

SQL FOREIGN KEY Constraint

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SQL FOREIGN KEY Constraint

A FOREIGN KEY is a key used to link two tables together.

A FOREIGN KEY is a field (or collection of fields) in one table that refers to the PRIMARY KEY in another table.

The table containing the foreign key is called the child table, and the table containing the candidate key is called the referenced or parent table.

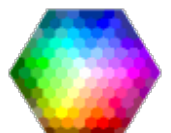
Look at the following two tables:

"Persons" table:

PersonID	LastName	FirstName	Age
1	Hansen	Ola	30
2	Svendson	Tove	23
3	Pettersen	Kari	20

"Orders" table:

COLOR
PICKER



HOW
TO

OrderID	OrderNumber	PersonID
1	77895	3
2	44678	3
3	22456	2
4	24562	1

Notice that the "PersonID" column in the "Orders" table points to the "PersonID" column in the "Persons" table.

The "PersonID" column in the "Persons" table is the PRIMARY KEY in the "Persons" table.

The "PersonID" column in the "Orders" table is a FOREIGN KEY in the "Orders" table.

The FOREIGN KEY constraint is used to prevent actions that would destroy links between tables.

The FOREIGN KEY constraint also prevents invalid data from being inserted into the foreign key column, because it has to be one of the values contained in the table it points to.

SQL FOREIGN KEY on CREATE TABLE

The following SQL creates a FOREIGN KEY on the "PersonID" column when the "Orders" table is created:

MySQL:

```
CREATE TABLE Orders (  
  OrderID int NOT NULL,  
  OrderNumber int NOT NULL,  
  PersonID int,
```

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

SHARE



CERTIFIC

HTML
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```
PRIMARY KEY (OrderID),  
FOREIGN KEY (PersonID) REFERENCES  
Persons(PersonID)  
);
```

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SQL Server / Oracle / MS Access:

```
CREATE TABLE Orders (  
    OrderID int NOT NULL PRIMARY KEY,  
    OrderNumber int NOT NULL,  
    PersonID int FOREIGN KEY REFERENCES  
Persons(PersonID)  
);
```

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

MySQL / SQL Server / Oracle / MS Access:

```
CREATE TABLE Orders (  
    OrderID int NOT NULL,  
    OrderNumber int NOT NULL,  
    PersonID int,  
    PRIMARY KEY (OrderID),  
    CONSTRAINT FK_PersonOrder FOREIGN  
KEY (PersonID)  
REFERENCES Persons(PersonID)
```

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SQL FOREIGN KEY on ALTER TABLE

To create a FOREIGN KEY constraint on the "PersonID" column when the "Orders" table is

- SQL Group By
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- SQL Insert Into Select
- SQL Case
- SQL Null Functions
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SQL Database

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SQL References

- SQL Keywords
- MySQL Functions
- SQL Server Functions
- MS Access Functions
- SQL Operators

already created, use the following SQL:

MySQL / SQL Server / Oracle / MS Access:

```
ALTER TABLE Orders
ADD FOREIGN KEY (PersonID) REFERENCES
Persons(PersonID);
```

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

MySQL / SQL Server / Oracle / MS Access:

```
ALTER TABLE Orders
ADD CONSTRAINT FK_PersonOrder
FOREIGN KEY (PersonID) REFERENCES
Persons(PersonID);
```

DROP a FOREIGN KEY Constraint

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

MySQL:

```
ALTER TABLE Orders
DROP FOREIGN KEY FK_PersonOrder;
```

SQL Server / Oracle / MS Access:

```
ALTER TABLE Orders
DROP CONSTRAINT FK_PersonOrder;
```

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