1. What is the most watched film (number of rentals) by each category?

```sql
select ranking.category_id, c.name, ranking.film_id, f.title, ranking.rentals

from(select fcr.category_id, fcr.film_id, rentals,

dense_rank() over (partition by category_Id order by rentals desc) as rankOfFilm

 from(select fc.film_id, fc.category_id, count(*) as rentals

 from rental as r inner join inventory as i on i.inventory_id=r.inventory_id inner join film_category as fc on fc.film_id=i.film_id group by 1,2) as fcr ) as ranking

 inner join category as c on c.category_id=ranking.category_id inner join film as f on f.film_id=ranking.film_id where rankOfFilm=1;
```

The screenshot shows MySQL Workbench with the following SQL query:

```sql
157    -- What is the most watched film (number of rentals) by each
158 •  select ranking.category_id, c.name, ranking.film_id, f.title
159    from(select fcr.category_id, fcr.film_id, rentals,
160    dense_rank() over (partition by category_Id order by rentals
161    from(select fc.film_id, fc.category_id, count(*) as rentals
162    from rental as r inner join inventory as i on i.inventory_i
163    inner join category as c on c.category_id=ranking.category_
164    --
```

JOIN Syntax:

MySQL supports the following JOIN syntax for the table_references part of SELECT statements and multiple-table DELETE and UPDATE statements:

```
>
table_references:
    escaped_table_reference [, escaped_table_refer

escaped_table_reference:
    table_reference
  | { OJ table_reference }

table_reference:
    table_factor
  | joined_table

table_factor:
    tbl_name [PARTITION (partition_names)]
```

Result Grid:

category_id	name	film_id	title	rentals
1	Action	748	RUGRATS SHAKESPEARE	30
1	Action	869	SUSPECTS QUILLS	30
2	Animation	489	JUGGLER HARDLY	32
3	Children	735	ROBBERS JOON	31
4	Classics	891	TIMBERLAND SKY	31

Action Output:

#	Time	Action	Message	Duration / Fetch
1	00:39:10	use sakila	0 row(s) affected	0.000 sec
2	00:39:13	select ranking.category_id, c.name, ranking.film_id, f.title, ranking.rentals from(select fcr.category_id, fcr.film_id, r...	21 row(s) returned	0.016 sec / 0.000 sec

2. What is the total rental amount per category?

select a.name as "Categroy Name", sum(a.amount) as "Total Amount"

from (select c.name, p.amount

from category c

inner join film_category fc

on fc.category_id = c.category_id

inner join film f

on fc.film_id = f.film_id

inner join inventory i

on f.film_id = i.film_id

inner join rental r

on i.inventory_id = r.inventory_id

inner join payment p

on r.rental_id = p.rental_id) a

group by a.name;

3. For each category, list the customer who is the second most renter.

```
select * from (select c.name, r.customer_id, count(r.rental_id) As "TOTAL RENTALS",
 dense_rank() over (partition by c.name order by count(r.rental_id) desc) AS RANKK
 from category c
inner join film_category fc
on fc.category_id = c.category_id
inner join film f
on fc.film_id = f.film_id
inner join inventory i
on f.film_id = i.film_id
inner join rental r
on i.inventory_id = r.inventory_id
group by c.name, r.customer_id
order by count(r.rental_id) desc) a
where rankk =2;
```

4. What is the second most popular movie title?

select * from (select f.title, count(r.rental_id),

rank() over(order by count(r.rental_id) desc) AS RANKMX

from film f

inner join inventory i

on f.film_id = i.film_id

inner join rental r

on i.inventory_id = r.inventory_id

group by f.title

order by count(r.rental_id) desc)a

where RANKMX=2;

5. . What are the most popular categories?

select c.category_id as "Category ID", c.name as "Category Name", a.rentals as "Count of Rentals"
from (select f.film_id, f.title, count(*) as rentals

