

浙江大学

数据库系统实验报告

作业名称: SQL 数据定义和操作

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2020 年 3 月 14 日

实验名称

一、 实验目的

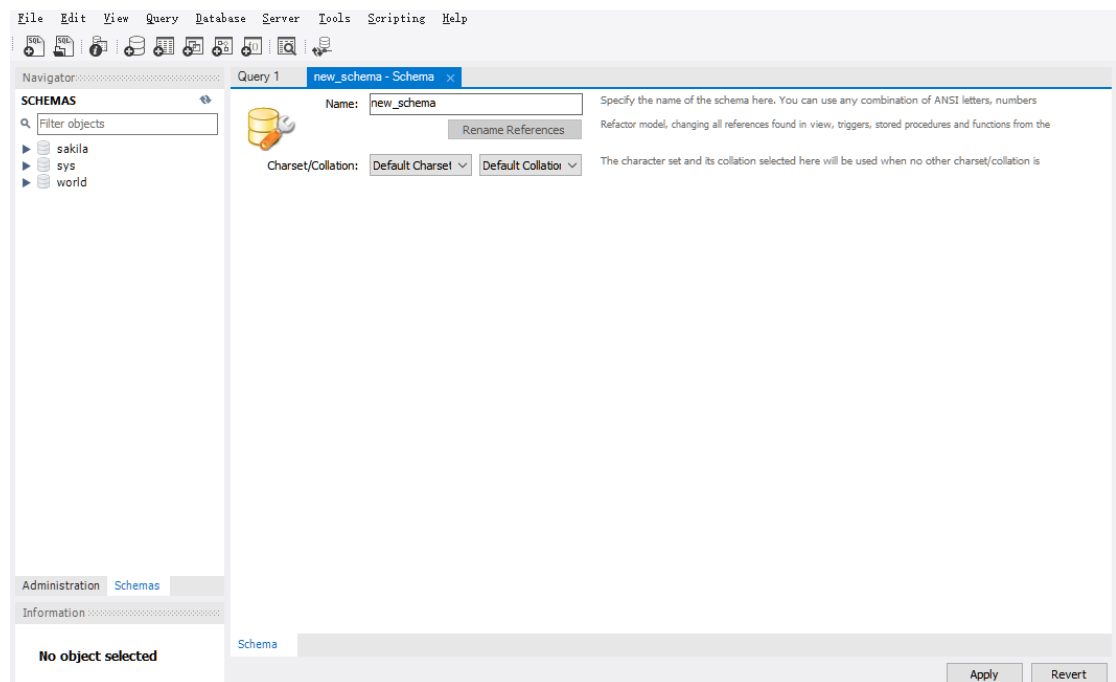
1. 掌握关系数据库语言 SQL 的使用。
2. 使所有的 SQL 作业都能上机通过。

