

LAB - TIME Data Type

In this lab, you will learn how to store the time of a day in the database by using SQL Server `TIME` data type.

The SQL Server `TIME` data type defines a time of a day based on 24-hour clock. The syntax of the `TIME` data type is as follows:

```
TIME[ (fractional second scale) ]
```

The fractional second scale specifies the number of digits for the fractional part of the seconds. The fractional second scale ranges from 0 to 7. By default, the fractional second scale is 7 if you don't explicitly specify it.

The following example illustrates how to create a table with a `TIME` column:

```
CREATE TABLE table_name(  
    ...,  
    start_at TIME(0),  
    ...  
);
```

The default literal format for a `TIME` value is

```
hh:mm:ss[.nnnnnnn]
```

In this format:

- `hh` is two digits that represent the hour with a range from 0 to 23.
- `mm` is two digits that represent the minute with a range from 0 to 59.
- `ss` is two digits that represent the second with the range from 0 to 59.
- The fractional seconds part can be zero to seven digits that has a range from 0 to 9999999.

A time value with the default of 100ms fractional second precision requires 5 bytes storage.

Note that the `TIME` data type is not the time zone-awareness.

Example

The following statement creates a table named `sales.visits` with two `TIME` columns that record the visit time of the customers to a particular store:

```
CREATE TABLE sales.visits (  
    visit_id INT PRIMARY KEY IDENTITY,  
    customer_name VARCHAR (50) NOT NULL,  
    phone VARCHAR (25),  
    store_id INT NOT NULL,  
    visit_on DATE NOT NULL,  
    start_at TIME (0) NOT NULL,  
    end_at TIME (0) NOT NULL,  
    FOREIGN KEY (store_id) REFERENCES sales.stores (store_id)  
);
```

The following `INSERT` statement adds a row to the `sales.visits` table:

```
INSERT INTO sales.visits (  
    customer_name,  
    phone,  
    store_id,  
    visit_on,  
    start_at,  
    end_at  
)  
VALUES  
(  
    'John Doe',  
    '(408)-993-3853',  
    1,  
    '2018-06-23',  
    '09:10:00',  
    '09:30:00'  
);
```

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