1.建数据库：

```
mysql> create database mydata;
Query OK, 1 row affected (0.02 sec)
```

建表：

```
mysql> create table user(
    -> id int auto_increment primary key,
    -> name varchar(50),
    -> sex varchar(50),
    -> age int,
    -> phone varchar(50));
Query OK, 0 rows affected (0.14 sec)
```

插入数据：

```
mysql> insert into user
    -> (name,sex,age,phone)
    -> values
    -> ('John Doe', 'Male', 25, '123-456-7890'),
    -> ('Jane Smith', 'Female', 31, '987-654-3210'),
    -> ('Bob Johnson', 'Male', 22, '555-123-4567');
Query OK, 3 rows affected (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 0

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)
```

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> select * from user where age >= 20 and age <= 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)
```

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> insert into user
    -> (name,sex,age,phone)
    -> values
    -> ('江楠','Male',19,'18584650611'),
    -> ('江北','Male',24,'1145141919'),
    -> ('江东','Female',22,'5556667778'),
    -> ('江西','Female',28,'6677123456');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

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 |
|  4 | 江楠        | Male   |   19 | 18584650611  |
|  5 | 江北        | Male   |   24 | 1145141919   |
|  6 | 江东        | Female |   22 | 5556667778   |
|  7 | 江西        | Female |   28 | 6677123456   |
+----+-------------+--------+------+-------------+
7 rows in set (0.00 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> select * from user where name like '江%'
    -> and age>=20 and age<=30
    -> order by age DESC;
+----+------+--------+------+------------+
| id | name | sex    | age  | phone      |
+----+------+--------+------+------------+
|  7 | 江西 | Female |   28 | 6677123456 |
|  5 | 江北 | Male   |   24 | 1145141919 |
|  6 | 江东 | Female |   22 | 5556667778 |
+----+------+--------+------+------------+
3 rows in set (0.00 sec)
```

5.写出 SQL 语句,计算 user 表中所有用户的平均年龄：

```
mysql> select AVG(age) as '平均年龄' from user;
+----------+
| 平均年龄 |
+----------+
|  24.4286 |
+----------+
1 row in set (0.00 sec)
```

6. 新建两张 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> CREATE TABLE team(
    -> id int PRIMARY KEY,
    -> teamName VARCHAR(30));
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE score(
    -> id int,
    -> teamid int,
    -> userid int,
    -> score int
    -> ,
    -> foreign key(teamid) references team(id),
    -> foreign key(userid) references user(id)
    -> );
Query OK, 0 rows affected (0.05 sec)
```

7.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:

插入：

```
mysql> insert into team
    -> values
    -> (1,'ECNU'),
    -> (2,'PKU');
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

```
mysql> insert into score
    -> values
    -> (1,1,3,99),
    -> (2,1,4,95),
    -> (3,1,5,90),
    -> (4,1,6,100),
    -> (5,2,1,90),
    -> (6,2,2,100),
    -> (7,2,7,99);
Query OK, 7 rows affected (0.12 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

查询：

```
mysql> select a.id, a.name, a.sex, a.age, a.phone, b.score, c.teamName
    -> from user a
    -> join score b on a.id = b.userid
    -> join team c on c.id = b.teamid
    -> where a.age < 20
    -> and c.teamName = 'ECNU';
+----+------+------+------+-------------+-------+----------+
| id | name | sex  | age  | phone       | score | teamName |
+----+------+------+------+-------------+-------+----------+
|  4 | 江楠 | Male |   19 | 18584650611 |    95 | ECNU     |
+----+------+------+------+-------------+-------+----------+
1 row in set (0.00 sec)
```

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

```
mysql> select avg(coalesce(b.score,0))
    -> from user a
    -> join score b on a.id = b.userid
    -> join team c on c.id = b.teamid
    -> where c.teamName = 'ECNU';
+---------------------------+
| avg(coalesce(b.score,0)) |
+---------------------------+
|                   96.0000 |
+---------------------------+
```

9.写出SQL语句，删除user表中个人信息的记录。

先删除score中指向user表id的外键，再删除表。

```
mysql>  alter table score drop foreign key score_ibfk_2;
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> drop table user;
Query OK, 0 rows affected (0.03 sec)

mysql>
```