数据库第三次作业-习题3

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- T1、SQL的特点
- 1、综合统一
- 2、高度非过程化
- 3、面向集合的操作方式
- 4、以同一种语法结构提供两种使用方式
- 5、语言简洁,易学易用

T3、

```
1 (1)
 2 SELECT *
 3
   FROM S
4 WHERE A = 10;
   (2)
   SELECT DISTINCT A, B
 7
   FROM S;
   (3)
9 SELECT A, B, S.C, S.D, E, F
10
   FROM S, T
11 WHERE S.C = T.C AND S.D = T.D;
12
   (4)
13 SELECT A, B, S.C, S.D, T.C, T.D, E, F
14 FROM S, T
15 WHERE S.C = T.C;
16 (5)
   SELECT A, B, S.C, S.D, T.C, T.D, E, F
17
18 FROM S, T
19 WHERE A < E;
20
   (6)
21 | SELECT S_.C, S_.D, T.C, T.D, E, F
22 FROM T, (SELECT DISTINCT C, D FROM S) AS S_;
```

T4、

```
1 S表:
2 S(SNO,SNAME,STATUS,CITY);
3 Create Table S
4 (SNO char(5) not null unique,
5 SNAME char(20) not null,
6 STATUS int,
7 CITY char(15),
8 Primary Key(SNO));
9
10 INSERT INTO S VALUES ('S1', '精益', 20, '天津');
11 INSERT INTO S VALUES ('S2', '盛锡', 10, '北京');
12 INSERT INTO S VALUES ('S3', '东方红', 30, '北京');
```

```
13 INSERT INTO S VALUES ('S4', '丰泰盛', 20, '天津');
14
    INSERT INTO S VALUES ('S5', '为民', 30, '上海');
15
16
    P表:
17
    P(PNO, PNAME, COLOR, WEIGHT);
18
   Create Table P
19
    (PNO char(5) not null unique,
20
    PNAME char(5) not null,
    COLOR char(1) not null,
21
22
    WEIGHT int,
23
    Primary key(PNO));
24
    INSERT INTO P VALUES ('P1', '螺母', '红', 12);
25
   INSERT INTO P VALUES ('P2', '螺栓', '绿', 17);
26
    INSERT INTO P VALUES ('P3', '螺丝刀', '蓝', 14);
27
    INSERT INTO P VALUES ('P4', '螺丝刀', '红', 14);
28
    INSERT INTO P VALUES ('P5', '凸轮', '蓝', 40);
29
    INSERT INTO P VALUES ('P6', '齿轮', '红', 30);
30
31
32
    J表:
33
   J(JNO, JNAME, CITY);
34
   Create Table J
35
    (JNO char(5) not null unique,
36
   JNAME char(10) not null,
37
    CITY char(15),
38
    Primary key(JNO));
39
40
    INSERT INTO J VALUES ('J1', '三建', '北京');
41 INSERT INTO J VALUES ('J2', '一汽', '长春');
    INSERT INTO J VALUES ('J3', '弹簧厂', '天津');
    INSERT INTO J VALUES ('J4', '造船厂', '天津');
43
    INSERT INTO J VALUES ('J5', '机车厂', '唐山');
44
    INSERT INTO J VALUES ('J6', '无线电厂',
                                         '常州');
45
    INSERT INTO J VALUES ('J7', '半导体厂', '南京');
46
48
   SPJ表:
49
   SPJ(SNO, PNO, JNO, QTY);
50
   Create Table SPJ
51
   (SNO char(5) not null,
52
    PNO char(5) not null,
53
    JNO char(5) not null,
54
    QTY int,
55
    Primary key(SNO, PNo, JNO),
    Foreign key (SNO) references S (SNO),
56
57
    Foreign key (PNO) references P (PNO),
    Foreign key (JNO) references J (JNO));
58
59
    INSERT INTO SPJ VALUES ('S1', 'P1', 'J1', 200);
60
    INSERT INTO SPJ VALUES ('S1', 'P1', 'J3', 100);
61
    INSERT INTO SPJ VALUES ('S1', 'P1', 'J4', 700);
62
    INSERT INTO SPJ VALUES ('S1', 'P2', 'J2', 100);
63
    INSERT INTO SPJ VALUES ('S2', 'P3', 'J1', 400);
64
    INSERT INTO SPJ VALUES ('S2', 'P3', 'J2', 200);
65
66 INSERT INTO SPJ VALUES ('S2', 'P3', 'J4', 500);
    INSERT INTO SPJ VALUES ('S2', 'P3', 'J5', 400);
67
68 INSERT INTO SPJ VALUES ('S2', 'P5', 'J1', 400);
   INSERT INTO SPJ VALUES ('S2', 'P5', 'J2', 100);
69
70 INSERT INTO SPJ VALUES ('S3', 'P1', 'J1', 200);
```

```
INSERT INTO SPJ VALUES ('S3', 'P3', 'J1', 200);
71
    INSERT INTO SPJ VALUES ('S4', 'P5', 'J1', 100);
72
    INSERT INTO SPJ VALUES ('S4', 'P6', 'J3', 300);
73
    INSERT INTO SPJ VALUES ('S4', 'P6', 'J4', 200);
74
    INSERT INTO SPJ VALUES ('S5', 'P2', 'J4', 100);
75
    INSERT INTO SPJ VALUES ('S5', 'P3', 'J1', 200);
76
    INSERT INTO SPJ VALUES ('S5', 'P6', 'J2', 200);
77
    INSERT INTO SPJ VALUES ('S5', 'P6', 'J4', 500);
78
79
80
    查询:
81
    (1) SELECT DISTINCT SNO FROM SPJ WHERE JNO = 'J1';
82
    (2) SELECT DISTINCT SNO FROM SPJ WHERE JNO = 'J1' AND PNO = 'P1';
83
    (3) SELECT DISTINCT SNO FROM SPJ, P WHERE JNO = 'J1' AND SPJ.PNO = P.PNO
    AND P.COLOR = '红';
84
    (4) SELECT DISTINCT JNO FROM SPJ WHERE
85
        SPJ.SNO NOT IN (SELECT SNO FROM S WHERE CITY = '天津') AND
86
        SPJ.PNO NOT IN (SELECT PNO FROM P WHERE COLOR = '红');
87
    (5)
    SELECT DISTINCT JNO FROM SPJ X
88
89
      WHERE NOT EXISTS
        (SELECT * FROM SPJ Y
90
91
          WHERE Y.SNO = 'S1' AND NOT EXISTS
92
            (SELECT * FROM SPJ Z
93
              WHERE Z.PNO = Y.PNO
94
                AND Z.JNO = X.JNO);
```

