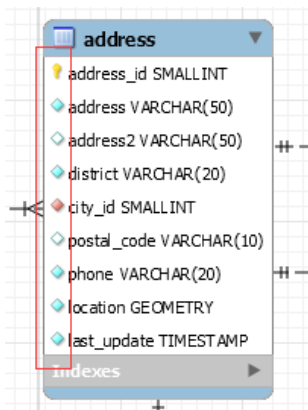


实验一报告

一、回答问题

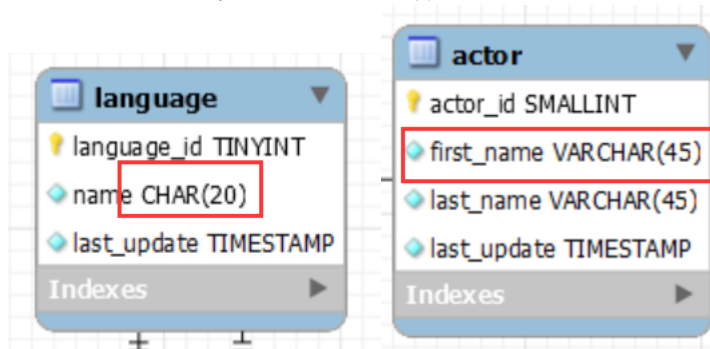
请一边熟悉 sakila 数据库，一边回答以下问题：

1. sakila.mwb 模型中，表结构里每个字段前面的小标记分别表示什么意思？
(观察字段的属性)



标记	意义
	主键，用于唯一标识此元组
	非空属性，属性值不能为 null
	可空属性，属性值可以为 null
	外键，引用了其他表的属性

2. char 和 varchar 类型的区别是什么？



char 是固定长度的字符串类型，如 char(20) 长度为 20，如果实际的数据长度不足 20，也会用空格填充成 20，适合存储定长的数据。varchar 是可变长度的字符串类型，存储的字符串按照实际长度进行存储不会用空格填充，适合存储长度不定的数据。

3. 图中哪部分体现影片-演员关系？换句话说，如果要找出演某个影片的演员名字，访问哪几张表可以获得信息？

film_actor。 如果要找某给影片的演员名字，访问 film_actor, actor, film 三张表。

4. 如果已知某个顾客姓名，要找到他租借的所有影片名，需要访问哪几张表？

customer, rental, inventory, film 4 张表。

二、实验截图

(请注意粘贴文本格式的 SQL 语句，截图执行结果和 Output 窗口)

1、 请列出所有 country 是“France”的客户的信息，显示 customer_id、客户姓名、地址、所在区域，所在城市（注意：客户姓名请以 first_name+空格+last_name 的格式，例如：SISSY SOBIESKI）；

```
select customer_id , concat(first_name , ' ', last_name) as full_name , address , district , city from  
customer
```

```
inner join address
```

```
on address.address_id = customer.address_id
```

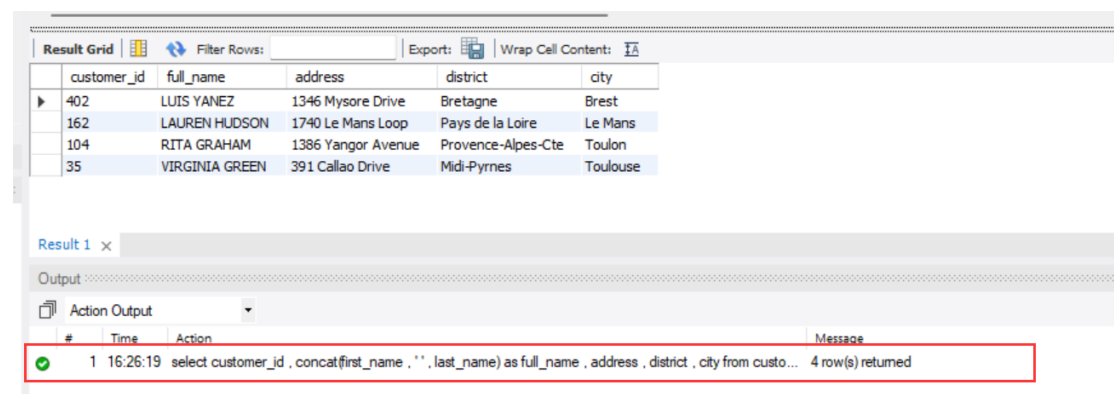
```
inner join city
```

```
on address.city_id = city.city_id
```

```
inner join country
```

```
on city.country_id = country.country_id
```

```
where country.country like 'france'
```



