LAB - Multi Row Insert

In this lab, you will learn you will learn how to insert multiple rows into a table using a single SQL Server `INSERT` statement.

In the previous lab, you have learned how to add one row at a time to a table by using the `INSERT` statement.

To add multiple rows to a table at once, you use the following form of the `INSERT` statement:

```
INSERT INTO table_name (column_list)
VALUES
    (value_list_1),
    (value_list_2),
    ...
    (value_list_n);
```

In this syntax, instead of using a single list of values, you use multiple comma-separated lists of values for insertion.

The number of rows that you can insert at a time is 1,000 rows using this form of the `INSERT` statement. If you want to insert more rows than that, you should consider using multiple `INSERT` statements, `BULK INSERT` or a derived table.

Note that this `INSERT` multiple rows syntax is only supported in SQL Server 2008 or later.

To insert multiple rows returned from a `SELECT` statement, you use the `INSERT INTO SELECT` statement.

Examples

We will use the `sales.promotions` table created in the previous tutorial for the demonstration.

If you have not yet created the `sales.promotions` table, you can use the following `CREATE TABLE` statement:

```
CREATE TABLE sales.promotions (
    promotion_id INT PRIMARY KEY IDENTITY (1, 1),
    promotion_name VARCHAR (255) NOT NULL,
    discount NUMERIC (3, 2) DEFAULT 0,
    start_date DATE NOT NULL,
    expired_date DATE NOT NULL
);
```

1) Inserting multiple rows example

The following statement inserts multiple rows to the `sales.promotions` table:

```
INSERT INTO sales.promotions (
    promotion_name,
    discount,
    start_date,
    expired_date
)
VALUES
    (
        '2019 Summer Promotion',
        0.15,
        '20190601',
        '20190901'
    ),
    (
        '2019 Fall Promotion',
        0.20,
        '20191001',
        '20191101'
    ),
    (
        '2019 Winter Promotion',
        0.25,
        '20191201',
        '20200101'
    );
```

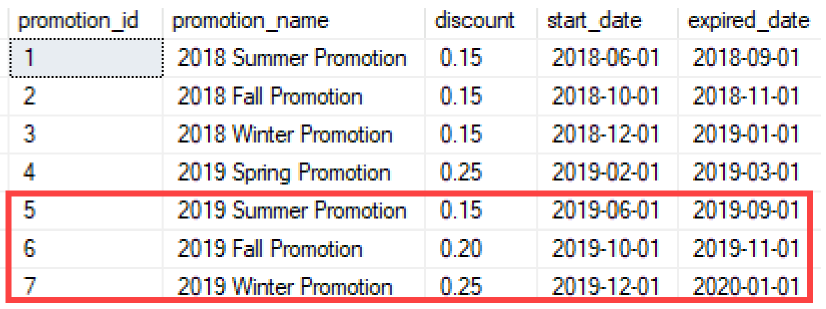
SQL server issued the following message indicating that three rows have been inserted successfully.

```
(3 rows affected)
```

Let’s verify the insert by executing the following query:

```
SELECT
    *
FROM
    sales.promotions;
```

Here is the output:

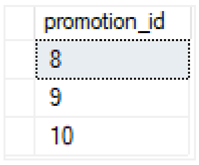


promotion_id	promotion_name	discount	start_date	expired_date
1	2018 Summer Promotion	0.15	2018-06-01	2018-09-01
2	2018 Fall Promotion	0.15	2018-10-01	2018-11-01
3	2018 Winter Promotion	0.15	2018-12-01	2019-01-01
4	2019 Spring Promotion	0.25	2019-02-01	2019-03-01
5	2019 Summer Promotion	0.15	2019-06-01	2019-09-01
6	2019 Fall Promotion	0.20	2019-10-01	2019-11-01
7	2019 Winter Promotion	0.25	2019-12-01	2020-01-01

2) Inserting multiple rows and returning the inserted id list example

This example inserts three rows into the `sales.promotions` table and returns the promotion identity list:

```
INSERT INTO
    sales.promotions (
        promotion_name, discount, start_date, expired_date
    )
OUTPUT inserted.promotion_id
VALUES
    ('2020 Summer Promotion',0.25,'20200601','20200901'),
    ('2020 Fall Promotion',0.10,'20201001','20201101'),
    ('2020 Winter Promotion', 0.25,'20201201','20210101');
```



promotion_id
8
9
10

In this example, we added the `OUTPUT` clause with the column that we want to return using the `inserted.column_name` syntax. If you want to return values from multiple columns, you can use the following syntax:

```
OUTPUT inserted.column1, inserted.column2...
```

In this lab, you have learned how to use another form of the SQL Server `INSERT` statement to insert multiple rows into a table using one `INSERT` statement.