

1. 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`), 数据如下:
- ('John Doe', 'Male', 25, '123-456-7890')
- ('Jane Smith', 'Female', 31, '987-654-3210')
- ('Bob Johnson', 'Male', 22, '555-123-4567')

```
MySQL localhost:3306 ssl hw5 SQL > create table `user`(`id` int,`name` varchar(20),`sex` varchar(6),`age` int,`phone` varchar(20),primary key(`id`));
Query OK, 0 rows affected (0.0252 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(0,'John Doe', 'Male', 25, '123-456-7890');
Query OK, 1 row affected (0.0079 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(1,'Jane Smith', 'Female', 31, '987-654-3210');
Query OK, 1 row affected (0.0069 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(2,'Bob Johnson', 'Male', 22, '555-123-4567');
Query OK, 1 row affected (0.0067 sec)
MySQL localhost:3306 ssl hw5 SQL > select * from `user`;
+----+-----+-----+-----+-----+
| id | name   | sex   | age  | phone      |
+----+-----+-----+-----+-----+
| 0  | John Doe | Male  | 25   | 123-456-7890 |
| 1  | Jane Smith | Female | 31   | 987-654-3210 |
| 2  | Bob Johnson | Male  | 22   | 555-123-4567 |
+----+-----+-----+-----+-----+
3 rows in set (0.0017 sec)
```

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

```
MySQL localhost:3306 ssl hw5 SQL > select * from `user` where age>=20 and age<=30;
+----+-----+-----+-----+-----+
| id | name   | sex   | age  | phone      |
+----+-----+-----+-----+-----+
| 0  | John Doe | Male  | 25   | 123-456-7890 |
| 2  | Bob Johnson | Male  | 22   | 555-123-4567 |
+----+-----+-----+-----+-----+
2 rows in set (0.0008 sec)
```

3. 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。

```
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(3,'Deng Jin', 'Male', 19, '131-472-9389');
Query OK, 1 row affected (0.0037 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(4,'Deng Xiaoming', 'Male', 20, '486-159-4860');
Query OK, 1 row affected (0.0068 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into `user` values(5,'Deng Yuqin', 'Female', 21, '957-753-3268');
Query OK, 1 row affected (0.0067 sec)
MySQL localhost:3306 ssl hw5 SQL > select * from `user`;
+----+-----+-----+-----+-----+
| id | name       | sex   | age  | phone      |
+----+-----+-----+-----+-----+
| 0  | John Doe   | Male  | 25   | 123-456-7890 |
| 1  | Jane Smith | Female | 31   | 987-654-3210 |
| 2  | Bob Johnson | Male  | 22   | 555-123-4567 |
| 3  | Deng Jin   | Male  | 19   | 131-472-9389 |
| 4  | Deng Xiaoming | Male  | 20   | 486-159-4860 |
| 5  | Deng Yuqin | Female | 21   | 957-753-3268 |
+----+-----+-----+-----+-----+
6 rows in set (0.0013 sec)
```

4. 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 localhost:3306 ssl hw5 SQL > select * from `user` where age>=20 and age<=30 and name like 'Deng%' order by age desc;
+----+-----+-----+-----+-----+
| id | name       | sex   | age  | phone      |
+----+-----+-----+-----+-----+
| 5  | Deng Yuqin | Female | 21   | 957-753-3268 |
| 4  | Deng Xiaoming | Male  | 20   | 486-159-4860 |
+----+-----+-----+-----+-----+
2 rows in set (0.0018 sec)
```

5. 写出 SQL 语句,计算 `user` 表中所有用户的平均年龄

```
MySQL localhost:3306 ssl hw5 SQL > select avg(age) from user;
+-----+
| avg(age) |
+-----+
| 23.0000 |
+-----+
1 row in set (0.0015 sec)
```

6. 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

```
MySQL localhost:3306 ssl hw5 SQL > create table `team`(id int primary key,teamName varchar(20));
Query OK, 0 rows affected (0.0199 sec)
MySQL localhost:3306 ssl hw5 SQL > create table `score`(id int primary key,teamid int,userId int,
score float,foreign key(teamid) references team(id) on delete set null,foreign key(userid) references
user(id) on delete set null);
Query OK, 0 rows affected (0.0282 sec)
MySQL localhost:3306 ssl hw5 SQL > describe team
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int  | NO   | PRI | NULL    |       |
| teamName | varchar(20) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.0031 sec)
MySQL localhost:3306 ssl hw5 SQL > describe score;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int  | NO   | PRI | NULL    |       |
| teamid | int  | YES  | MUL | NULL    |       |
| userid | int  | YES  | MUL | NULL    |       |
| score | float | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0035 sec)
```

7. 在 team 表中中和 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 localhost:3306 ssl hw5 SQL > insert into team values(0,'ECNU');
Query OK, 1 row affected (0.0068 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into team values(1,'DASE');
Query OK, 1 row affected (0.0073 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(0,0,0,null);
Query OK, 1 row affected (0.0075 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(1,0,1,83);
Query OK, 1 row affected (0.0069 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(2,0,3,91);
Query OK, 1 row affected (0.0068 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(3,0,2,98);
Query OK, 1 row affected (0.0063 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(4,1,4,75);
Query OK, 1 row affected (0.0067 sec)
MySQL localhost:3306 ssl hw5 SQL > insert into score values(5,1,5,84);
Query OK, 1 row affected (0.0072 sec)
MySQL localhost:3306 ssl hw5 SQL > select * from team;
+-----+-----+
| id | teamName |
+-----+-----+
| 0  | ECNU     |
| 1  | DASE     |
+-----+-----+
2 rows in set (0.0016 sec)
MySQL localhost:3306 ssl hw5 SQL > select * from score;
+-----+-----+-----+-----+
| id | teamid | userid | score |
+-----+-----+-----+-----+
| 0  | 0      | 0      | NULL  |
| 1  | 0      | 1      | 83    |
| 2  | 0      | 3      | 91    |
| 3  | 0      | 2      | 98    |
| 4  | 1      | 4      | 75    |
| 5  | 1      | 5      | 84    |
+-----+-----+-----+-----+
6 rows in set (0.0016 sec)
```

```
MySQL localhost:3306 ssl hw5 SQL > select * from user where age<20 and id in(select userid from s
core where teamid=(select id from team where teamName='ECNU'));
+-----+-----+-----+-----+-----+
| id | name   | sex | age | phone |
+-----+-----+-----+-----+-----+
| 3  | Deng Jin | Male | 19 | 131-472-9389 |
+-----+-----+-----+-----+-----+
1 row in set (0.0013 sec)
```

8. 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 localhost:3306 ssl hw5 SQL > select sum(ifnull(score,0)) from score where teamid=0;
+-----+
| sum(ifnull(score,0)) |
+-----+
| 272 |
+-----+
1 row in set (0.0007 sec)
```

9. 写出 SQL 语句，删除 user 表中个人信息的记录。

```
MySQL localhost:3306 ssl hw5 SQL > delete from user where id=3;
```

```
Query OK, 1 row affected (0.0079 sec)
```

```
MySQL localhost:3306 ssl hw5 SQL > select * from user;
```

id	name	sex	age	phone
0	John Doe	Male	25	123-456-7890
1	Jane Smith	Female	31	987-654-3210
2	Bob Johnson	Male	22	555-123-4567
4	Deng Xiaoming	Male	20	486-159-4860
5	Deng Yuqin	Female	21	957-753-3268

```
5 rows in set (0.0013 sec)
```

```
MySQL localhost:3306 ssl hw5 SQL >
```