

# LAB - Alter Table - Drop Column

In this lab, you will learn how to use the SQL Server `ALTER TABLE DROP` column statement to remove one or more columns from existing table.

Sometimes, you need to remove one or more unused or obsolete columns from a table. To do this, you use the `ALTER TABLE DROP COLUMN` statement as follows:

```
ALTER TABLE table_name
DROP COLUMN column_name;
```

In this syntax:

- First, specify the name of the table from which you want to delete the column.
- Second, specify the name of the column that you want to delete.

If the column that you want to delete has a `CHECK` constraint, you must delete the constraint first before removing the column. Also, SQL Server does not allow you to delete a column that has a `PRIMARY KEY` or a `FOREIGN KEY` constraint.

If you want to delete multiple columns at once, you use the following syntax:

```
ALTER TABLE table_name
DROP COLUMN column_name_1, column_name_2,...;
```

In this syntax, you specify columns that you want to drop as a list of comma-separated columns in the `DROP COLUMN` clause.

## Examples

Let's create a new table named `sales.price_lists` for the demonstration.

```
CREATE TABLE sales.price_lists(
    product_id int,
    valid_from DATE,
    price DEC(10,2) NOT NULL CONSTRAINT ck_positive_price CHECK(price >= 0),
    discount DEC(10,2) NOT NULL,
    surcharge DEC(10,2) NOT NULL,
    note VARCHAR(255),
    PRIMARY KEY(product_id, valid_from)
);
```

The following statement drops the `note` column from the `price_lists` table:

```
ALTER TABLE sales.price_lists  
DROP COLUMN note;
```

The price column has a `CHECK` constraint, therefore, you cannot delete it. If you try to execute the following statement, you will get an error:

```
ALTER TABLE sales.price_lists  
DROP COLUMN price;
```

Here is the error message:

```
The object 'ck_positive_price' is dependent on column 'price'.
```

To drop the `price` column, first, delete its `CHECK` constraint:

```
ALTER TABLE sales.price_lists  
DROP CONSTRAINT ck_positive_price;
```

And then, delete the `price` column:

```
ALTER TABLE sales.price_lists  
DROP COLUMN price;
```

The following example deletes two columns `discount` and `surcharge` at once:

```
ALTER TABLE sales.price_lists DROP COLUMN discount, surcharge;
```

In this lab, you have learned how to use the SQL Server `ALTER TABLE DROP COLUMN` statement to remove one or more columns from a table.