T5

(1)

```
SELECT SNAME, CITY FROM S;
SQL Fiddle 

MySQL 5.6 → 

View Sample Fiddle 

Clear 

Text to DDL
                     1 Create Table S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 SELECT SNAME, CITY FROM S:
                   1 Create lable S
(SNO char(5) not null unique,
3 SNAME char(20) not null,
4 STATUS int,
5 CITY char(15),
6 Primary Key(SNO));
               7

8 INSERT INTO S VALUES ('51', '精趋', 20, '天津');

9 INSERT INTO S VALUES ('52', '基體', 10, '北京');

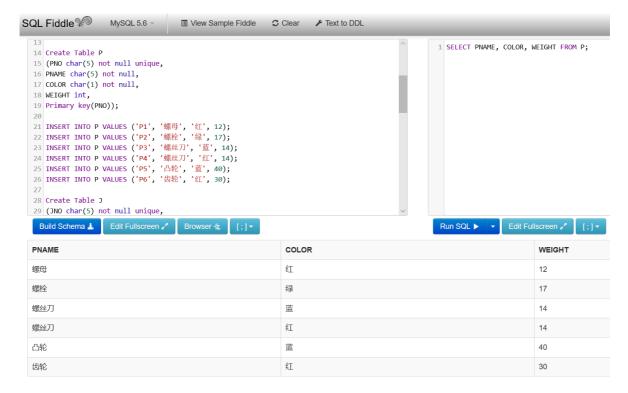
10 INSERT INTO S VALUES ('53', '*东⊉', 20, '天津');

11 INSERT INTO S VALUES ('55', '持是', 20, '天津');

12 INSERT INTO S VALUES ('55', '为民', 30, '上青');
               13
14 Create Table P
15 (PNO char(5) not null unique,
16 PNAME char(5) not null,
17 PNAME char(1) not null,
18 PNAME char(1) not null,
19 PNAME char(1) null,
19 PNAME ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run SQL ▶ ▼ Edit Fullscreen 🖍 [;] ▼
               Build Schema ≜ Edit Fullscreen ✓ Browser ₺ [;] ▼
           精益
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         天津
           盛锡
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         北京
           东方红
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         北京
           丰泰盛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         天津
           为民
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         上海
```