二、 实验环境

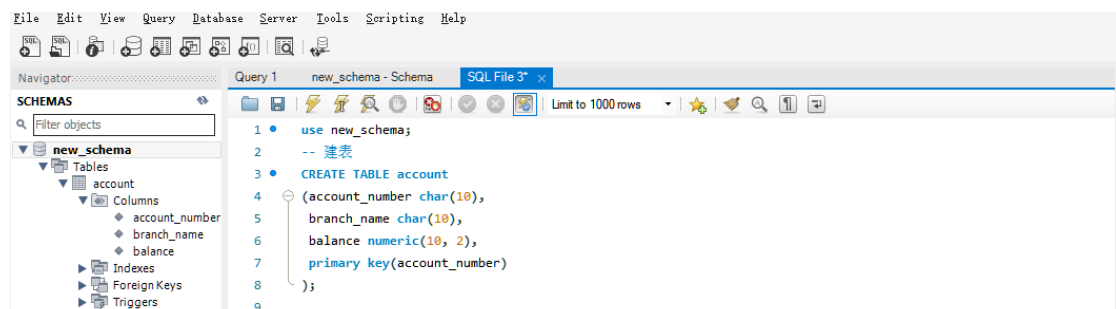
1. 数据库管理系统：MySQL

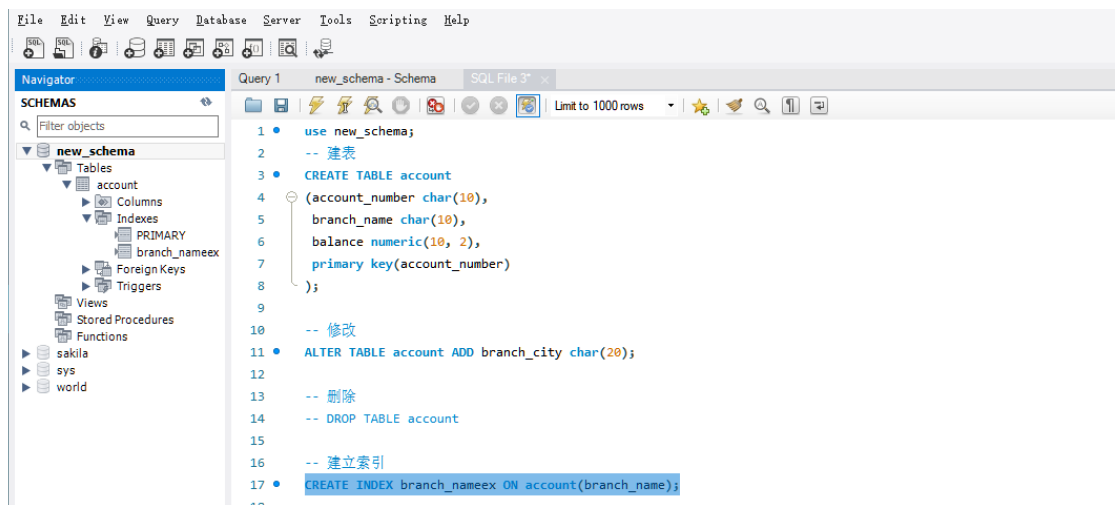
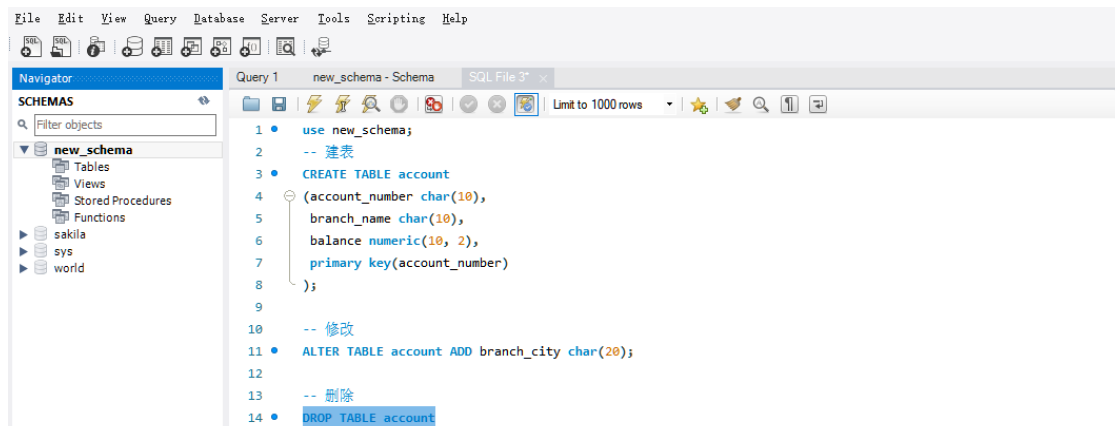
三、 实验流程

