ANALYTICS USING SQL: HACKATHON

use sakila;

-- Task 1 : Find list of all actors available in the database along with their last updated date.

select distinct(concat(first_name,' ',last_name)) as fullname,date(actor.last_update),avg(amount) from actor

join film_actor using(actor_id)

join film using(film_id)

join inventory using(film_id)

join rental using(inventory_id)

join payment using(rental_id)

group by concat(first_name,' ',last_name),actor.last_update;

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

fullname	date(actor.last_update)	avg(amount)
ADAM GRANT	2006-02-15	3.466868
ADAM HOPPER	2006-02-15	4.021549
AL GARLAND	2006-02-15	3.694600
ALAN DREYFUSS	2006-02-15	3.942891
ALBERT JOHANSSON	2006-02-15	4.227985
ALBERT NOLTE	2006-02-15	4.167462
ALEC WAYNE	2006-02-15	3.896565
ANGELA HUDSON	2006-02-15	4.113693
ANGELA WITHERSPOON	2006-02-15	3.997645
ANGELINA ASTAIRE	2006-02-15	3.880244
ANNE CRONYN	2006-02-15	4.417811
AUDREY BAILEY	2006-02-15	4.176216

-- Task 2 :

-- Task 2.1 : Is there any change in the actor's first name or last name?

select first_name,last_name from actor

order by 1,2;

Result Grid | Filter Rows:

first_name	last_name
ADAM	GRANT
ADAM	HOPPER
AL	GARLAND
ALAN	DREYFUSS
ALBERT	JOHANSSON
ALBERT	NOLTE
ALEC	WAYNE
ANGELA	HUDSON
ANGELA	WITHERSPOON
ANGELINA	ASTAIRE
ANNE	CRONYN
AUDREY	BAILEY

actor 66

-- Task 2.2 : How many actors have the same first names and last names?

select concat(first_name,' ',last_name) as Full_name,count(*) from actor group by Full_name having count(Full_name)>1;

Result Grid | Filter Rows: | Exp

Full_name	count(*)
SUSAN DAVIS	2

-- Interpretation : Only two actors have same first and last name.

-- Task 2.3 : How many actors have unique names? What is the count of these actors?

select count(*) from (select distinct(concat(first_name,' ',last_name)) as Full_name from actor) as mytab;

Result Grid | Filt

count(*)
199

-- Interpretation : Total 199 actors have unique names

-- Task 3 : Find the list of actors whose names are repeated and list of actors whose names are not repeated

select concat(first_name,' ',last_name) as Full_name from actor group by Full_name having count(Full_name)>1;

Result Grid

Full_name
SUSAN DAVIS

select distinct(concat(first_name,' ',last_name)) as Full_name from actor;

Result Grid | Filter Rows:

Full_name
PENELOPE GUINESS
NICK WAHLBERG
ED CHASE
JENNIFER DAVIS
JOHNNY LOLLOBRIGIDA
BETTE NICHOLSON
GRACE MOSTEL
MATTHEW JOHANSSON
JOE SWANK
CHRISTIAN GABLE
ZERO CAGE
KARL BERRY

Result 70

Output

/* Task 4 : The board needs to categorize the actors playing identity roles such as action,romance, horror and mystery. For this board members want to have detail overview of films based on actor's preference */

select concat(first_name,' ',last_name) as actor_name,category.name,count(category.name) from actor

inner join film_actor using(actor_id)

inner join film using (film_id)

inner join film_category using(film_id)

```
inner join category using(category_id)
where category.name in ('Action','Romance','Horror','Mystery')
group by category.name,actor_name
order by 3 desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

actor_name	name	count(category.name)
JULIA MCQUEEN	Horror	7
NATALIE HOPKINS	Action	6
TOM MIRANDA	Horror	6
SUSAN DAVIS	Action	5
JON CHASE	Action	5
SEAN GUINESS	Action	5
KIRSTEN AKROYD	Action	5
AL GARLAND	Action	5
HENRY BERRY	Horror	5
VIVIEN BERGEN	Horror	5
RIP CRAWFORD	Action	4
SIDNEY CROWE	Action	4

Result 71

/* Task 5 : The board wants to know various rating categories with their descriptions.

Determine which movies are suitable for kids, under 16 but under parent guidance & also restricted for all under 18 */

