

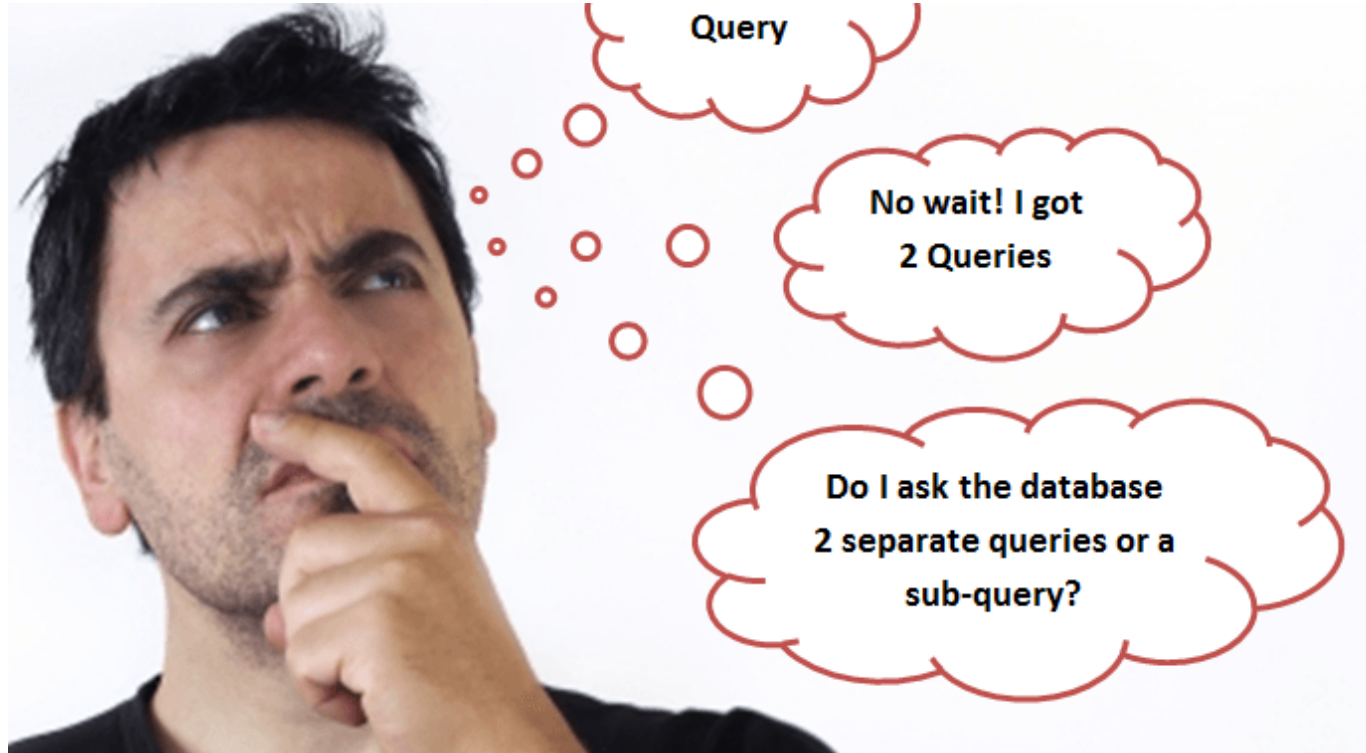


Quản trị CSDL SQL Server

#7. **SUBQUERY** – Truy vấn con

Lương Trần Hy Hiến

Sub-Queries should only be used as a fallback solution when you **cannot** use a **JOIN** operation to achieve the above



diagram



shop



Conclusion on SQL Sub-Queries

- Sub queries are **simple & easy** to understand. It can be easily broken down into logical steps, so it offers more flexibility.
- The Sub queries are used in conjunction with **SELECT, INSERT, UPDATE & DELETE** commands.
- In this article we have learnt about three types of SQL sub queries: scalar, row and table sub queries.
- In SQL server, The Nested query can be used up to **32** levels.
- As compare with Joins, the performance of Sub query is low. Joins are **500 times** faster than Sub queries.



diagram



shop



Sub query với câu lệnh SELECT

```
SELECT column_name [, column_name ]  
FROM table1 [, table2 ]  
WHERE column_name OPERATOR  
    (SELECT column_name [, column_name ]  
      FROM table1 [, table2 ]  
      [WHERE])
```

Ví dụ:

```
SELECT * FROM HangHoa  
WHERE MaHH IN (SELECT MaHH  
              FROM HangHoa  
              WHERE DonGia > 4500) ;
```



```
SELECT *  
FROM HangHoa  
WHERE MaHH NOT IN  
      (SELECT DISTINCT MaHH  
       FROM ChiTietHD);
```

```
SELECT *  
FROM HangHoa P  
WHERE NOT EXISTS  
      (SELECT NULL  
       FROM ChiTietHD F  
       WHERE P.MaHH = F.MaHH);
```



Sub query trong mệnh đề FROM

```
SELECT column_name [, column_name ]  
FROM table1, (  
    SELECT column_name [, column_name ]  
    FROM table1 [, table2 ]  
    [WHERE]  
) as M
```

Ví dụ:

```
SELECT P.*  
FROM HangHoa P,  
    (SELECT MAX(DonGia) DonGiaLonNhat  
     FROM HangHoa) M  
WHERE P.DonGia = M.DonGiaLonNhat;
```



Sub query với câu lệnh INSERT

```
INSERT INTO table_name [ (column1 [, column2 ]) ]  
    SELECT [ *|column1 [, column2 ]  
    FROM table1 [, table2 ]  
    [ WHERE VALUE OPERATOR ]
```

Ví dụ:

```
INSERT INTO KhachHang_Backup  
    SELECT * FROM KhachHang  
    WHERE MaKH IN (  
        SELECT MaKH FROM HoaDon  
    );
```

Sub query với câu lệnh UPDATE

```
UPDATE table  
SET column_name = new_value  
[ WHERE OPERATOR [ VALUE ]  
  (SELECT COLUMN_NAME  
    FROM TABLE_NAME)  
  [ WHERE) ]
```

Ví dụ:

```
UPDATE NhanVien  
  SET Luong = Luong * 1.25  
  WHERE Tuổi IN (SELECT Tuổi FROM  
                  KhachHang_Backup  
                  WHERE Tuổi >= 27 );
```



Sub query với câu lệnh DELETE

```
DELETE FROM TABLE_NAME  
[ WHERE OPERATOR [ VALUE ]  
  (SELECT COLUMN_NAME  
    FROM TABLE_NAME)  
  [ WHERE) ]
```

Ví dụ:

```
DELETE FROM KhachHang  
  WHERE Tuổi IN (SELECT Tuổi FROM  
                  KhachHang_Backup  
                  WHERE Tuổi >= 38 );
```



Tham khảo

- <https://www.sqlservertutorial.net/sql-server-basics/sql-server-subquery>
- <https://www.sqltutorial.org>



Q&A

