# LAB - DATE Data Type

In this lab, you will learn how to use the SQL Server `DATE` to store date data in a table.

To store the date data in the database, you use the SQL Server `DATE` data type. The syntax of `DATE` is as follows:

```
DATE
```

Unlike the `DATETIME2` data type, the `DATE` data type has only the date component. The range of a `DATE` value is from `January 1, 1 CE (0001-01-01)` through `December 31, 9999 CE (9999-12-31)`.

It takes 3 bytes to store a `DATE` value. The default literal string format of a `DATE` value is as follows:

```
YYYY-MM-DD
```

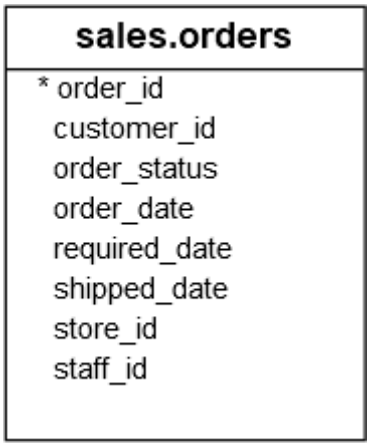
In this format:

- `YYYY` is four digits that represent a year, which ranges from 0001 to 9999.
- `MM` is two digits that represent a month of a year, which ranges from 01 to 12.
- `DD` is two digits that represent a day of the specified month, which ranges from 01 to 31, depending on the month.

## Examples

### A) Query data from a table based on `DATE` values

Let's see the `sales.orders` table from the sample database




The following example returns all orders whose ordered date is earlier than January 05 2016:

```
SELECT
    order_id,
    customer_id,
    order_status,
    order_date
FROM
    sales.orders
WHERE order_date < '2016-01-05'
ORDER BY
    order_date DESC;
```

Here is the output:

| order_id | customer_id | order_status | order_date |
|---|---|---|---|
| 6 | 94 | 4 | 2016-01-04 |
| 7 | 324 | 4 | 2016-01-04 |
| 8 | 1204 | 4 | 2016-01-04 |
| 4 | 175 | 4 | 2016-01-03 |
| 5 | 1324 | 4 | 2016-01-03 |
| 3 | 523 | 4 | 2016-01-02 |
| 1 | 259 | 4 | 2016-01-01 |
| 2 | 1212 | 4 | 2016-01-01 |

## B) Using `DATE` to define the table columns example

The following statement creates a table named `sales.list_prices` that has two `DATE` columns:

```
CREATE TABLE sales.list_prices (
    product_id INT NOT NULL,
    valid_from DATE NOT NULL,
    valid_to DATE NOT NULL,
    amount DEC (10, 2) NOT NULL,
    PRIMARY KEY (
        product_id,
        valid_from,
        valid_to
    ),
    FOREIGN KEY (product_id)
      REFERENCES production.products (product_id)
);
```

The following `INSERT` statement illustrates how to insert a row with literal date values into the table:

```
INSERT INTO sales.list_prices (
    product_id,
    valid_from,
    valid_to,
    amount
)
VALUES
    (
        1,
        '2019-01-01',
        '2019-12-31',
        400
    );
```

In this lab, you have learned how to use the SQL Server `DATE` data type to store date data in a table.