应急管理与安全工程学院

安全信息大作业

课程名称： 安全工程信息技术

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班 级： 安全 2018-2

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应急管理与安全工程学院

一、删除操作

1. 删除库操作

```
[mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| class              |
| company_hazard     |
| exchange           |
| experiment         |
| hazard             |
| information_schema |
| mysql              |
| performance_schema |
| school             |
| sys                |
| 企业隐患统计        |
+--------------------+
11 rows in set (0.00 sec)

[mysql> drop database exchange;
Query OK, 0 rows affected (0.03 sec)

[mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| class              |
| company_hazard     |
| experiment         |
| hazard             |
| information_schema |
| mysql              |
| performance_schema |
| school             |
| sys                |
| 企业隐患统计        |
+--------------------+
10 rows in set (0.00 sec)

mysql>
```

2. 删除表操作

```
[mysql> show tables;
+------------------+
| Tables_in_school |
+------------------+
| classes          |
| courses          |
| grades           |
| score            |
| student          |
+------------------+
5 rows in set (0.00 sec)

[mysql> drop table classes;
Query OK, 0 rows affected (0.02 sec)

[mysql> show tables;
+------------------+
| Tables_in_school |
+------------------+
| courses          |
| grades           |
| score            |
| student          |
+------------------+
4 rows in set (0.00 sec)

mysql>
```

二、 修改操作

1. 添加列操作：

```
mysql> alter table moto大王的表格 add(name varchar(100));
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from moto大王的表格;
+--------+--------+--------+--------+
| 姓名   | 性别   | gender | name   |
+--------+--------+--------+--------+
| 胡树杰 | NULL   | NULL   | NULL   |
| 胡江昱 | NULL   | NULL   | NULL   |
+--------+--------+--------+--------+
2 rows in set (0.00 sec)
```

2. 修改列类型：

```
mysql> alter table moto大王的表格 change 性别 sex char(2);
Query OK, 2 rows affected (0.08 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> select * from moto大王的表格;
+--------+--------+--------+--------+
| 姓名   | sex    | gender | name   |
+--------+--------+--------+--------+
| 胡树杰 | NULL   | NULL   | NULL   |
| 胡江昱 | NULL   | NULL   | NULL   |
+--------+--------+--------+--------+
2 rows in set (0.00 sec)
```

3. 修改字段名称：

```
mysql> desc moto大王;
+--------+------+------+-----+---------+-------+
| Field  | Type | Null | Key | Default | Extra |
+--------+------+------+-----+---------+-------+
| name   | int  | NO   |     | NULL    |       |
+--------+------+------+-----+---------+-------+
1 row in set (0.00 sec)

mysql> alter table moto大王 change name number int not null;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc moto大王;
+--------+------+------+-----+---------+-------+
| Field  | Type | Null | Key | Default | Extra |
+--------+------+------+-----+---------+-------+
| number | int  | NO   |     | NULL    |       |
+--------+------+------+-----+---------+-------+
1 row in set (0.01 sec)
```

4. 删除列：

```
mysql> select * from moto大王的表格;
+--------+------+--------+------+
| 姓名   | sex  | gender | name |
+--------+------+--------+------+
| 胡树杰 | NULL | NULL   | NULL |
| 胡江昱 | NULL | NULL   | NULL |
+--------+------+--------+------+
2 rows in set (0.00 sec)

mysql> alter table moto大王的表格 drop name;
Query OK, 0 rows affected (0.15 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from moto大王的表格;
+--------+------+--------+
| 姓名   | sex  | gender |
+--------+------+--------+
| 胡树杰 | NULL | NULL   |
| 胡江昱 | NULL | NULL   |
+--------+------+--------+
2 rows in set (0.00 sec)
```

5. 修改表名称：

```
mysql> select * from moto大王的表格;
+--------+------+--------+
| 姓名   | sex  | gender |
+--------+------+--------+
| 胡树杰 | NULL | NULL   |
| 胡江昱 | NULL | NULL   |
+--------+------+--------+
2 rows in set (0.00 sec)

mysql> alter table moto大王的表格 rename to moto;
Query OK, 0 rows affected (0.02 sec)

mysql> select * from moto;
+--------+------+--------+
| 姓名   | sex  | gender |
+--------+------+--------+
| 胡树杰 | NULL | NULL   |
| 胡江昱 | NULL | NULL   |
+--------+------+--------+
2 rows in set (0.01 sec)
```

6. 修改表内容：

```
mysql> update moto set sex= 1  where 姓名= 胡树杰 ;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from moto;
+--------+------+--------+
| 姓名   | sex  | gender |
+--------+------+--------+
| 胡树杰 | 1    | NULL   |
| 胡江昱 | NULL | NULL   |
+--------+------+--------+
2 rows in set (0.00 sec)
```