```
-- Option 1 :
create view movie_rating as
select rating,
case
when rating in('G') then 'GENERAL AUDIENCES'
when rating in('PG') then 'PARENTAL GUAIDANCE SUGGESTED'
when rating in('PG-13') then 'PARENTS STRONGLY CAUTIONED'
when rating in('R') then 'RESTRICTED '
else 'NO ONE 17 AND UNDER ADMITTED' end as movie_type
from film
inner join film_category using(film_id)
```

inner join category using(category_id)

;

select * from movie_rating group by rating;

Result Grid | Filter Rows: | Export:

rating	movie_type
PG	PARENTAL GUAIDANCE SUGGESTED
R	RESTRICTED
NC-17	NO ONE 17 AND UNDER ADMITTED
G	GENERAL AUDIENCES
PG-13	PARENTS STRONGLY CAUTIONED

select title,movie_type from film

inner join movie_rating using(rating)

group by title,movie_type;

title	movie_type
ACADEMY DINOSAUR	PARENTAL GUAIDANCE SUGGESTED
ACE GOLDFINGER	GENERAL AUDIENCES
ADAPTATION HOLES	NO ONE 17 AND UNDER ADMITTED
AFFAIR PREJUDICE	GENERAL AUDIENCES
AFRICAN EGG	GENERAL AUDIENCES
AGENT TRUMAN	PARENTAL GUAIDANCE SUGGESTED
AIRPLANE SIERRA	PARENTS STRONGLY CAUTIONED
AIRPORT POLLOCK	RESTRICTED
ALABAMA DEVIL	PARENTS STRONGLY CAUTIONED
ALADDIN CALENDAR	NO ONE 17 AND UNDER ADMITTED
ALAMO VIDEOTAPE	GENERAL AUDIENCES
ALASKA PHANTOM	PARENTAL GUAIDANCE SUGGESTED

Result 77

select count(*),movie_type from movie_rating

group by movie_type;

Result Grid | Filter Rows: | Expo

count(*)	movie_type
194	PARENTAL GUAIDANCE SUGGESTED
195	RESTRICTED
210	NO ONE 17 AND UNDER ADMITTED
178	GENERAL AUDIENCES
223	PARENTS STRONGLY CAUTIONED

-- Option 2 :

```
select name, count(film.film_id) as count_of_movies from category
join film_category using(category_id)
join film using(film_id)
group by name;
```

Result Grid | Filter Rows: | Export: | Wrap Cell C

name	count_of_movies
Action	64
Animation	66
Children	60
Classics	57
Comedy	58
Documentary	68
Drama	62
Family	69
Foreign	73
Games	61
Horror	56
Music	51

Result 80

```
select name,title,rating,description from category
join film_category using(category_id)
join film using(film_id)
where rating in('r','nc-17') or name='children';
```

87

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	title	rating	description
Action	AMERICAN CIRCUS	R	A Insightful Drama of a Girl And a Astronaut who must Face a Database Administrator in A Shark Tank
Action	ANTITRUST TOMATOES	NC-17	A Fateful Yarn of a Womanizer And a Feminist who must Succumb a Database Administrator in Ancient India
Action	ARK RIDGEMONT	NC-17	A Beautiful Yarn of a Pioneer And a Monkey who must Pursue a Explorer in The Sahara Desert
Action	BULL SHAWSHANK	NC-17	A Fanciful Drama of a Moose And a Squirrel who must Conquer a Pioneer in The Canadian Rockies
Action	CADDYSHACK JEDI	NC-17	A Awe-Inspiring Epistle of a Woman And a Madman who must Fight a Robot in Soviet Georgia
Action	CAMPUS REMEMBER	R	A Astounding Drama of a Crocodile And a Mad Cow who must Build a Robot in A Jet Boat
Action	CLUELESS BUCKET	R	A Taut Tale of a Car And a Pioneer who must Conquer a Sumo Wrestler in An Abandoned Fun House
Action	DANCES NONE	NC-17	A Insightful Reflection of a A Shark And a Dog who must Kill a Butler in An Abandoned Amusement Park
Action	DARKO DORADO	NC-17	A Stunning Reflection of a Frisbee And a Husband who must Redeem a Dog in New Orleans
Action	DEVIL DESIRE	R	A Beautiful Reflection of a Monkey And a Dentist who must Face a Database Administrator in Ancient Japan
Action	DRAGON SQUAD	NC-17	A Taut Reflection of a Boy And a Waitress who must Outgun a Teacher in Ancient China

Result 81

-- Task 6

-- Task 6.1 : Figure out movie titles where replacement cost is upto $9

```
select title,replacement_cost from film

where replacement_cost <=9;
```

Result Grid | Filter Rows:

title	replacement_cost

-- Interpretation : No movies with replacement cost upto $9

-- Task 6.2 : Get movie titles where replacement cost between $15 and $20

```
select title,replacement_cost from film

where replacement_cost between 15 and 20;
```

title	replacement_cost
ADAPTATION HOLES	18.99
AGENT TRUMAN	17.99
AIRPORT POLLOCK	15.99
ALAMO VIDEOTAPE	16.99
AMERICAN CIRCUS	17.99
ANALYZE HOOSIERS	19.99
ANGELS LIFE	15.99
ANNIE IDENTITY	15.99
ANTHEM LUKE	16.99
APACHE DIVINE	16.99
APOLLO TEEN	15.99
ARSENIC INDEPEND...	17.99

film 83

Output

-- Task 6.3: Find movie titles with highest replacement cost but lowest rental cost

