

SQL Primary Key Constraint

by Sudheer Sharma - Wednesday, November 26, 2008

<http://dwhnotes.com/data-base/sql-constraints/sql-primary-key-constraint>

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SQL PRIMARY KEY Constraint

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

Primary keys must contain unique values.

A primary key column cannot contain NULL values.

Each table should have a primary key, and each table can have only ONE primary key.

SQL PRIMARY KEY Constraint on CREATE TABLE

The following SQL creates a PRIMARY KEY on the “P_Id” column when the “Persons” table is created:

MySQL:

```
CREATE TABLE Persons
(
P_Id int NOT NULL,
LastName varchar(255) NOT NULL,
FirstName varchar(255),
Address varchar(255),
City varchar(255),
PRIMARY KEY (P_Id)
)
```

SQL Server / Oracle / MS Access:

```
CREATE TABLE Persons
(
```

```
P_Id int NOT NULL PRIMARY KEY,  
LastName varchar(255) NOT NULL,  
FirstName varchar(255),  
Address varchar(255),  
City varchar(255)  
)
```

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  
(  
P_Id int NOT NULL,  
LastName varchar(255) NOT NULL,  
FirstName varchar(255),  
Address varchar(255),  
City varchar(255),  
CONSTRAINT pk_PersonID PRIMARY KEY (P_Id,LastName)  
)
```

SQL PRIMARY KEY Constraint on ALTER TABLE

To create a PRIMARY KEY constraint on the “P_Id” column when the table is already created, use the following SQL:

MySQL / SQL Server / Oracle / MS Access:

```
ALTER TABLE Persons  
ADD PRIMARY KEY (P_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_PersonID PRIMARY KEY (P_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).

To 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_PersonID
```

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