customer_id	full_name	address	district	city
402	LUIS YANEZ	1346 Mysore Drive	Bretagne	Brest
162	LAUREN HUDSON	1740 Le Mans Loop	Pays de la Loire	Le Mans
104	RITA GRAHAM	1386 Yangor Avenue	Provence-Alpes-Cte	Toulon
35	VIRGINIA GREEN	391 Callao Drive	Midi-Pyrnes	Toulouse

Result 1 x

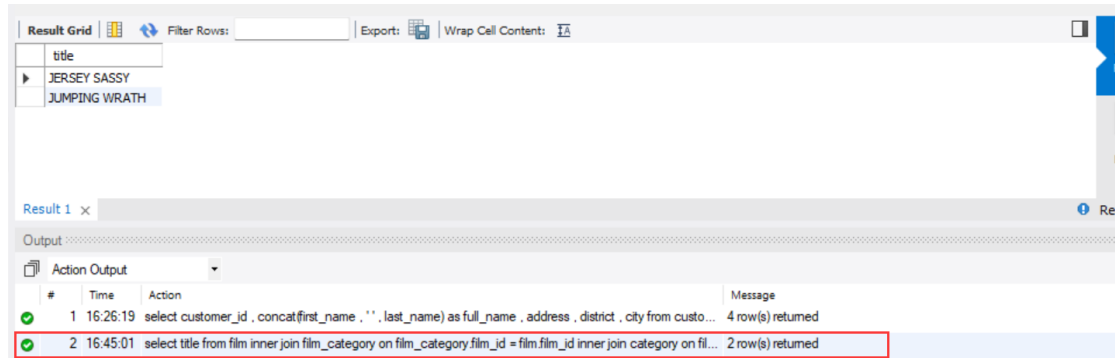
Output

Action Output

#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , ' ', last_name) as full_name , address , district , city from custo...	4 row(s) returned

2、 列出属于 “Children” 类型并以 “J” 开头的电影名；

```
select title from film
inner join film_category
on film_category.film_id = film.film_id
inner join category
on film_category.category_id = category.category_id
where category.name like 'children'
and title like 'J%'
order by film.film_id asc
```

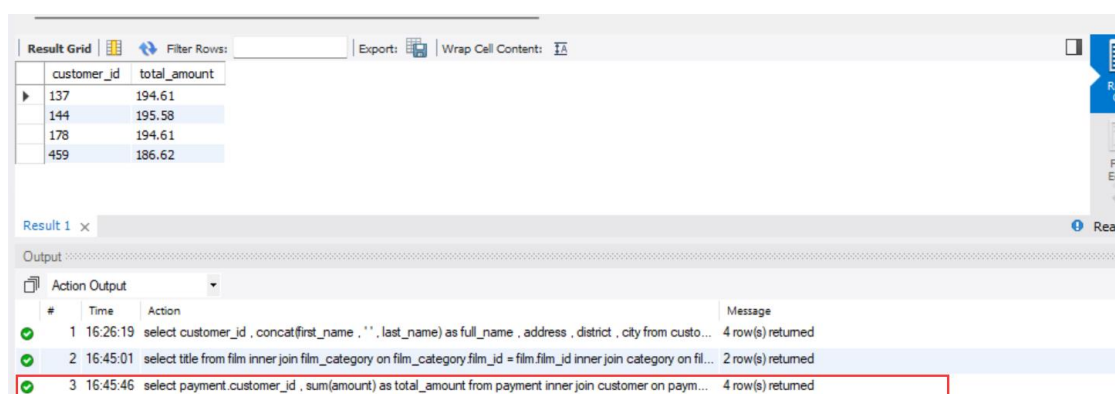


The screenshot shows a database interface with a 'Result Grid' at the top displaying two rows of movie titles: 'JERSEY SASSY' and 'JUMPING WRATH'. Below the grid, the 'Output' section shows the 'Action Output' for the query, indicating that 2 rows were returned.