```
select title,replacement_cost,rental_rate from film
where replacement_cost=(select max(replacement_cost)from film)
and rental_rate=(select min(rental_rate) from film);
```

title	replacement_cost	rental_rate
ARABIA DOGMA	29.99	0.99
BALLROOM MOCKINGBIRD	29.99	0.99
BONNIE HOLOCAUST	29.99	0.99
CLOCKWORK PARADISE	29.99	0.99
CLYDE THEORY	29.99	0.99
CRUELTY UNFORGIVEN	29.99	0.99
EARTH VISION	29.99	0.99
EVERYONE CRAFT	29.99	0.99
FEUD FROGMEN	29.99	0.99
GILMORE BOILED	29.99	0.99
GOLDFINGER SENSIBILITY	29.99	0.99
GRAFFITI LOVE	29.99	0.99

film 84

-- Task 7 : Find list of all films along with the number of actors listed for each movie

```
select title,count(actor_id) from film
inner join film_actor using(film_id)
group by title;
```

Result Grid | Filter Rows:

title	count(actor_id)
ACADEMY DINOSAUR	10
ACE GOLDFINGER	5
ADAPTATION HOLES	5
AFFAIR PREJUDICE	5
AFRICAN EGG	5
AGENT TRUMAN	7
AIRPLANE SIERRA	5
AIRPORT POLLOCK	4
ALABAMA DEVIL	9
ALADDIN CALENDAR	8
ALAMO VIDEOTAPE	4
ALASKA PHANTOM	7

ACE GOLDFINGER

Result 93

-- Task 8 : Display titles of the movie starting with k or q

```
select title from film
where title like 'k%' or title like 'Q%';
```

Result Grid | Filter Rows:

title
KANE EXORCIST
KARATE MOON
KENTUCKIAN GIANT
KICK SAVANNAH
KILL BROTHERHOOD
KILLER INNOCENT
KING EVOLUTION
KISS GLORY
KISSING DOLLS
KNOCK WARLOCK
KRAMER CHOCOLATE
KWAI HOMEWARD

film 85

-- Task 9 : Display all actors appeared in movie 'Agent Truman'

```
select distinct(concat(first_name,' ',last_name)) as actor_name from actor
inner join film_actor using(actor_id)
inner join film using(film_id)
where title='Agent Truman';
```

Result Grid | Filter Rows:

actor_name
KIRSTEN PALTROW
SANDRA KILMER
JAYNE NEESON
WARREN NOLTE
MORGAN WILLIAMS
KENNETH HOFFMAN
REESE WEST

-- Task 10 : Identify all movies categorizes as family films

```
select title from film
inner join film_category using(film_id)
inner join category using(category_id)
where name='Family';
```

Result Grid | Filter Rov

title
AFRICAN EGG
APACHE DIVINE
ATLANTIS CAUSE
BAKED CLEOPATRA
BANG KWAI
BEDAZZLED MARRIED
BILKO ANONYMOUS
BLANKET BEVERLY
BLOOD ARGONAUTS
BLUES INSTINCT
BRAVEHEART HUMAN
CHASING FIGHT

Result 95

-- Task 11 : Display the most fruently rented movies in descending order

```
select title,count(rental_id) from film
inner join inventory using(film_id)
inner join rental using(inventory_id)
```

group by title

order by 2 desc;

Result Grid Filter Rows:

title	count(rental_id)
BUCKET BROTHERHOOD	34
ROCKETEER MOTHER	33
FORWARD TEMPLE	32
GRIT CLOCKWORK	32
JUGGLER HARDLY	32
RIDGEMONT SUBMARINE	32
SCALAWAG DUCK	32
APACHE DIVINE	31
GOODFELLAS SALUTE	31
HOBBIT ALIEN	31
NETWORK PEAK	31
ROBBERS JOON	31

Result 96

-- Task 12 : In how many film categories aveage difference between replacement cost and rental cost is greater than $15?

select count(*) from (select name, (avg(replacement_cost-rental_rate)) as x from film

inner join film_category using(film_id)

inner join category using(category_id)

group by name

having (avg(replacement_cost-rental_rate))>15)

as mytab

;

Result Grid Filter Rows: Export:

count(*)
16

/* Task 13 : List names of categories having 60 to 70 films.List name of these categories and number of films per category sorted by number of films */

```
select name,count(film_id) from category

inner join film_category using(category_id)

group by name

having count(film_id) between 60 and 70

order by 2 desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	count(film_id)
Family	69
Documentary	68
Animation	66
Action	64
New	63
Drama	62
Games	61
Sci-Fi	61
Children	60