from rental r

inner join inventory i

on r.inventory_id = i.inventory_id

inner join film f

on i.film_id = f.film_id

group by 1,2) a

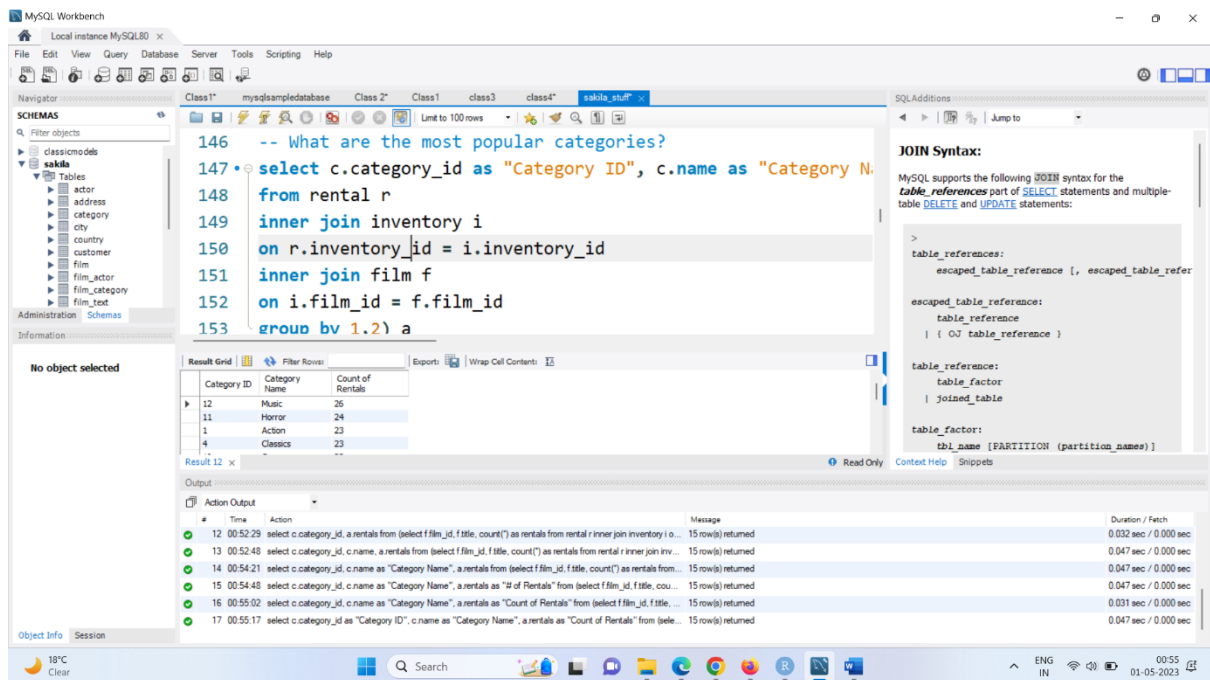inner join film_category fc

on a.film_id = fc.film_id

inner join category c

on c.category_id = fc.film_id

group by c.category_id

order by a.rentals desc;

6. . What are the top 10 most rented movies by category?

select dd.film_id, fcr.title, fcr.rankk, fcr.rentals

from (select a.film_id, a.title, a.rentals, row_number() over (order by rentals desc) rankk from (select f.film_id, f.title, count(*) as rentals

from rental r

inner join inventory i

on r.inventory_id = i.inventory_id

inner join film f

on f.film_id = i.film_id

group by f.film_id)a) fcr

inner join film dd

on dd.film_id = fcr.film_id

group by 1

order by rankk asc

limit 10;

7. What are the average rental days for each movie?

select f.film_id,f.title, round(avg(datediff(return_date, rental_date))) as "Rental Days"