#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , ' ', last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned

3、 找出费用在 180 至 200 之间的客户，列出他们的 first_name, last_name 和每个人花费的金额；

```
select payment.customer_id , sum(amount) as total_amount from payment
inner join customer
on payment.customer_id = customer.customer_id
group by payment.customer_id
having total_amount >= 180
and total_amount <= 200
```



The screenshot shows a database interface with a 'Result Grid' at the top displaying four rows of customer IDs and their total payment amounts: 137 (194.61), 144 (195.58), 178 (194.61), and 459 (186.62). Below the grid, the 'Output' section shows the 'Action Output' for the query, indicating that 4 rows were returned.

#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , ' ', last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned

4、 哪个影片获得了总体最高的租金？请列出影片 id、影片名、总租金；

```
select inventory.film_id,film.title,sum(amount) as total_rent from rental
inner join payment
on rental.rental_id = payment.rental_id
```

```

inner join inventory
on rental.inventory_id = inventory.inventory_id
inner join film
on inventory.film_id = film.film_id
group by inventory.film_id
order by total_rent desc
limit 1 offset 0

```

Result Grid			
Filter Rows:			
Export: Wrap Cell Content: Fetch rows:			
film_id	title	total_rent	
879	TELEGRAPH VOYAGE	231.73	

Result 1 x			
Output			
Action Output			
#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , ' ' , last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned
4	16:47:58	select inventory.film_id , film.title , sum(amount) as total_rent from rental inner join payment on rental.rental...	1 row(s) returned

5、 哪些演员出演的电影超过 38 部？ 请列出演员名、出演的电影数；

```

select concat(first_name,' ' , last_name) as name , count(film_id) as cnt_film from film_actor
inner join actor
on actor.actor_id = film_actor.actor_id
group by actor.actor_id
having cnt_film > 38

```

Result Grid			
Filter Rows:			
Export: Wrap Cell Content:			
name	cnt_film		
WALTER TORN	41		
GINA DEGENERES	42		
MATTHEW CARREY	39		
MARY KEITEL	40		

Result 1 x			
Output			
Action Output			
#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , ' ' , last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned
4	16:47:58	select inventory.film_id , film.title , sum(amount) as total_rent from rental inner join payment on rental.rental...	1 row(s) returned
5	16:51:25	select concat(first_name,' ' , last_name) as name , count(film_id) as cnt_film from film_actor inner join a...	4 row(s) returned

6、 请找出没有租借过电影《NATURAL STOCK》的顾客姓名；

```

select concat(first_name , ' ' , last_name) as full_name
from customer
where customer.customer_id not in (
    select distinct customer_id from rental
    inner join inventory

```

```

on rental.inventory_id = inventory.inventory_id
inner join film
on inventory.film_id = film.film_id
where title like 'NATURAL STOCK'

```

```
);
```

Result Grid			
Filter Rows: <input type="text"/> Export: Wrap Cell Content:			
full_name			
MARY SMITH			
PATRICIA JOHNSON			
LINDA WILLIAMS			
BARBARA JONES			
JENNIFER DAVIS			
SUSAN WILSON			
MARGARET MOORE			
DOROTHY TAYLOR			
LISA ANDERSON			
NANCY THOMAS			
KAREN JACKSON			

Result 1			
Output			
Action Output			
#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , '' , last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned
4	16:47:58	select inventory.film_id.film.title.sum(amount) as total_rent from rental inner join payment on rental.rental...	1 row(s) returned
5	16:51:25	select concat(first_name , '' , last_name) as name , count(film_id) as cnt_film from film_actor inner join a...	4 row(s) returned
6	16:52:36	select concat(first_name , '' , last_name) as full_name from customer where customer_id not...	575 row(s) returned