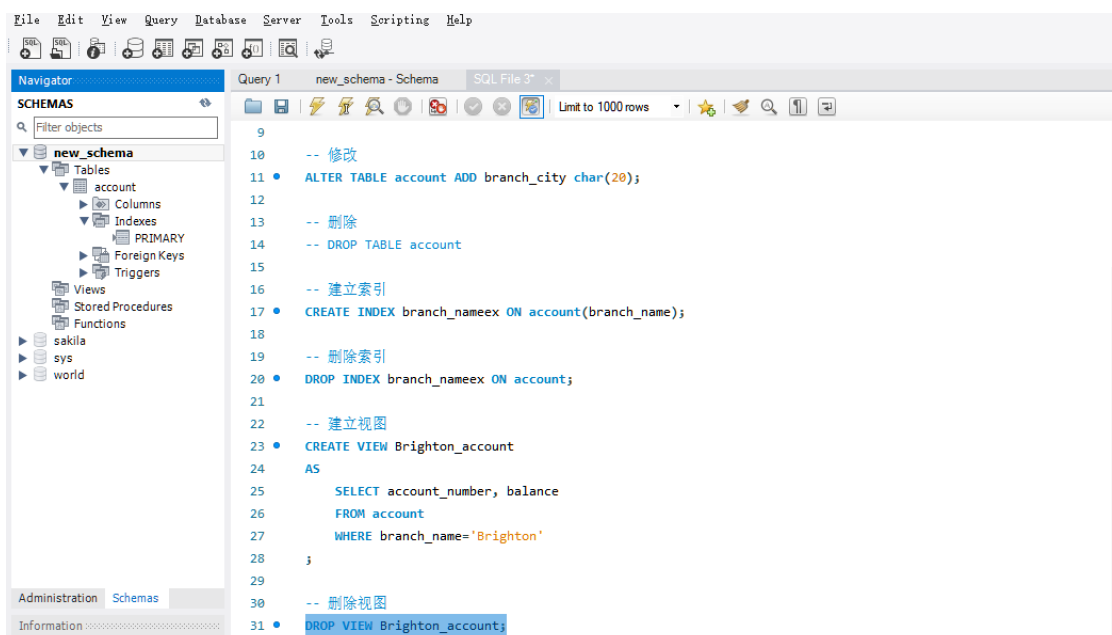
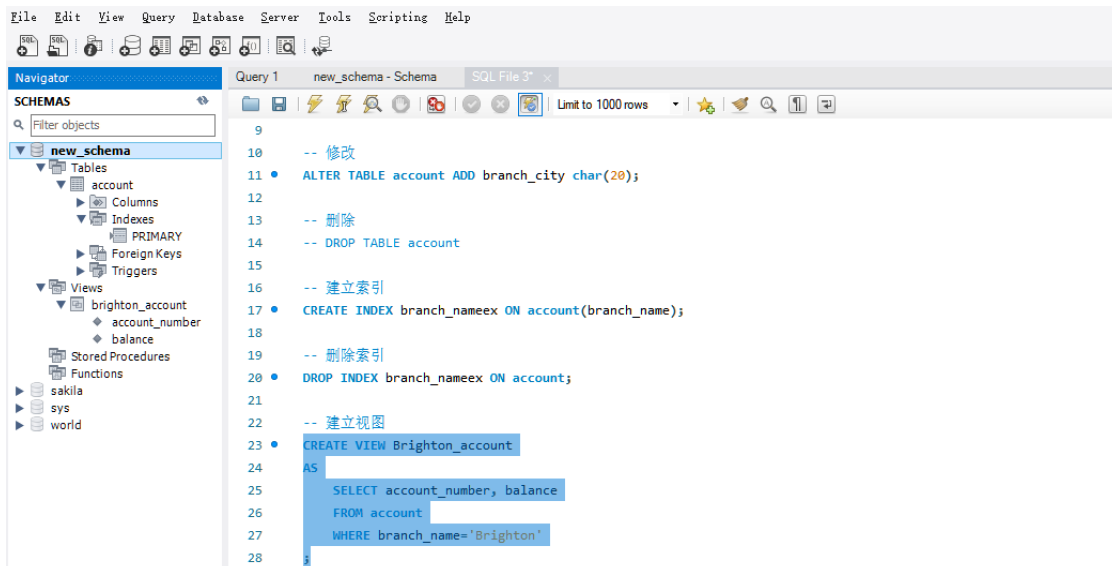
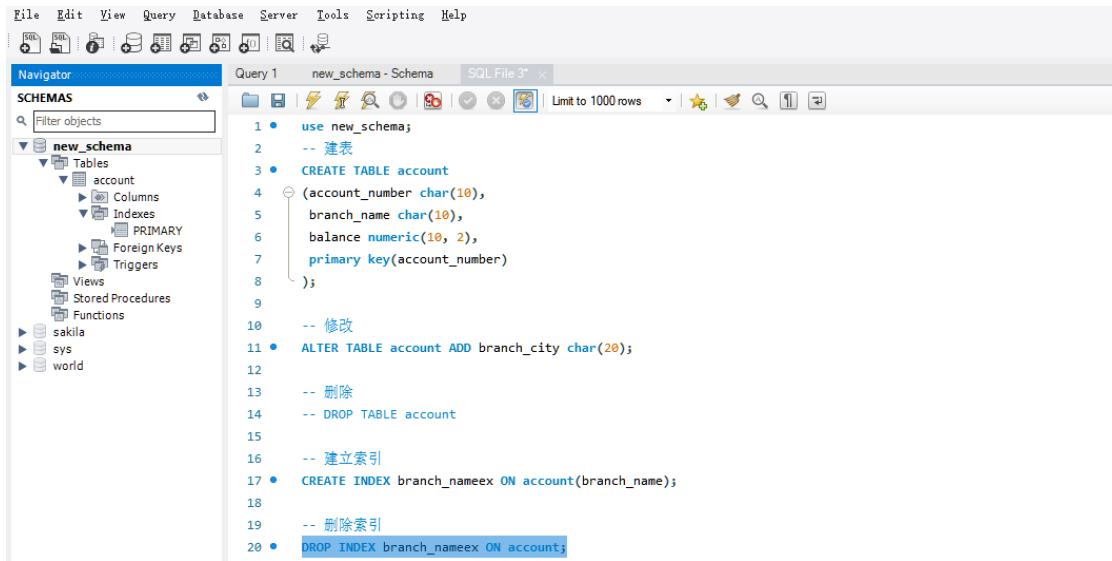
1. 在实验过程中，截图所用命令和实验结果
2. 建立数据库



