1. SQL 的特点：

① 综合统一

② 高度非过程化：只需指出"做什么"，不用指明"怎么做"

③ 面向集合的操作方式

④ 以同一种语法结构提供多种使用方式

⑤ 语言简洁，易学易用

2. DROP TABLE 时

RESTRICT：表示该表的删除是有限制条件的. 欲删除的基本表不能被其他表的约束所引用，不能有视图，不能有触发器，不能有在储过程或函数等。否则，此表不能被删除

CASCADE：表示该表的删除没有限制条件. 在删除基本表的同时，相关的依赖对象 (如视图)，都将被一起删除.

3. (1) $\sigma_{A=10}(S)$

```
SELECT  *
FROM    S
WHERE   A=10;
```

(2) $\Pi_{A,B}(S)$ ~~DISTINCT~~

```
SELECT  ~~S,B~~ DISTINCT A, B
FROM    S;
```

(3) $S \bowtie T$

```
SELECT  A, B, S.C, S.D, E, F
FROM    S, T
WHERE   S.C = T.C AND S.D = T.D;
```

(4) $S \underset{S.C = T.C}{\bowtie} T$

```
SELECT  S.*, T.*
FROM  S, T
WHERE  S.C = T.C;
```

(5) $S \underset{A<E}{\bowtie} T$

```
SELECT  S.*, T.*
FROM  S, T
WHERE  A < E;
```

(6) $\Pi_{C,D}(S) \times T$

```
SELECT  S.C, S.D, T.*
FROM  S, T;
```

4.

以建表：

① CREATE TABLE S(
   SNO CHAR(10) PRIMARY KEY,
   SNAME CHAR(10),
   STATUS CHAR(2),
   CITY CHAR(20)
   );

② CREATE TABLE P(
   PNO CHAR(10) PRIMARY KEY,
   PNAME CHAR(10),
   COLOR CHAR(10),
   WEIGHT INT
   );

③ CREATE TABLE J(
   JNO CHAR(10) PRIMARY KEY,
   JNAME CHAR(10),
   CITY CHAR(10)
   );

④ CREATE TABLE SPJ(
   SNO CHAR(10),
   PNO CHAR(10),
   JNO CHAR(10),
   QTY INT,
   PRIMARY KEY(SNO, PNO, JNO),
   FOREIGN KEY(SNO) REFERENCES S(SNO),
   FOREIGN KEY(PNO) REFERENCES P(PNO),
   FOREIGN KEY(JNO) REFERENCES J(JNO)
   );

(二) 查询

1) SELECT DISTINCT SNO
   FROM SPJ
   WHERE JNO = 'J₁';

2) SELECT DISTINCT SNO
   FROM SPJ
   WHERE JNO = 'J₁' AND 'PNO = P₁';

3) SELECT ~~SNO~~ DISTINCT SNO
   FROM SPJ
   WHERE JNO = 'J₁' AND PNO IN
        (SELECT PNO
         FROM P
         WHERE COLOR = '红');

(4) SELECT JNO
    FROM J
    WHERE NO EXISTS
        (SELECT *
         ~~WHERE~~
         FROM SPJ
         WHERE SPJ.JNO = J.JNO
            AND SNO IN
               (SELECT SNO
                FROM S
                WHERE CITY = '天津')
            AND PNO IN
               (SELECT PNO
                FROM P
                WHERE COLOR = '红')
        );

```sql
5) SELECT JNO
   FROM SPJ X
   WHERE NOT EXISTS
       ( SELECT *
         FROM SPJ Y
         WHERE SNO = 'S1'
         AND NOT EXISTS
             ( SELECT *
               FROM SPJ Z
                 WHERE X.JNO = Z.JNO
                 AND Y.SNO = Z.SNO)
       );
```