7、 查询既演过《ELEPHANT TROJAN》又演过《DOGMA FAMILY》的演员，列出其姓名；

```

select name from (
    select film_actor.actor_id , count(title) , concat(first_name,' ' , last_name) as name from
    film_actor
    inner join film
    on film_actor.film_id = film.film_id
    inner join actor
    on actor.actor_id = film_actor.actor_id
    where title like 'ELEPHANT TROJAN'
    or title like 'DOGMA FAMILY'
    group by actor_id
    having count(title)=2) as subquery

```

Result Grid				
		Filter Rows:	Export:	Wrap Cell Content:
	name			
	GINA DEGENERES			

Result 1 x				
Output				
Action Output				
#	Time	Action	Message	
1	16:26:19	select customer_id , concat(first_name , '' , last_name) as full_name , address , district , city from custo...	4 row(s) returned	
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned	
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned	
4	16:47:58	select inventory.film_id,film.title,sum(amount) as total_rent from rental inner join payment on rental.rental...	1 row(s) returned	
5	16:51:25	select concat(first_name , '' , last_name) as name , count(film_id) as cnt_film from film_actor inner join a...	4 row(s) returned	
6	16:52:36	select concat(first_name , '' , last_name) as full_name from customer where customer.customer_id not...	575 row(s) returned	
7	16:53:19	select name from (select film_actor.actor_id , count(title) , concat(first_name , '' , last_name) as name fr...	1 row(s) returned	

- 8、统计每种类型的影片数，显示类型编号、类型名称、该类型影片数；
- ```
select category.category_id, name , count(film_id) as number_of_films from film_category
inner join category
on film_category.category_id = category.category_id
group by category.category_id , name
```

| Result Grid |             |              |                 |                    |
|-------------|-------------|--------------|-----------------|--------------------|
|             |             | Filter Rows: | Export:         | Wrap Cell Content: |
|             | category_id | name         | number_of_films |                    |
|             | 1           | Action       | 64              |                    |
|             | 2           | Animation    | 66              |                    |
|             | 3           | Children     | 60              |                    |
|             | 4           | Classics     | 57              |                    |
|             | 5           | Comedy       | 58              |                    |
|             | 6           | Documentary  | 68              |                    |
|             | 7           | Drama        | 62              |                    |
|             | 8           | Family       | 69              |                    |
|             | 9           | Foreign      | 73              |                    |
|             | 10          | Games        | 61              |                    |

| Result 1 x    |          |                                                                                                                       |                     |  |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------|---------------------|--|
| Output        |          |                                                                                                                       |                     |  |
| Action Output |          |                                                                                                                       |                     |  |
| #             | Time     | Action                                                                                                                | Message             |  |
| 1             | 16:26:19 | select customer_id , concat(first_name , '' , last_name) as full_name , address , district , city from custo...       | 4 row(s) returned   |  |
| 2             | 16:45:01 | select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil... | 2 row(s) returned   |  |
| 3             | 16:45:46 | select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...                  | 4 row(s) returned   |  |
| 4             | 16:47:58 | select inventory.film_id,film.title,sum(amount) as total_rent from rental inner join payment on rental.rental...      | 1 row(s) returned   |  |
| 5             | 16:51:25 | select concat(first_name , '' , last_name) as name , count(film_id) as cnt_film from film_actor inner join a...       | 4 row(s) returned   |  |
| 6             | 16:52:36 | select concat(first_name , '' , last_name) as full_name from customer where customer.customer_id not...               | 575 row(s) returned |  |
| 7             | 16:53:19 | select name from ( select film_actor.actor_id , count(title) , concat(first_name , '' , last_name) as name fr...      | 1 row(s) returned   |  |
| 8             | 16:57:16 | select category.category_id, name , count(film_id) as number_of_films from film_category inner join cate...           | 16 row(s) returned  |  |