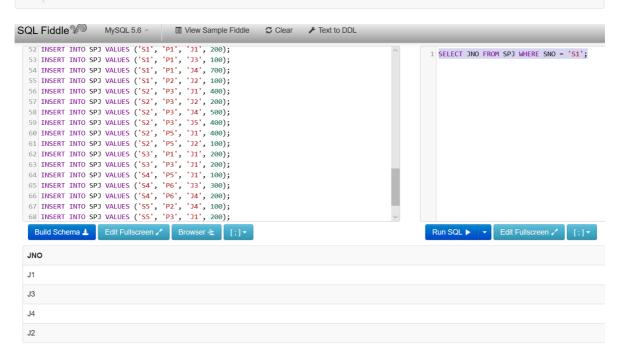
(2)

```
1 | SELECT PNAME, COLOR, WEIGHT FROM P;
```



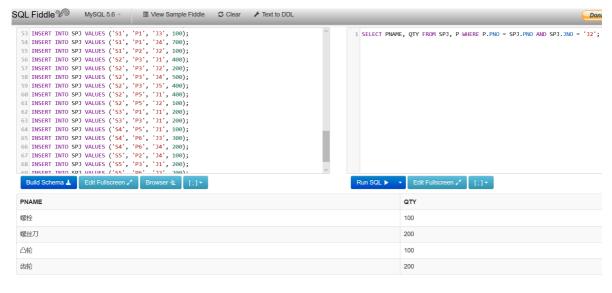
(3)

```
1 | SELECT JNO FROM SPJ WHERE SNO = 'S1';
```



(4)

```
1 | SELECT PNAME, QTY FROM SPJ, P WHERE P.PNO = SPJ.PNO AND SPJ.JNO = 'J2';
```



(5)

```
1 | SELECT DISTINCT PNO FROM SPJ, S WHERE S.CITY = '上海' AND S.SNO = SPJ.SNO;
```

(6)

```
1 | SELECT DISTINCT JNAME FROM SPJ, S, J
2 | WHERE J.JNO = SPJ.JNO AND S.CITY = '上海' AND S.SNO = SPJ.SNO;
```

```
SQL Fiddle 

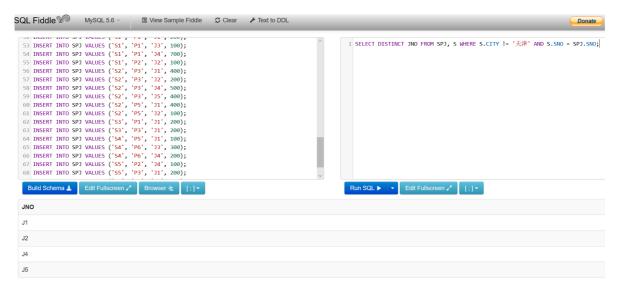
MySQL 5.6 

■ View Sample Fiddle 

Clear 

Text to DDL
                                                                                                                                   1 SELECT DISTINCT JNAME FROM SPJ, S, J
.... CO JNO AND S.CITY = '上海' AND S.SNO = SPJ.SNO;
   29 (JNO char(5) not null unique,
   30 JNAME char(10) not null,
   31 CITY char(15),
   32 Primary key(JNO));
  34 INSERT INTO J VALUES ('J1', '三建', '北京');
35 INSERT INTO J VALUES ('J2', '一汽', '长春');
36 INSERT INTO J VALUES ('J3', '弹簧厂', '天津');
  37 INSERT INTO J VALUES ('14', '造融'', 大津');
38 INSERT INTO J VALUES ('15', '机车厂', '唐山');
39 INSERT INTO J VALUES ('16', '无线电厂', '常州');
40 INSERT INTO J VALUES ('17', '半导体厂', '南京');
  41
   42 Create Table SPJ
  43 (SNO char(5) not null,
  44 PNO char(5) not null,
   Run SQL ▶ ▼ Edit Fullscreen ✓ [;] ▼
  JNAME
  造船厂
  三建
  一汽
```