3. 数据定义： 表的建立/删除/修改；索引的建立/删除；视图的建立/删除







4. 数据更新：用 insert/delete/update 命令插入/删除/修改表数据。

Query 1: new_schema - Schema SQL File 3*

```
1 -- 插入数据
2 • INSERT INTO account VALUES('A1', 'BANK1', 1000);
3 • INSERT INTO account VALUES('A2', 'BANK2', 10);
4 • INSERT INTO account VALUES('A3', 'BANK3', 100);
5 • INSERT INTO account VALUES('B1', 'BANK4', 2000);
6 • INSERT INTO account VALUES('B2', 'BANK5', 13000);
7 • INSERT INTO account VALUES('C1', 'BANK6', 34000);
8
9 • select * from account;
```

account_number	branch_name	balance
A1	BANK1	1000.00
A2	BANK2	10.00
A3	BANK3	100.00
B1	BANK4	2000.00
B2	BANK5	13000.00
C1	BANK6	34000.00
NULL	NULL	NULL

Query 1: new_schema - Schema SQL File 3*

```
1 -- 建立表格, 插入数据
2 • create table depositor
3 (customer_name char(10) not null,
4 account_number char(10) not null,
5 primary key (customer_name, account_number)
6 );
7
8 • insert into depositor values('Mike', 'A2');
9 • insert into depositor values('Jake', 'A3');
10 • insert into depositor values('Tom', 'B1');
11 • insert into depositor values('Jerry', 'B1');
12 • insert into depositor values('Milly', 'B2');
13 • insert into depositor values('Miya', 'C1');
```

Query 1: new_schema - Schema SQL File 3*

```
1 -- 修改数据
2 • UPDATE account
3 SET branch_name = 'BANKA'
4 WHERE account_number = 'A1';
5
6 • select * from account;
```

account_number	branch_name	balance
A1	BANKA	1000.00
A2	BANK2	10.00
A3	BANK3	100.00
B1	BANK4	2000.00
B2	BANK5	13000.00
C1	BANK6	34000.00
NULL	NULL	NULL

