SET vs. SELECT When Assigning Variables

There are 2 ways of assigning a value to a local variable previously created with the DECLARE @LocalVariable statement, namely using the SET and the SELECT statements. To illustrate:

```
DECLARE @SETVariable INT, @SELECTVariable INT
SET @SETVariable = 1
SELECT @SELECTVariable = 2
```

Listed below are the differences between the SET and SELECT statements.

<table>
<tr><td>ANSI standard for variable assignment.</td><td>Non-ANSI standard when assigning variables.</td></tr>
<tr><td>Can only assign one variable at a time.

<pre>SET @Index = 1
SET @LoopCount = 10
SET @InitialValue = 5</pre></td><td>Can assign values to more than one variable at a time.

<pre>SELECT @Index = 1, @LoopCount = 10,
       @InitialValue = 5</pre></td></tr>
<tr><td>When assigning from a query and the query returns no result, SET will assign a NULL value to the variable.

<pre>DECLARE @CustomerID NCHAR(5)
SET @CustomerID = 'XYZ'
SET @CustomerID = (SELECT
[CustomerID]
                   FROM
[dbo].[Customers]
                   WHERE [CustomerID]
= 'ABC')
SELECT @CustomerID -- Returns NULL</pre></td><td>When assigning from a query and the query returns no result, SELECT will not make the assignment and therefore not change the value of the variable.

<pre>DECLARE @CustomerID NCHAR(5)
SET @CustomerID = 'XYZ'
SELECT @CustomerID = [CustomerID]
FROM [dbo].[Customers]
WHERE [CustomerID] = 'ABC'
SELECT @CustomerID -- Returns XYZ</pre></td></tr>
<tr><td>When assigning from a query that returns more than one value, SET will fail with an error.

<pre>SET = (SELECT [CustomerID]
       FROM [dbo].[Customers])

Msg 512, Level 16, State 1, Line 3
Subquery returned more than 1 value.
This is not permitted when the
subquery
follows =, !=, <, <= , >, >= or when
the
subquery is used as an expression.</pre></td><td>When assigning from a query that returns more than one value, SELECT will assign the last value returned by the query and hide the fact that the query returned more than one row.

<pre>SELECT @CustomerID = [CustomerID]
FROM [dbo].[Customers]
-- No error generated</pre></td></tr>
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