
SQL语言集数据定义、数据查询、数据操纵和数据控制功能于一体，充分体现了关系数据语言的特点和优点

- 综合统一
- 高度非过程化
- 面向集合的操作方式
- 以同一种语法结构提供多种使用方式

二

视图

- 由一个或多个基本表导出，不实际存储数据，虚表
- 视图定义存储在数据字典中，使用的时候，根据定义从基本表中导出数据供用户使用
- 视图可以像基本表一样进行查询和某些更新的操作

优点

- 视图可以像基本表一样进行查询和某些更新的操作
- 简化了用户操作，能更清晰的表达查询
- 使用户能以多种角度看待同一数据
- 提供了安全保护功能



(1)

```
SELECT DISTINCT C, D
FROM X
WHERE A = 10;
```

(2)

```
SELECT *
FROM X, Y;
```

(3)

```
SELECT *
FROM X
JOIN Y
ON X.C = Y.C;
```

(4)

```
SELECT DISTINCT C, D
FROM X
EXCEPT
SELECT DISTINCT C, D
FROM Y;
```

四

(1)

```
SELECT S.*
FROM S
JOIN SC ON S.Sno = SC.Sno
WHERE SC.Cno = 'C1'
      AND SC.Grade IS NULL    -- 假设缺考用 Grade IS NULL 表示
ORDER BY S.Sno ASC;
```

(2)

```
SELECT DISTINCT S.Sname, S.Sdept
FROM S
JOIN SC AS SC1 ON S.Sno = SC1.Sno
JOIN SC AS SC2 ON S.Sno = SC2.Sno
WHERE SC1.Cno = 'C1'
      AND SC2.Cno = 'C5';
```

(3)

```
SELECT SUM(C.Ccredit) AS TotalCredit
FROM S
JOIN SC ON S.Sno = SC.Sno
JOIN C  ON SC.Cno = C.Cno
WHERE S.Sname = '张三';
```

(4)

```
INSERT INTO SC (Sno, Cno, Grade)
SELECT S.Sno, 'C2', NULL
FROM S
WHERE S.Sname = '李四'
      AND S.Sdept = 'CS';
```

(5)

```
UPDATE C
SET Ccredit = 3
WHERE Cname = '数据库';
```

(6)

```
DELETE FROM S
WHERE Sname LIKE '张%雨%';
```

(7)

```
CREATE VIEW vIS AS
SELECT S.Sno, S.Sname, C.Cname, SC.Grade
FROM S
JOIN SC ON S.Sno = SC.Sno
JOIN C ON SC.Cno = C.Cno
WHERE S.Sdept = 'IS';
```

(8)

```
SELECT Sname, Cname
FROM vIS
WHERE Grade = 90;
```

(9)

```
GRANT SELECT, UPDATE (Grade)
ON SC
TO U1
WITH GRANT OPTION;
```