from rental r

inner join inventory i

on r.inventory_id = i.inventory_id

inner join film f

on f.film_id = i.film_id

group by f.film_id;
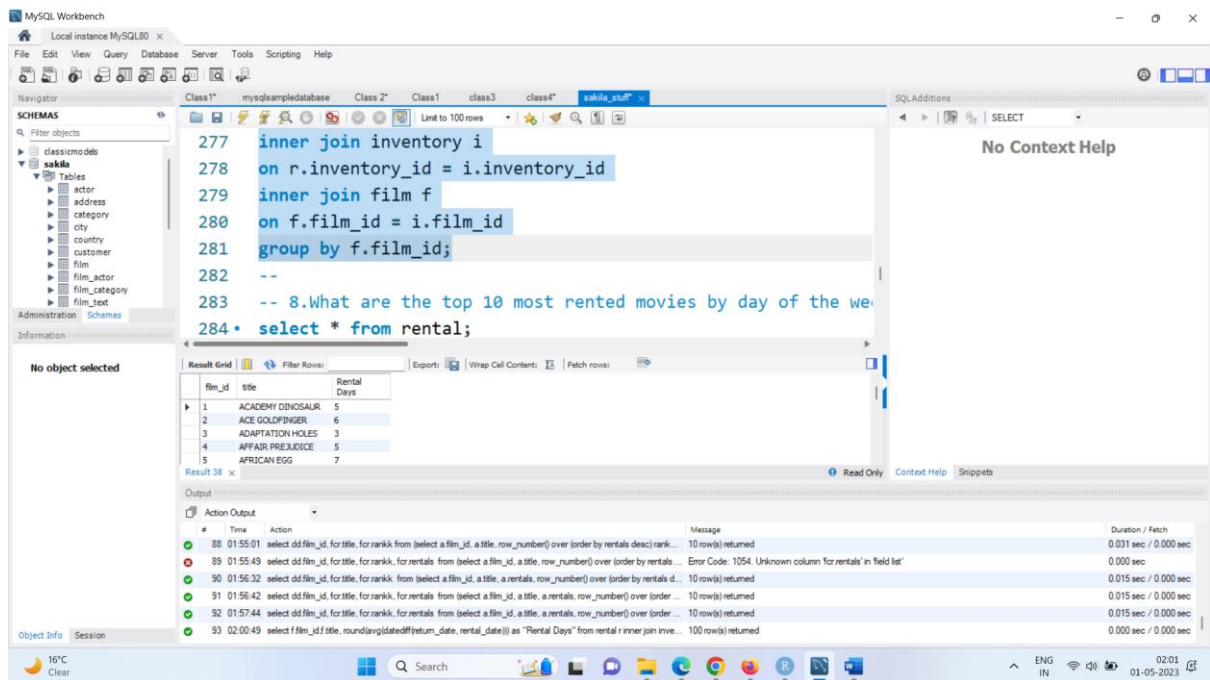
8. What are the top 10 most rented movies by day of the week?

select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "Rank Order", fc.rentals as "Number of Rentals" from (select a.film_id,a.title,a.daynames,a.rentals, row_number() over(partition by a.daynames order by rentals desc)as rankk from (select f.film_id,f.title,dayname(r.rental_date)as daynames, count(*) as rentals

from rental r

inner join inventory i

on r.inventory_id = i.inventory_id

inner join film f

on i.film_id = f.film_id

group by 1,2,3

order by 4 desc) a)fc

where fc.rankk in (1,2,3,4,5,6,7,8,9,10)

order by fc.daynames;

Screenshot 1 — SQL Editor (sakila_stuff)

```
431   r join film f
432   .film_id = f.film_id;
433
434 • ct * from rental;
435
436 • ct fc.film_id as "ID Category",fc.title as "Popular Movies",
437   | rental r
438   r join inventory i
```

Result Grid:

ID Category	Popular Movies	Day of the Week	Rank Order	Number of Rentals
450	IDOLS SNATCHERS	Friday	10	7
397	HANKY OCTOBER	Monday	1	9
945	VIRGINIAN PLUTO	Monday	2	9
109	BUTTERFLY CHOCOLAT	Monday	3	9
285	ENGLISH BULWORTH	Monday	4	9

Result 55

Action Output:

#	Time	Action	Message	Duration / Fetch
104	02:27:02	select fc.film_id,fc.title,fc.daynames "Day of the Week",fc.rankk as "Rank Order", fc.rentals as "Number of R...	Error Code: 1054. Unknown column 'fc.title' in 'field list'	0.000 sec
105	02:27:26	select fc.film_id,fc.title,fc.daynames "Day of the Week",fc.rankk as "Rank Order", fc.rentals as "Number of R...	Error Code: 1054. Unknown column 'a.title' in 'field list'	0.000 sec
106	02:27:41	select fc.film_id,fc.title,fc.daynames "Day of the Week",fc.rankk as "Rank Order", fc.rentals as "Number of R...	Error Code: 1055. Expression #3 of SELECT list is not in GROUP BY clause and contains nonaggregated colu...	0.000 sec
107	02:27:53	select fc.film_id,fc.title,fc.daynames "Day of the Week",fc.rankk as "Rank Order", fc.rentals as "Number of R...	70 row(s) returned	0.063 sec / 0.000 sec
108	02:28:41	select fc.film_id as "ID Category",fc.title as "Movie",fc.daynames "Day of the Week",fc.rankk as "Rank Order...	70 row(s) returned	0.063 sec / 0.000 sec
109	02:28:54	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	70 row(s) returned	0.046 sec / 0.000 sec

Screenshot 2 — SQL Editor (sakila_stuff)

```
432   on i.film_id = f.film_id;
433   --
434 • select * from rental;
435   --
436 • select fc.film_id as "ID Category",fc.title as "Popular Movi
437   from rental r
438   inner join inventory i
439   on r.inventory_id = i.inventory_id
```

Result Grid:

ID Category	Popular Movies	Day of the Week	Rank Order	Number of Rentals
789	SHOCK CABIN	Monday	9	7
845	STEPMOM DREAM	Monday	10	7
130	CELEBRITY HORN	Saturday	1	11
100	BROOKLYN DESERT	Saturday	2	9
966	WEDDING APOLLO	Saturday	3	9

Result 57

Action Output:

#	Time	Action	Message	Duration / Fetch
109	02:28:54	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	70 row(s) returned	0.046 sec / 0.000 sec
110	02:29:15	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL s...	0.000 sec
111	02:29:18	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynam...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 10	
112	02:29:24	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL s...	0.000 sec
113	02:29:32	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	70 row(s) returned	0.062 sec / 0.000 sec
114	02:29:34	select fc.film_id as "ID Category",fc.title as "Popular Movies",fc.daynames "Day of the Week",fc.rankk as "R...	70 row(s) returned	0.047 sec / 0.000 sec

9. What is the total rental revenue (total amount of all rentals) by day of the week?
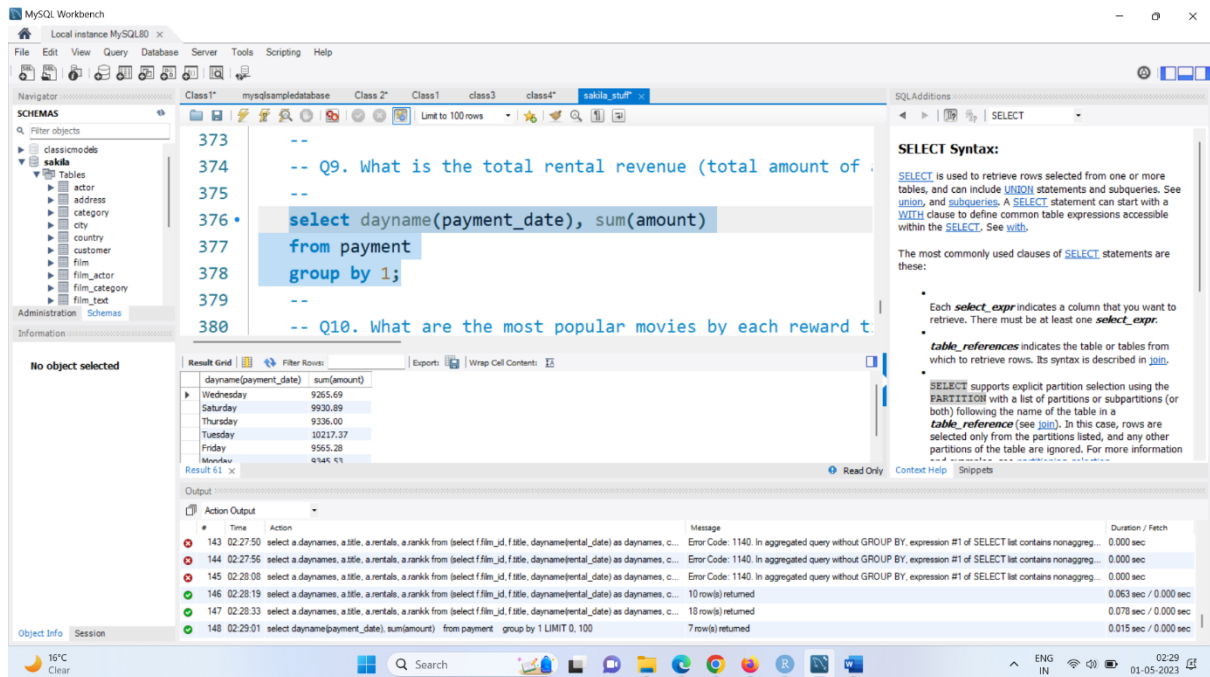
select dayname(payment_date), sum(amount)

  from payment

  group by 1;

10. . What are the most popular days to rent movies?

select

  sum(case when dayname(rental_date) ='Tuesday' then 1 else 0 end) as TUESDAY,

  sum(case when dayname(rental_date) ='Wednesday' then 1 else 0 end) as WEDNESDAY,

  sum(case when dayname(rental_date) ='Thursday' then 1 else 0 end) as THURSDAY,

  sum(case when dayname(rental_date) ='Friday' then 1 else 0 end) as FRIDAY,

  sum(case when dayname(rental_date) ='Saturday' then 1 else 0 end) as SATURDAY,

  sum(case when dayname(rental_date) ='Sunday' then 1 else 0 end) as SUNDAY,

sum(case when dayname(rental_date) ='Monday' then 1 else 0 end) as Monday

from rental;

As we can see Tuesday is the most popular day with Total rentals at 2463 count.