7. 添加外键操作

```
air — mysql -u calvin -p — 90×50

[mysql> desc score;
+-------+------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+------+------+-----+---------+-------+
| sno   | int  | NO   | MUL | NULL    |       |
| cno   | int  | YES  | MUL | NULL    |       |
| grade | int  | YES  |     | NULL    |       |
+-------+------+------+-----+---------+-------+
3 rows in set (0.01 sec)

[mysql> alter table score
[    -> add constraint sno
[    -> foreign key(sno)
[    -> references student(sno);
Query OK, 12 rows affected (0.14 sec)
Records: 12  Duplicates: 0  Warnings: 0

[mysql> desc score;
+-------+------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+------+------+-----+---------+-------+
| sno   | int  | NO   | MUL | NULL    |       |
| cno   | int  | YES  | MUL | NULL    |       |
| grade | int  | YES  |     | NULL    |       |
+-------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```
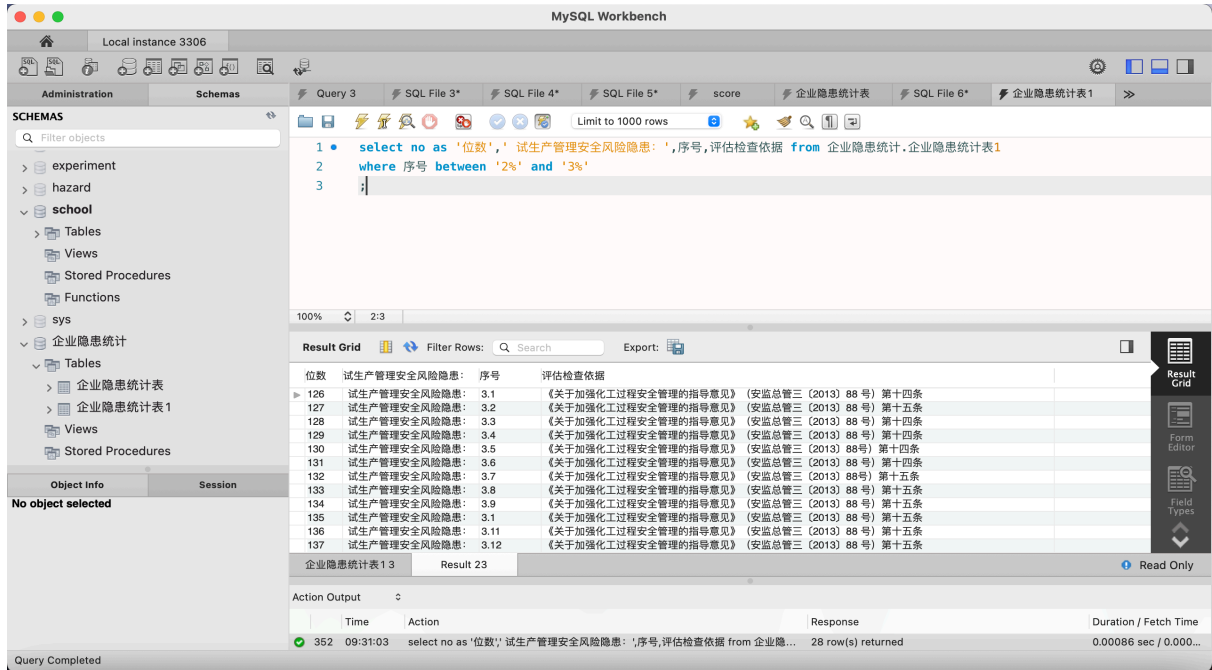
8. 删除外键操作

```
air — mysql -u calvin -p — 123×41

[mysql> desc score;
+-------+------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+------+------+-----+---------+-------+
| sno   | int  | NO   | MUL | NULL    |       |
| cno   | int  | YES  | MUL | NULL    |       |
| grade | int  | YES  |     | NULL    |       |
+-------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)

