

1.

```
postgres=# CREATE DATABASE testdb;
CREATE DATABASE
postgres=# \l
```

名称	拥有者	字元编码	Locale Pr
ale	ICU Rules	存取权限	
postgres	Φ	UTF8	libc
template0	Φ	UTF8	libc
	=c/"Φ"		+
	"Φ"=CTc/"Φ"		
template1	Φ	UTF8	libc
	=c/"Φ"		+
	"Φ"=CTc/"Φ"		
testdb	Φ	UTF8	libc

(4 行记录)

```
testdb=# CREATE TABLE "user" (
testdb=#     id SERIAL PRIMARY KEY,
testdb=#     name VARCHAR(100),
testdb=#     sex VARCHAR(10),
testdb=#     age INT,
testdb=#     phone VARCHAR(15)
testdb=# );
CREATE TABLE
```

```
testdb=# INSERT INTO "user" (name, sex, age, phone) VALUES
testdb=# ('John Doe', 'Male', 25, '123-456-7890'),
testdb=# ('Jane Smith', 'Female', 31, '987-654-3210'),
testdb=# ('Bob Johnson', 'Male', 22, '555-123-4567');
INSERT 0 3
```

2.

```
testdb=# SELECT * FROM "user"
testdb=# 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 行记录)

3.

3.

```
testdb=# INSERT INTO "user" (name,sex,age,phone)
testdb=# VALUES
testdb=# ('肖璟仪','Female',19,'13786659795'),
testdb=# ('肖曦文','Female',19,'123456789'),
testdb=# ('肖羽萱','Female',19,'7777777');
INSERT 0 3
```

```
postgres=# 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 | 肖曦文         | Female | 27  | 7171717
  5 | 肖羽萱         | Female | 22  | 7171717
  6 | 肖璟仪         | Female | 19  | 13786659795
(6 行记录)
```

4

```
postgres=# SELECT *
postgres=# FROM "user"
postgres=# WHERE age BETWEEN 20 AND 30
postgres=# AND name LIKE '%肖%'
postgres=# ORDER BY age DESC;
 id |      name      | sex  | age |      phone
-----+-----+-----+-----+-----
  4 | 肖曦文         | Female | 27  | 7171717
  5 | 肖羽萱         | Female | 22  | 7171717
(2 行记录)
```

5.

```
postgres=# SELECT AVG(age) AS average_age
postgres=# FROM "user";
      average_age
-----
 24.333333333333333
(1 行记录)
```

6.

```

postgres=# CREATE TABLE "team" (
postgres=#         id SERIAL PRIMARY KEY,
postgres=#         teamName VARCHAR(255) NOT NULL
postgres=# );
CREATE TABLE
postgres=#
postgres=# CREATE TABLE "score" (
postgres=#         id SERIAL PRIMARY KEY,
postgres=#         teamid INT REFERENCES "team"(id),
postgres=#         userid INT REFERENCES "user"(id),
postgres=#         score INT NOT NULL
postgres=# );
CREATE TABLE

```

7.

```

postgres=# INSERT INTO "team" (teamName)
postgres=# VALUES ('ECNU'),('SJTU');
INSERT 0 2
postgres=# INSERT INTO "score" (teamid, userid, score)
postgres=# VALUES
postgres=# (1, 1, 100),
postgres=# (1, 2, 88),
postgres=# (1, 3, 77);
INSERT 0 3

```

```

postgres=# INSERT INTO "score" (teamid, userid, score)
postgres=# VALUES
postgres=# (1,4,66),
postgres=# (1,5,50),
postgres=# (1,6,99);
INSERT 0 3

```

```

postgres=# SELECT u.*
postgres=# FROM "user" u
postgres=# JOIN "score" s ON u.id = s.userid
postgres=# JOIN "team" t ON s.teamid = t.id
postgres=# WHERE t.teamName = 'ECNU' AND u.age < 20;
 id |  name  | sex   | age |   phone
-----+-----+-----+-----+-----
   6 | 肖璟仪 | Female |  19 | 13786659795
(1 行记录)

```

8.

```

postgres=# SELECT SUM(COALESCE(s.score, 0)) AS total_score
postgres=# FROM "score" s
postgres=# JOIN "team" t ON s.teamid = t.id
postgres=# WHERE t.teamName = 'ECNU';
 total_score
-----
          480
(1 行记录)

```

9.

```

postgres=# DELETE FROM "score" WHERE userid = 6;
DELETE 1
postgres=# DELETE FROM "user" WHERE id = 6;
DELETE 1
postgres=# 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 | 肖曦文   | Female | 27 | 7171717
  5 | 肖羽萱   | Female | 22 | 7171717
(5 行记录)

```