TSQL Homework 04

Chapter 4, T-SQL Query Fundamentals

# Readings

Read Chapter 4 in the *T-SQL Query Fundamentals* book.

# Homework questions

1. In your own words, what is a *subquery* ?
   * A query that is used by an outer query in the from and select phases
2. In your own words, what is a *self contained subquery* ?
   * Has no independency on tables from the outer query
3. In your own words, what is a *correlated subquery* ?
   * Has dependencies on queries
4. Give an example of a subquery that returns a single value. When would you use this kind of subquery?
   * DECLARE @maxid AS INT = (SELECT MAX(orderid) FROM Sales.Orders);
   * Select ordierid, orderdate, empid,custid, from dales.orders where ordered = @maxid;
   * Needed to return a a single row, to be precise
5. Give an example of a subquery that returns multiple values. When would you use this kind of subquery?
   * SELECT orderid FROM Sales.Orders WHERE empid IN (SELECT E.empid FROM HR.Employees AS E WHERE E.lastname LIKE N'D%');
   * To be able to group info. A column from a table IN,ANY,ALL,EXISTS
6. Give an example of a subquery that returns table values. When would you use this kind of subquery?
7. What does the *exists* predicate do? Give an example.
   * Excepts a subquery as input and returns true if the subquery returns any rows and false. USED FIR LISTS
8. What happens if we use the *not* operator before a predicate? Give an example.
   * It negates the predicate. Is the opposite of that action.
9. When you use *exists* or *not exists* with respect to a row in a database, does it return two or three values? Explain your answer.
   * It returns 2 values. Rows cannot be returned unknown.
10. How would you use a subquery to calculate aggregates? For example, you want to calculate yearly sales of a product, and you also want to keep a running sum of total sales. Explain how you would use a subquery to do this.

Select orderyear, qty from sales

(Select sum(02.qty)from sales as 02 were 02.orders <= 01 orderyear) as runqty

From sale.orders as 01 order by orderyear.

Page 1, Revised on November 4, 2019 by Charles Carter