- 9、找出最热门的（被最多不同人租借过）影片名，并显示租借人数；
- ```
WITH CustomerCounts AS (
    SELECT film.title, COUNT(DISTINCT rental.customer_id) AS cnt_customer
```

```

FROM rental
INNER JOIN inventory ON rental.inventory_id = inventory.inventory_id
INNER JOIN film ON inventory.film_id = film.film_id
GROUP BY film.film_id
)
SELECT title, cnt_customer
FROM CustomerCounts
WHERE cnt_customer = (SELECT MAX(cnt_customer) FROM CustomerCounts);

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
title	cnt_customer			
BUCKET BROTHERHOOD	32			
FORWARD TEMPLE	32			
RIDGEMONT SUBMARINE	32			
SCALAWAG DUCK	32			

#	Time	Action	Message
1	16:26:19	select customer_id , concat(first_name , '' , last_name) as full_name , address , district , city from custo...	4 row(s) returned
2	16:45:01	select title from film inner join film_category on film_category.film_id = film.film_id inner join category on fil...	2 row(s) returned
3	16:45:46	select payment.customer_id , sum(amount) as total_amount from payment inner join customer on paym...	4 row(s) returned
4	16:47:58	select inventory.film_id, film.title, sum(amount) as total_rent from rental inner join payment on rental.rental...	1 row(s) returned
5	16:51:25	select concat(first_name, '' , last_name) as name , count(film_id) as cnt_film from film_actor inner join a...	4 row(s) returned
6	16:52:36	select concat(first_name , '' , last_name) as full_name from customer where customer.customer_id not...	575 row(s) returned
7	16:53:19	select name from (select film_actor.actor_id , count(title) , concat(first_name, '' , last_name) as name fr...	1 row(s) returned
8	16:57:16	select category.category_id, name , count(film_id) as number_of_films from film_category inner join cate...	16 row(s) returned
9	16:58:01	WITH CustomerCounts AS (SELECT film.title, COUNT(DISTINCT rental.customer_id) AS cnt_custo...	4 row(s) returned

10、 查询单次租借影片时间最长的 6 位客户，列出其 first_name、last_name 和当次租借时长（单位秒）；