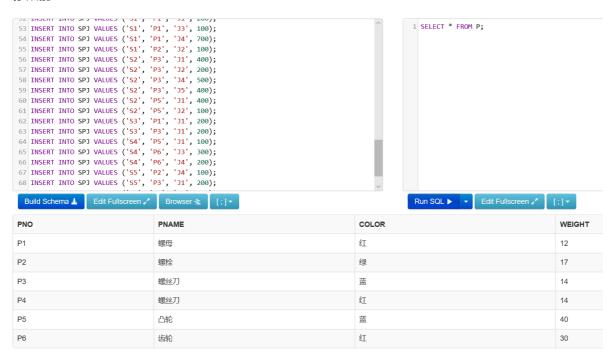
1 | SELECT DISTINCT JNO FROM SPJ, S WHERE S.CITY != '天津' AND S.SNO = SPJ.SNO;

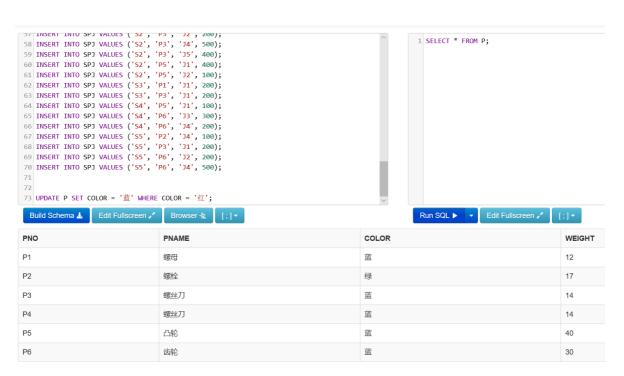


(8)

```
1 UPDATE P SET COLOR = '蓝' WHERE COLOR = '红';
```

修改前:





(9)

```
1 UPDATE SPJ SET SNO = 'S3' WHERE SNO = 'S5' AND PNO = 'P6' AND JNO = 'J4';
```

修改前:

sno	PNO	JNO	QTY
S1	P1	J1	200
S1	P1	J3	100
S1	P1	J4	700
S1	P2	J2	100
S2	P3	J1	400
S2	P3	J2	200
S2	P3	J4	500
S2	P3	J5	400
S2	P5	J1	400
S2	P5	J2	100
S3	P1	J1	200
S3	P3	J1	200
S4	P5	J1	100
S4	P6	J3	300
S4	P6	J4	200
S5	P2	J4	100
S5	P3	J1	200
S5	P6	J2	200
S5	P6	J4	500

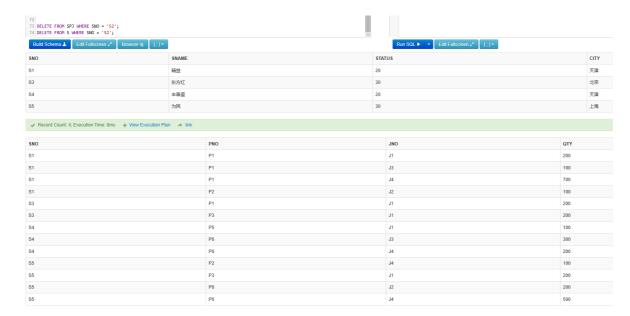
sno	PNO	JNO	QTY
S1	P1	J1	200
S1	P1	J3	100
S1	P1	J4	700
S1	P2	J2	100
S2	P3	J1	400
S2	P3	J2	200
S2	P3	J4	500
S2	P3	J5	400
S2	P5	J1	400
S2	P5	J2	100
S3	P1	J1	200
S3	P3	J1	200
S3	P6	J4	500
S4	P5	J1	100
S4	P6	J3	300
S4	P6	J4	200
S5	P2	J4	100
S5	P3	J1	200
S5	P6	J2	200