File Edit View Query Database Server Tools Scripting Help

Navigator: new_schema - Schema SQL File 3*

SCHEMAS

Filter objects

new_schema

Tables

account

Columns

account_number

branch_name

balance

Indexes

PRIMARY

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sakila

sys

world

Query 1

```
-- 删除数据
DELETE FROM account
WHERE account_number = 'A1';

select * from account;
```

Result Grid

account_number	branch_name	balance
A2	BANK2	10.00
A3	BANK3	100.00
B1	BANK4	2000.00
B2	BANK5	13000.00
C1	BANK6	34000.00
NULL	NULL	NULL

5. 数据查询： 单表查询， 多表查询， 嵌套子查询等。

File Edit View Query Database Server Tools Scripting Help

Navigator: new_schema - Schema SQL File 3*

SCHEMAS

Filter objects

new_schema

Tables

account

Columns

account_number

branch_name

balance

Indexes

PRIMARY

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sakila

sys

world

Query 1

```
-- 单表查询
SELECT account_number, balance
FROM account
WHERE branch_name = 'BANK2';
```

Result Grid

account_number	balance
A2	10.00
NULL	NULL

File Edit View Query Database Server Tools Scripting Help

Navigator: new_schema - Schema SQL File 3*

SCHEMAS

Filter objects

new_schema

Tables

account

depositer

Columns

customer_name

account_number

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sakila

sys

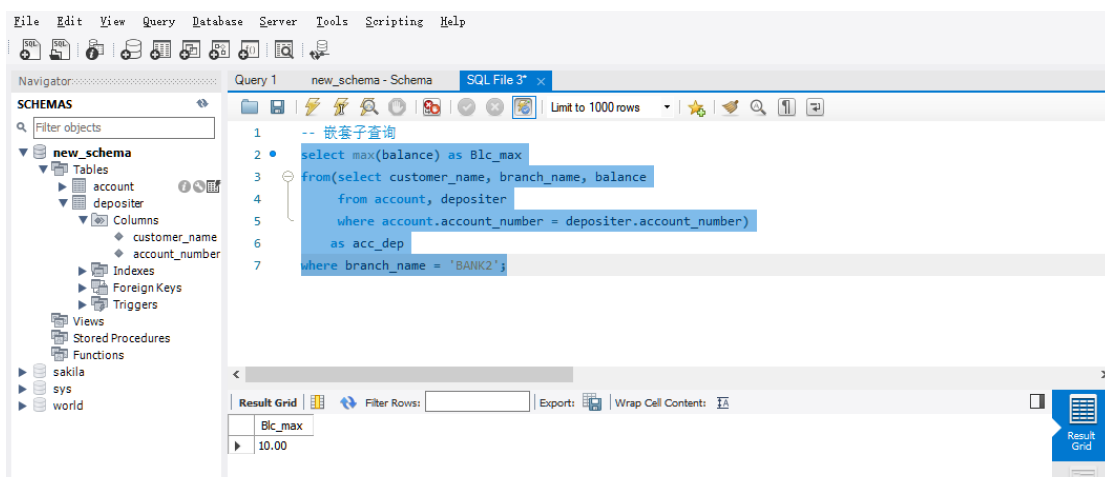
world

Query 1

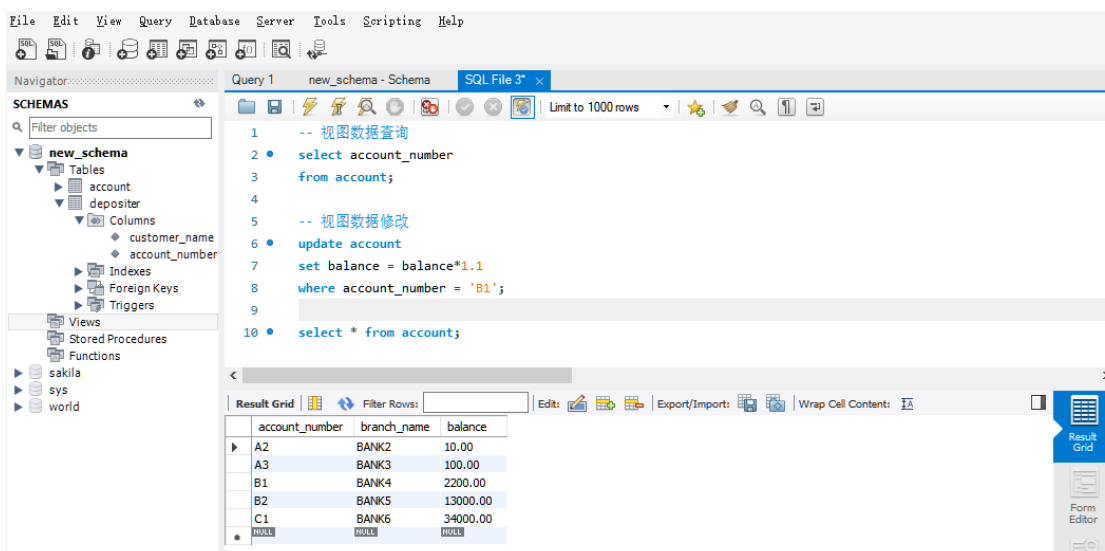
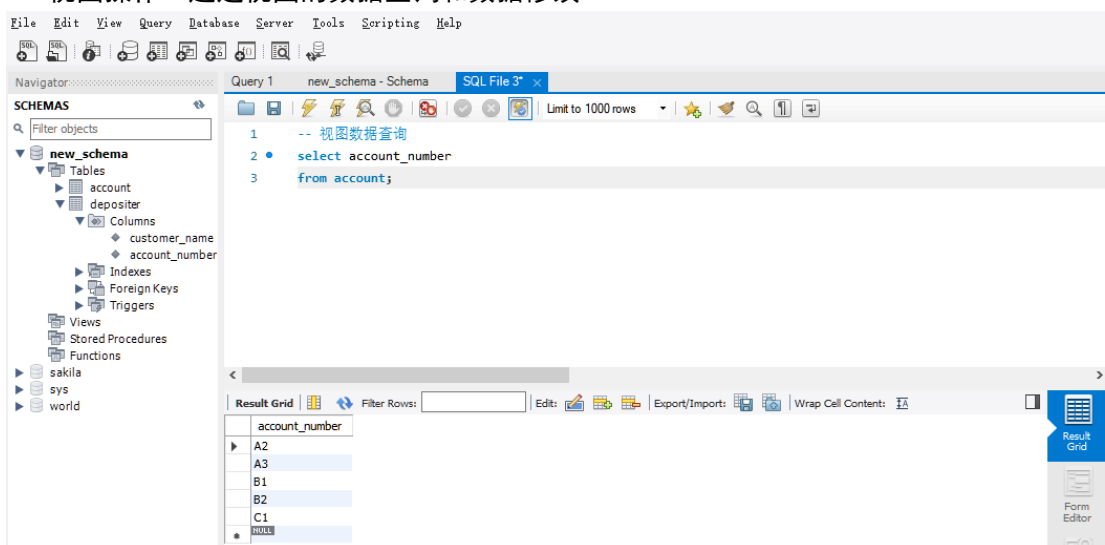
```
-- 多表查询
select customer_name, balance
from account, depositer
where account.account_number = depositer.account_number;
```

Result Grid

customer_name	balance
Jake	100.00
Jerry	2000.00
Mike	10.00
Milly	13000.00
Miya	34000.00
Tom	2000.00



6. 视图操作：通过视图的数据查询和数据修改



7. 所有的 SQL 作业都上机通过。

四、 遇到的问题及解决方法

1. 由于粗心在建表的时候错将 depositor 写成 depositer，执行查询时多次报错。

2. 发现 MySQL 不区分大小写指令

五、 总结

1. 各语法指令的掌握还需熟练