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.**

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【**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'  ) ;
```