```

select first_name, last_name , TIMESTAMPDIFF(second, rental_date, return_date) as duration from
rental
#select first_name, last_name , return_date - rental_date as duration from rental
inner join customer
on customer.customer_id = rental.customer_id
order by duration desc
limit 6 offset 0

```

Result Grid			Filter Rows:	Exports:	Wrap Cell Content:	Fetch rows:
first_name	last_name	duration				
MARTIN	BALES	799140				
ELAINE	STEVENS	799140				
JACQUELINE	LONG	799080				
JAMES	GANNON	799080				
VERA	MCCOY	799080				
PEARL	GARZA	799080				

#	Time	Action	Message
8	16:57:16	select category.category_id, name, count(film_id) as number_of_films from film_category inner join ca...	16 row(s) returned
9	16:58:01	WITH CustomerCounts AS (SELECT film.title, COUNT(DISTINCT rental.customer_id) AS cnt_cus...	4 row(s) returned
10	16:59:05	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from r...	6 row(s) returned
11	17:00:15	select first_name, last_name, return_date - rental_date as duration from rental inner join customer on ...	6 row(s) returned
12	17:00:45	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from r...	6 row(s) returned
13	17:04:37	select * from rental LIMIT 0, 1000	1000 row(s) returned
14	17:05:27	select *, timestampdiff(rental_date, return_date) from rental	Error Code: 1064. You have an error in your SQL syntax; check the manual that
15	17:05:37	select *, timestampdiff(day, rental_date, return_date) from rental LIMIT 0, 1000	1000 row(s) returned
16	17:06:32	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from r...	6 row(s) returned

- 11、在 customer 表中新增一条数据，注意 customer 表与其他表的关系：
 insert into customer(store_id, first_name, last_name, email, address_id, create_date)
 values (2, 'Piao', 'kaka', null, 1, now())

SQL File 7*			SQL File 8*	SQL File 9*	SQL File 10*	SQL File 11*	SQL File 12*	SQL File 13*	SQL File 15*	SQL File 16*	SQL File 17*
1	insert into customer(store_id, first_name, last_name, email, address_id, create_date)										
2	values (2, 'Piao', 'kaka', null, 1, now())										

#	Time	Action	Message
259	17:39:57	select * from rental	15709 row(s) returned
260	17:41:43	select *, TIMESTAMPDIFF(DAY, rental_date, return_date) as duration from rental	15709 row(s) returned
261	17:41:51	select *, TIMESTAMPDIFF(hour, rental_date, return_date) as duration from rental	15709 row(s) returned
262	17:42:50	select *, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rental	15709 row(s) returned
263	17:43:33	select *, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rental inner join customer ...	15709 row(s) returned
264	17:45:16	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	15709 row(s) returned
265	17:45:24	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	6 row(s) returned
266	18:31:57	describe customer	9 row(s) returned
267	18:33:26	show columns from customer	9 row(s) returned
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'ka...	Error Code: 1054. Unknown column 'first_name' in 'field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'k...	1 row(s) affected

The screenshot shows a database management tool interface. At the top, a SQL query is entered: `select * from customer`. Below the query, a "Result Grid" displays the data from the `customer` table. The grid has columns: `customer_id`, `store_id`, `first_name`, `last_name`, `email`, `address_id`, `active`, `create_date`, and `last_update`. The data rows are as follows:

customer_id	store_id	first_name	last_name	email	address_id	active	create_date	last_update
596	1	ENRIQUE	FORSYTHE	ENRIQUE.FORSYTHE@sakilacustomer.org	602	1	2006-02-14 22:04:37	2006-02-15 04:57:20
597	1	FREDDIE	DUGGAN	FREDDIE.FORSYTHE@sakilacustomer.org	1	1	2006-02-14 22:04:37	2006-02-15 04:57:20
598	1	WADE	DELVALLE	WADE.DELVALLE@sakilacustomer.org	604	1	2006-02-14 22:04:37	2006-02-15 04:57:20
599	2	AUSTIN	CINTRON	AUSTIN.CINTRON@sakilacustomer.org	605	1	2006-02-14 22:04:37	2006-02-15 04:57:20
600	2	Piao	kaika		1	1	2024-09-19 18:36:08	2024-09-19 18:36:08

Below the result grid, the "Action Output" section shows a list of actions performed. The actions are as follows:

#	Time	Action	Message
263	17:43:33	select *, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rental inner join customer ...	15709 row(s) returned
264	17:45:16	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	15709 row(s) returned
265	17:45:24	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	6 row(s) returned
266	18:31:57	describe customer	9 row(s) returned
267	18:33:26	show columns from customer	9 row(s) returned
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'ka...	Error Code: 1054. Unknown column 'first_name' in 'field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', k...	1 row(s) affected
270	18:37:46	select * from customer	589 row(s) returned

查询插入的数据

12、 修改刚才在 `customer` 表中新增的那条数据；

Update customer

Set first_name = 'quan',

Last_name = 'XIAOJIANG'

Where customer_id = 600

SQL File 8* SQL File 9* SQL File 10* SQL File 11* SQL File 12* SQL File 13* SQL File 15* SQL File 16* SQL File 17* x SQL File 18*