[mysql> alter table score drop foreign key sno;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
```
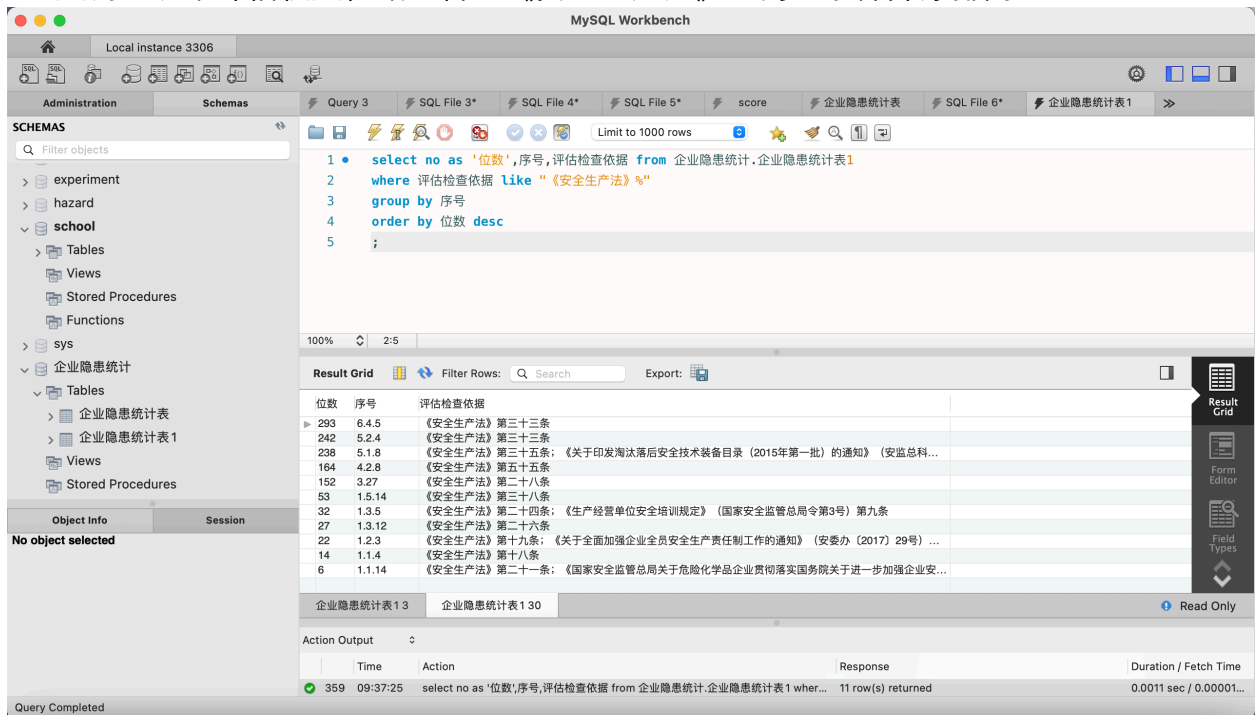
三、数据库查询与统计

1. 试生产管理安全风险隐患查询其序号、评价依据

2. 查询总表中评估检查依据包含"《安全生产法》"的记录并降序排列

3. 查询总表中隐患类型为 "安全承诺及责任制落实" 的记录数

4. 利用集函数查询统计不同排查对象的记录数
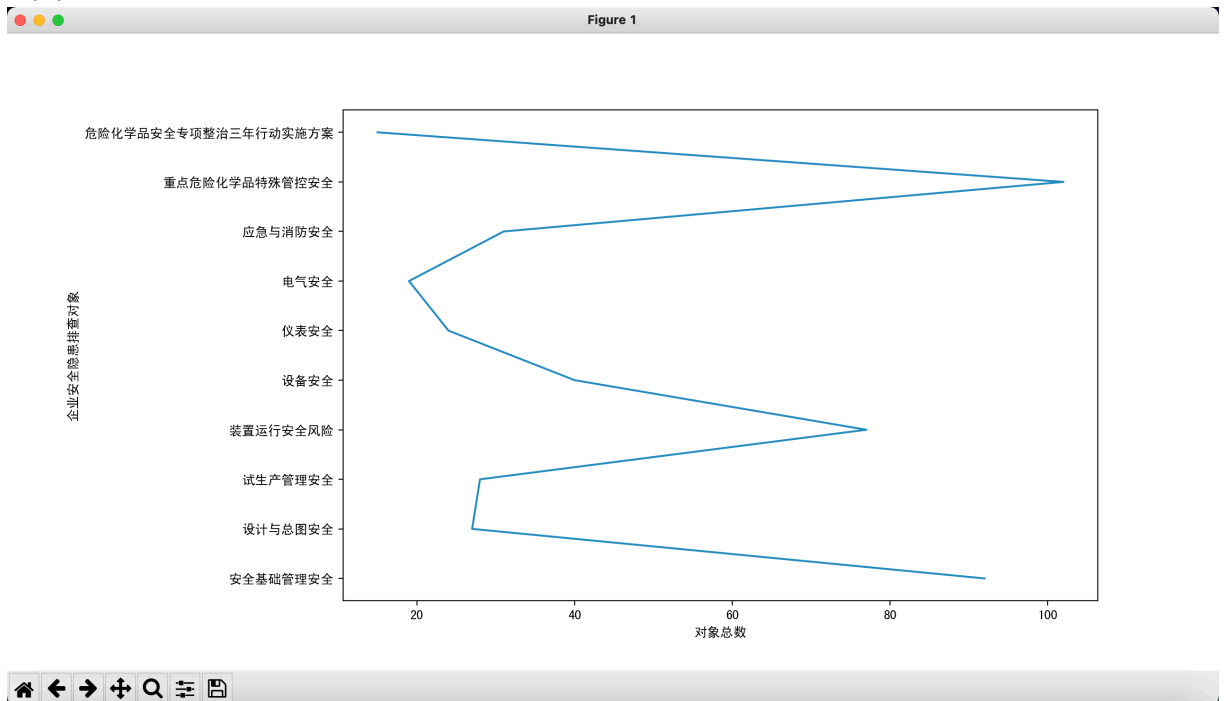
三、 Python 绘图

1. 在 python 中连接本地数据库

