

Examples of SQL (query)

查询语句的多样性

关系模式

顾客

Customers (cid, cname, city, discnt)

供应商

Agents (aid, aname, city, percent)

产品

Products (pid, pname, city, quantity, price)

订单

Orders (ordno, month, cid, aid, pid, qty, dollars)

Customers (cid, cname, city, discnt)

Agents (aid, aname, city, percent)

Products (pid, pname, city, quantity, price)

Orders (ordno, month, cid, aid, pid, qty, dollars)

【例】 Retrieve the city names containing customers who order product p01.

【Answer 1】 表的连接查询

```
SELECT city  
FROM customers c, orders o  
WHERE c.cid = o.cid and o.pid = 'p01' ;
```

Customers (cid, cname, city, discnt)

Agents (aid, aname, city, percent)

Products (pid, pname, city, quantity, price)

Orders (ordno, month, cid, aid, pid, qty, dollars)

【例】 Retrieve the city names containing customers who order product p01.

【Answer 2】 IN谓词 + 独立子查询

```
SELECT city  
FROM customers  
WHERE cid IN ( SELECT cid  
FROM orders  
WHERE pid = 'p01' ) ;
```

Customers (cid, cname, city, discnt)

Agents (aid, aname, city, percent)

Products (pid, pname, city, quantity, price)

Orders (ordno, month, cid, aid, pid, qty, dollars)

【例】 Retrieve the city names containing customers who order product p01.

【Answer 3】 IN谓词 + 相关子查询

```
SELECT city  
FROM customers c  
WHERE 'p01' IN (SELECT o.pid  
FROM orders o  
WHERE o.cid = c.cid ) ;
```

Customers (cid, cname, city, discnt)

Agents (aid, aname, city, percent)

Products (pid, pname, city, quantity, price)

Orders (ordno, month, cid, aid, pid, qty, dollars)

【例】 Retrieve the city names containing customers who order product p01.

【Answer 4】 = ANY (SOME) + 子查询

```
SELECT city  
FROM customers  
WHERE cid = ANY (  
                SELECT cid  
                FROM orders  
                WHERE pid = 'p01' ) ;
```

Customers (cid, cname, city, discnt)

Agents (aid, aname, city, percent)

Products (pid, pname, city, quantity, price)

Orders (ordno, month, cid, aid, pid, qty, dollars)

【例】 Retrieve the city names containing customers who order product p01.

【Answer 5】 EXISTS + 相关子查询

```
SELECT city  
FROM customers c  
WHERE EXISTS (  
        SELECT *  
        FROM orders o  
        WHERE o.cid = c.cid and  
                o.pid = 'p01' );
```