

SQL PRIMARY KEY Constraint

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SQL PRIMARY KEY Constraint

The PRIMARY KEY constraint uniquely identifies each record in a table.

Primary keys must contain UNIQUE values, and cannot contain NULL values.

A table can have only ONE primary key; and in the table, this primary key can consist of single or multiple columns (fields).

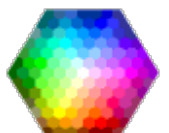
SQL PRIMARY KEY on CREATE TABLE

The following SQL creates a PRIMARY KEY on the "ID" column when the "Persons" table is created:

MySQL:

```
CREATE TABLE Persons (  
  ID int NOT NULL,
```

COLOR
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HOW
TO

SQL Union
SQL Group By
SQL Having
SQL Exists
SQL Any, All
SQL Select Into
SQL Insert Into Select
SQL Case
SQL Null Functions
SQL Stored Procedures
SQL Comments

SQL Database

SQL Create DB
SQL Drop DB
SQL Backup DB
SQL Create Table
SQL Drop Table
SQL Alter Table
SQL Constraints
SQL Not Null
SQL Unique
SQL Primary Key
SQL Foreign Key
SQL Check
SQL Default
SQL Index
SQL Auto Increment
SQL Dates
SQL Views
SQL Injection
SQL Hosting

SQL References

SQL Keywords
MySQL Functions
SQL Server Functions
MS Access Functions

```
LastName varchar(255) NOT NULL,  
FirstName varchar(255),  
Age int,  
PRIMARY KEY (ID)  
);
```

SQL Server / Oracle / MS Access:

```
CREATE TABLE Persons (  
    ID int NOT NULL PRIMARY KEY,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int  
);
```

To allow naming of a PRIMARY KEY constraint, and for defining a PRIMARY KEY constraint on multiple columns, use the following SQL syntax:

MySQL / SQL Server / Oracle / MS Access:

```
CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    CONSTRAINT PK_Person PRIMARY KEY  
    (ID, LastName)  
);
```

Note: In the example above there is only ONE PRIMARY KEY (PK_Person). However, the VALUE of the primary key is made up of TWO COLUMNS (ID + LastName).

Tabs
Dropdown
Accordion
Side
Navigation
Top
Navigation
Modal
Boxes
Progress
Bars
Parallax
Login
Form
HTML
Includes
Google
Maps
Range
Sliders
Tooltips
Slideshow
Filter
List
Sort
List

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HTML
CSS
JavaScript
SQL
Python
PHP

SQL PRIMARY KEY on ALTER TABLE

To create a PRIMARY KEY constraint on the "ID" column when the table is already created, use the following SQL:

MySQL / SQL Server / Oracle / MS Access:

```
ALTER TABLE Persons  
ADD PRIMARY KEY (ID);
```

To allow naming of a PRIMARY KEY constraint, and for defining a PRIMARY KEY constraint on multiple columns, use the following SQL syntax:

MySQL / SQL Server / Oracle / MS Access:

```
ALTER TABLE Persons  
ADD CONSTRAINT PK_Person PRIMARY KEY  
(ID, LastName);
```

Note: If you use the ALTER TABLE statement to add a primary key, the primary key column(s) must already have been declared to not contain NULL values (when the table was first created).

DROP a PRIMARY KEY Constraint

To drop a PRIMARY KEY constraint, use the following SQL:

MySQL:

```
ALTER TABLE Persons  
DROP PRIMARY KEY;
```

SQL Server / Oracle / MS Access:

```
ALTER TABLE Persons  
DROP CONSTRAINT PK_Person;
```

[< Previous](#)[Next >](#)[REPORT ERROR](#)[PRINT PAGE](#)[FORUM](#)[ABOUT](#)

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