```python
import matplotlib.pyplot as plt
import pandas
import pymysql
con=pymysql.connect(
    host='localhost',
    user='calvin',
    password='          ',
    db='企业隐患统计'
)
cur=con.cursor()
step1='SELECT 排查对象,count(排查对象) FROM 企业隐患统计.企业隐患统计表1 group by 排查对象'
cur.execute(step1)
a1=cur.fetchall()
val_x=[]
val_y=[]
for row in a1:
    val_x.append(row[0])
    val_y.append(row[1])
plt.plot(val_y,val_x)
plt.xlabel('对象总数')
plt.ylabel('企业安全隐患排查对象')
plt.show()
```
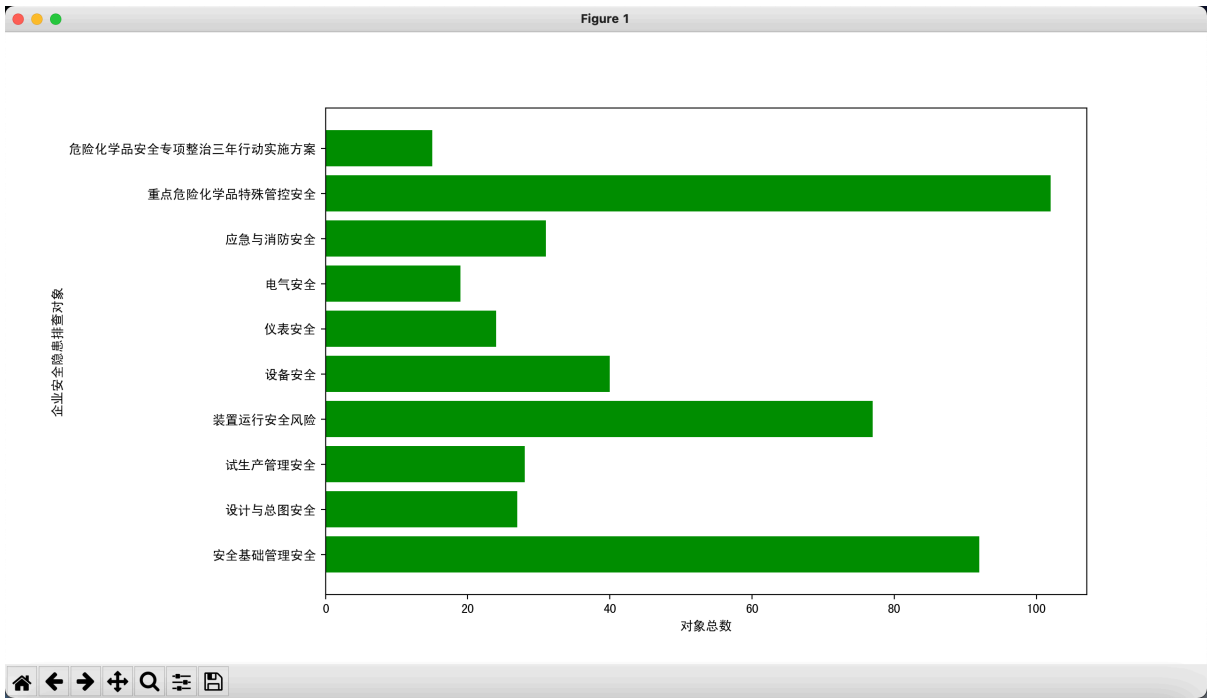
Process finished with exit code 0

2. 用 matplotlib 进行绘图
（1）横向折线图

（2）横向柱状图

（3）饼状图