

SQL SERVER 2008 EXERCISE: T-SQL LANGUAGE BASICS

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This exercise will guide you to practice T-SQL language basics: variable, data type, operator, and control flow.

INSTRUCTIONS

1. Write the following queries using variables for criteria in the WHERE clause.

- a. Get all orders shipped to a country, and in a certain time frame.
- b. I plan to invite all customers, employees, and suppliers to our annual appreciation dinner. How many people are there?

2. Practice control flow:

- a. Determine if a given year is a leap year – see http://en.wikipedia.org/wiki/Leap_year (under Gregorian calendar) and <http://support.microsoft.com/kb/214019> for the rules. Test your script with these cases:
 - o Leap year: 2000, 2012
 - o Not leap year: 2011, 2100
- b. See if an employee named “...” is in my database. If yes, display his record; if not, create a new record for him/her (only provide values for required fields).
 - o Reminder: what’s best way to assign an employee id?
- c. Write a script to get the sum of all numbers from m to n, where m and n are variables.

3. Practice “Case”

- a. Display order id, and the quarter it is placed in.
- b. I want to check if my sales have a seasonal effect. Get a report of number of orders by quarter, for all years. Hint: try using CTE.
- c. Check the inventory of my products. I want to get a list of products that should be ordered now (which means the inventory is low and the reorder level is hit). I also have a special requirement for category 3 products: because of a coming event we may need to prepare more of these products. Let’s see what the result is if we double the ReorderLevel for category 3 products. What if we triple the reorder level? Use variables if necessary for a what-if analysis.

4. Stored procedures and functions

- a. Create a stored procedure for 1a; use parameters with some default values.
 - o Execute the procedure by giving different combinations of parameter values
- b. Create a stored procedure for 2b: provide first name and last name as parameters.
- c. Create a function for 2a. Test your function.

5. System procedures and functions

- a. Practice the following system procedures:
 - o sp_tables: <http://msdn.microsoft.com/en-us/library/ms186250.aspx>
 - o sp_help: <http://msdn.microsoft.com/en-us/library/ms187335.aspx>
 - o sp_spaceused: <http://msdn.microsoft.com/en-us/library/ms188776.aspx>

REFERENCES

- Transact-SQL Reference (Database Engine): <http://msdn.microsoft.com/en-us/library/bb510741.aspx>