```

1 update customer
2 set first_name = 'quan',
3    last_name = 'XIAOJIANG'
4 where customer_id = 600
5

```

Output

#	Time	Action	Message
264	17:45:16	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	15709 row(s) returned
265	17:45:24	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	6 row(s) returned
266	18:31:57	describe customer	9 row(s) returned
267	18:33:26	show columns from customer	9 row(s) returned
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'ka...	Error Code: 1054. Unknown column 'first_name' in field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'k...	1 row(s) affected
270	18:37:46	select * from customer	589 row(s) returned
271	20:41:02	update customer set first_name = 'quan', last_name = 'XIAOJIANG' where customer_id = 600	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

1 • select * from customer

Result Grid

customer_id	store_id	first_name	last_name	email	address_id	active	create_date	last_update
596	1	ENRIQUE	FORSYTHE	ENRIQUE.FORSYTHE@sakilacustomer.org	602	1	2006-02-14 22:04:37	2006-02-15 04:57:20
597	1	FREDOIE	DUGGAN	FREDOIE.DUGGAN@sakilacustomer.org	603	1	2006-02-14 22:04:37	2006-02-15 04:57:20
598	1	WADE	DELVALLE	WADE.DELVALLE@sakilacustomer.org	604	1	2006-02-14 22:04:37	2006-02-15 04:57:20
599	2	AUSTIN	CENTRON	AUSTIN.CENTRON@sakilacustomer.org	605	1	2006-02-14 22:04:37	2006-02-15 04:57:20
600	2	quan	XIAOJIANG		1	1	2024-09-19 18:36:08	2024-09-19 20:41:02

customer 2 x

Output

#	Time	Action	Message
265	17:45:24	select first_name, last_name, TIMESTAMPDIFF(second, rental_date, return_date) as duration from rent...	6 row(s) returned
266	18:31:57	describe customer	9 row(s) returned
267	18:33:26	show columns from customer	9 row(s) returned
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'ka...	Error Code: 1054. Unknown column 'first_name' in field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', 'k...	1 row(s) affected
270	18:37:46	select * from customer	589 row(s) returned
271	20:41:02	update customer set first_name = 'quan', last_name = 'XIAOJIANG' where customer_id = 600	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
272	20:41:33	select * from customer	589 row(s) returned

修改后

13、 删除第 11 步新增的那条数据。

Delete from customer

Where customer_id = 600

#	Time	Action	Message
267	18:33:26	show columns from customer	9 row(s) returned
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', ka...	Error Code: 1054. Unknown column 'first_name' in field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', k...	1 row(s) affected
270	18:37:46	select * from customer	589 row(s) returned
271	20:41:02	update customer set first_name = 'quan', last_name = 'XIAOJIANG' where customer_id = 600	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
272	20:41:33	select * from customer	589 row(s) returned
273	20:42:30	select * from customer where customer_id = 600	1 row(s) returned
274	20:42:39	delete from customer where customer_id = 600	1 row(s) affected

The screenshot displays a database management interface. The top section shows a SQL query: `select * from customer`. Below the query, the 'Result Grid' shows a list of customers. The row for customer_id 600 is highlighted in red. The bottom section shows the 'Action Output' for the delete statement, confirming that 1 row was affected.

customer_id	store_id	first_name	last_name	email	address_id	active	create_date	last_update
595	1	TERRENCE	GUNDERSON	TERRENCE.GUNDERSON@sakilacustomer...	601	1	2006-02-14 22:04:37	2006-02-15 04:57:20
596	1	ENRIQUE	FORSYTHE	ENRIQUE.FORSYTHE@sakilacustomer.org	602	1	2006-02-14 22:04:37	2006-02-15 04:57:20
597	1	FREDDIE	DUGGAN	FREDDIE.DUGGAN@sakilacustomer.org	603	1	2006-02-14 22:04:37	2006-02-15 04:57:20
598	1	WADE	DELVALLE	WADE.DELVALLE@sakilacustomer.org	604	1	2006-02-14 22:04:37	2006-02-15 04:57:20
599	2	AUSTIN	CINTRON	AUSTIN.CINTRON@sakilacustomer.org	605	1	2006-02-14 22:04:37	2006-02-15 04:57:20
600	2	NULL	NULL	NULL	NULL	NULL	NULL	NULL

The 'Action Output' shows the following actions:

#	Time	Action	Message
268	18:35:59	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', ka...	Error Code: 1054. Unknown column 'first_name' in field list'
269	18:36:08	insert into customer(store_id, first_name, last_name, email, address_id, create_date) values (2, 'Piao', k...	1 row(s) affected
270	18:37:46	select * from customer	589 row(s) returned
271	20:41:02	update customer set first_name = 'quan', last_name = 'XIAOJIANG' where customer_id = 600	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
272	20:41:33	select * from customer	589 row(s) returned
273	20:42:30	select * from customer where customer_id = 600	1 row(s) returned
274	20:42:39	delete from customer where customer_id = 600	1 row(s) affected
275	20:43:27	select * from customer	588 row(s) returned

删除后

三、思考题

- 1) 如果 insert 一条数据到 actor 表，但 actor_id 和已有数据重复，会发生什么？同学们请自己尝试一下，截图并分析原因。
会报错，定义表时已经规定 actor_id 不允许重复，如果插入有重复的 id 会报错。

19	17:15:58	insert into actor values (1,'P22','GUINESZ','2006-02-15 04:34:33')	Error Code: 1062. Duplicate entry '1' for key 'actor.PRIMARY'
----	----------	--	---

- 2) insert 语句还用了一个函数 NOW(), 是做什么的呢？
用于获取到当前的时间。