

Homework05

姓名: 孔祥玉

学号: 10235501409

在新数据库中新建一张 `user` 表,插入几条数据,属性包含:唯一标识(id),姓名(name)性别(sex).年龄(age).联系方式(phone), 数据: ('John Doe', 'Male', 25, '123-456-7890'), ('Jane Smith', 'Female', 31, '987-654-3210'), ('Bob Johnson', 'Male', 22, '555-123-4567')

1. 写出 SQL 语句,查询 `user` 表中所有年龄在 20-30 范围内的用户

```
mysql> SELECT * FROM user WHERE age BETWEEN 20 AND 30;
+----+-----+-----+-----+-----+
| id | name       | sex  | age  | phone       |
+----+-----+-----+-----+-----+
| 1  | John Doe   | Male | 25   | 123-456-7890 |
| 3  | Bob Johnson | Male | 22   | 555-123-4567 |
+----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

2. 写出 SQL 语句, 向 `user` 表中添加自己的个人信息, 并添加几条和你姓名同姓的虚拟信息

```
sql> INSERT INTO user (name, sex, age, phone) VALUES
-> ('Eleven Kong', 'Male', 21, '111-222-3333'),
-> ('Fifteen Kong', 'Male', 25, '111-222-4444'),
-> ('Seventeen Kong', 'Female', 27, '111-222-5555');
ery OK, 3 rows affected (0.00 sec)
ords: 3 Duplicates: 0 Warnings: 0
```

3. 写出 SQL 语句,查询 `user` 表中年龄在 20-30 范围内,名字包含“你的姓氏”的用户,并按照年龄从大到小排序输出

```
mysql> SELECT * FROM user WHERE age BETWEEN 20 AND 30 AND name LIKE '%Kong'
ORDER BY age DESC;
+----+-----+-----+-----+-----+
| id | name       | sex  | age  | phone       |
+----+-----+-----+-----+-----+
| 6  | Seventeen Kong | Female | 27   | 111-222-5555 |
| 5  | Fifteen Kong  | Male  | 25   | 111-222-4444 |
| 4  | Eleven Kong   | Male  | 21   | 111-222-3333 |
+----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

4. 写出 SQL 语句,计算 `user` 表中所有用户的平均年龄

```
mysql> SELECT AVG(age) AS average_age FROM user;
+-----+
| average_age |
+-----+
| 25.1667     |
+-----+
1 row in set (0.00 sec)
```

5. 新建两张表 `team` 表(id,teamName)和 `score` 表(id,teamid,userid,score)。其中 `score` 表中的 `teamid` 为指向 `team` 表 `id` 的外键, `userid` 为指向 `user` 表 `id` 的外键
6. 在 `team` 表中和 `score` 表中插入合适的记录, 写出 SQL 语句,查询 `teamName` 为“ECNU”的队伍中, 年龄小于 20 的用户们, 结果不得为空。

```
mysql> SELECT u.*
-> FROM user u
-> JOIN score s ON u.id = s.userid
-> JOIN team t ON s.teamid = t.id
-> WHERE t.teamName = 'ECNU' AND u.age < 20;
+-----+-----+-----+-----+-----+
| id | name       | sex | age | phone       |
+-----+-----+-----+-----+-----+
| 7 | Twenty Kong | Male | 17 | 111-222-6666 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

7. 写出 SQL 语句,计算 teamName 为“ECNU”的总分(假设 score 存在 null 值,null 值默认为 0 加入计算)。

```
mysql> SELECT SUM(COALESCE(s.score, 0)) AS total_score
-> FROM score s
-> JOIN team t ON s.teamid = t.id
-> WHERE t.teamName = 'ECNU';
+-----+
| total_score |
+-----+
|          588 |
+-----+
1 row in set (0.00 sec)
```

8. 写出 SQL 语句,删除 user 表中个人信息的记录。

```
mysql> DELETE FROM score WHERE userid = 4;
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM score WHERE userid = 5;
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM score WHERE userid = 6;
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM score WHERE userid = 7;
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM user WHERE name = 'Eleven Kong';
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM user WHERE name = 'Fifteen Kong';
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM user WHERE name = 'Seventeen Kong';
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM user WHERE name = 'Twenty Kong';
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM user;
+-----+-----+-----+-----+-----+
| id | name       | sex | age | phone       |
+-----+-----+-----+-----+-----+
| 1 | John Doe   | Male | 25 | 123-456-7890 |
| 2 | Jane Smith | Female | 31 | 987-654-3210 |
| 3 | Bob Johnson | Male | 22 | 555-123-4567 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```