	title	description
15	ALIEN CENTER	A Brilliant Drama of a Cat And a
22	AMISTAD MIDSUMMER	A Emotional Character Study of
633	OCTOBER SUBMARINE	A Taut Epistle of a Monkey And
39	ARMAGEDDON LOST	A Fast-Paced Tale of a Boat An
42	ARTIST COLDBLOODED	A Stunning Reflection of a Robo
51	BALLOON HOMEWARD	A Insightful Panorama of a Fore
79	BLADE POLISH	A Thoughtful Character Study o
116	CANDIDATE PERDITION	A Brilliant Epistle of a Compos
128	CATCH AMISTAD	A Boring Reflection of a Lumber
685	PLATOON INSTINCT	A Thrilling Panorama of a Man A
167	COMA HEAD	A Awe-Inspiring Drama of a Boy
181	CONTACT ANONYMOUS	A Insightful Display of a A Shar
692	POTLUCK MIXED	A Beautiful Story of a Dog And a
185	COWBOY DOOM	A Astounding Drama of a Boy And a Lumberjack who
746	DRIVE ENIGMA	A Awe-Inspiring Drama of a Astronaut And a Dishe

O
U
T
P
U
T

film_id	title	description
24	ANALYZE HOOSTERS	A Thoughtful Display of a Explorer And a Past
92	BOWFINGER GABLES	A Fast-Paced Yarn of a Waitress And a Compos
108	BUTCH PANTHER	A Lachrymose Yarn of a Feminist And a Databa
113	CALIFORNIA BIRDS	A Thrilling Yarn of a Database Administrator An
125	CASSIDY WYOMING	A Intrepid Drama of a Frisbee And a Hunter wh
166	COLOR PHILADELPHIA	A Thoughtful Panorama of a Car And a Crocod
169	COMFORTS RUSH	A Unbelievable Panorama of a Pioneer And a
192	CROSSING DIVORCE	A Beautiful Documentary of a Dog And a Robot
213	DATE SPEED	A Touching Saga of a Composer And a Moose
225	DESTINATION JERK	A Beautiful Yarn of a Teacher And a Cat who must Build a Ca...
236	DIVINE RESURRECTION	A Boring Character Study of a Man And a Womanizer who mu...

O
U
T
P
U
T

film_id	title	description	release_y	language	original_language	rental_duration	rental_rate	length	replacement_cost	rating	special_features	last_update
34	ARABIA DOGMA	A Touching Epistle of a Madman And a Mad Cow who must D...	2006	1	NULL	6	0.99	62	29.99	NC-17	Commentaries,Deleted Scenes	2006-02-15 05:03:42
52	BALLROOM MOCKINGBIRD	A Thrilling Documentary of a Composer And a Monkey who m...	2006	1	NULL	6	0.99	173	29.99	G	Commentaries,Deleted Scenes	2006-02-15 05:03:42
81	BLINDNESS GUN	A Touching Drama of a Robot And a Dentist who must Meet a...	2006	1	NULL	6	4.99	103	29.99	PG-13	Trailers,Behind the Scenes	2006-02-15 05:03:42
85	BONNIE HOLOCAUST	A Fast-Paced Story of a Crocodile And a Robot who must Fin...	2006	1	NULL	4	0.99	63	29.99	G	Deleted Scenes	2006-02-15 05:03:42
138	CHARIOTS CONSPIRACY	A Unbelievable Epistle of a Robot And a Husband who must ...	2006	1	NULL	5	2.99	71	29.99	R	Deleted Scenes,Behind the Scenes	2006-02-15 05:03:42
157	CLOCKWORK PARADISE	A Insightful Documentary of a Technical Writer And a Feminis...	2006	1	NULL	7	0.99	143	29.99	PG-13	Trailers,Commentaries,Deleted Scenes,Behind t...	2006-02-15 05:03:42
163	CLYDE THEORY	A Beautiful Yarn of a Astronaut And a Frisbee who must Ove...	2006	1	NULL	4	0.99	139	29.99	PG-13	Commentaries,Deleted Scenes,Behind the Scenes	2006-02-15 05:03:42
196	CRUELTY UNFORGIVEN	A Brilliant Tale of a Car And a Moose who must Battle a Denti...	2006	1	NULL	7	0.99	69	29.99	G	Deleted Scenes,Behind the Scenes	2006-02-15 05:03:42
199	CUPBOARD SINNERS	A Emotional Reflection of a Frisbee And a Boat who must Rea...	2006	1	NULL	4	2.99	56	29.99	R	Behind the Scenes	2006-02-15 05:03:42
224	DESPERATE TRAINSPOTTING	A Epic Yarn of a Forensic Psychologist And a Teacher who mu...	2006	1	NULL	7	4.99	81	29.99	G	Deleted Scenes	2006-02-15 05:03:42

There are 15 movies with a replacement cost up to \$11.

There are 42 movies with a replacement cost between \$11 and \$20.

The highest replacement cost is 29.99 and movies like Arabia Dogma has the highest replacement cost

Identify all the movies categorized as family films.

Q
U
E
R
Y

```
SELECT
    title, name AS CategoryName
FROM
    film f
    INNER JOIN film_category fc ON fc.film_id=f.film_id
    INNER JOIN category c ON c.category_id=fc.category_id
WHERE
    name = 'Family';
```

O
U
T
P
U
T

title	CategoryName
AFRICAN EGG	Family
APACHE DIVINE	Family
ATLANTIS CAUSE	Family
BAKED CLEOPATRA	Family
BANG KWAI	Family
BEDAZZLED MARRIED	Family
BILKO ANONYMOUS	Family
BLANKET BEVERLY	Family

There are 69 such movies

Display the film categories in which the number of movies is greater than 70.

Q
U
E
R
Y

```
SELECT
  Name, COUNT(title) AS Num_Of_Movies
FROM
  film f
  INNER JOIN
  film_category fc ON f.film_id = fc.film_id
  INNER JOIN
  category c ON c.category_id = fc.category_id
GROUP BY Name
HAVING Num_Of_Movies > 70
ORDER BY Num_Of_Movies DESC;
```

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U
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Name	Num_Of_Movies
Sports	74
Foreign	73

The sports and Foreign are the only two category which have more than 70 movies



SUMMARY

1. Approximately one-third of the movies are suitable for children below the age of 13
2. Sports and Foreign category has most number of movies
3. The highest replacement cost is 29.99
4. There are 90 movies having replacement cost below 11
5. There are around 459 movies replacement cost between \$ 11 to \$ 20
6. Most number of movies have replacement cost above \$ 20
7. The number of movies in Family category should be increased

A series of white, thin, overlapping geometric lines and polygons on a black background, located on the left side of the slide.

THANK YOU