(10)

```
DELETE FROM SPJ WHERE SNO = 'S2';
DELETE FROM S WHERE SNO = 'S2';
```

修改前:

SNO	SNAME		STATUS			CITY
S1	精益		20			天津
S2	盛锡	盛場		10		北京
S3	东方红		30	30		北京
S4	主泰盛		20	20		
S5	为民		30	30		上海
✓ Record Count: 5; Execution Time: 7ms + View Execution Plan → Ink						
SNO		PNO		JNO	QTY	
81		P1		J1	200	
S1		P1		J3	100	
S1		P1		J4	700	
S1		P2		J2	100	
92		P3		л	400	
S2		P3		J2	200	
S2		P3		J4	500	
S2		P3		J5	400	
92		P5		J1	400	
S2		P5		J2	100	
93		P1		J1	200	
93		P3		Л	200	
S4		P5		J1	100	
S4		P6		J3	300	
S4		P6		J4	200	
95		P2		J4	100	
S5		P3		Л	200	
95		P6		J2	200	
P6			J4	500		

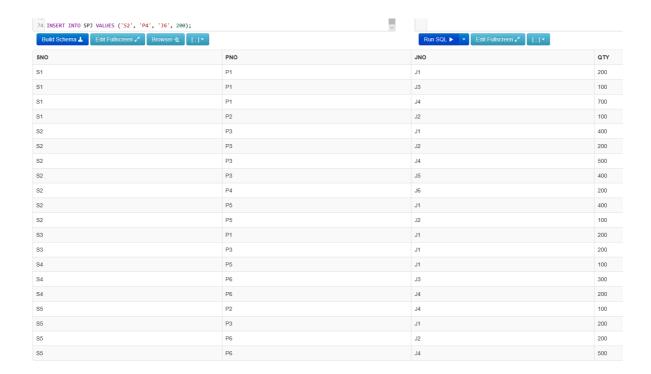


(11)

```
1 INSERT INTO SPJ VALUES ('S2', 'P4', 'J6', 200);
```

修改前:

SNO	PNO	JNO	QTY
S1	P1	J1	200
S1	P1	J3	100
S1	P1	J4	700
S1	P2	J2	100
S2	P3	J1	400
S2	P3	J2	200
S2	P3	J4	500
S2	P3	J5	400
S2	P5	J1	400
S2	P5	J2	100
S3	P1	J1	200
S3	P3	J1	200
S4	P5	J1	100
S4	P6	J3	300
S4	P6	J4	200
S5	P2	J4	100
S5	P3	J1	200
S5	P6	J2	200
S5	P6	J4	500



T6

基本表:实际存在的,每个表在存储中可用一个存储文件来表示。

视图:从基本表导出的表,是一个虚表,不实际存储在数据库中,只在数据库的数据字典中存储视图的 定义。

区别:基本表能用存储文件来表示,有实际的存储空间;视图不实际存储在数据库中。

联系:视图是由基本表导出的,是基本表的某一个视角,某一个部分。

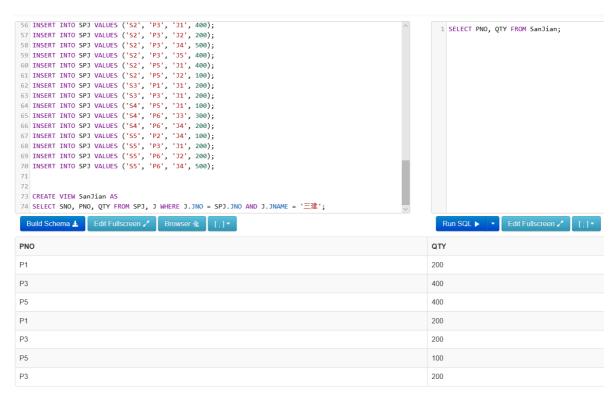
T9

建立视图:



(1)

1 | SELECT PNO, QTY FROM SanJian;



(2)



