

# SQL Constraints

SQL constraints are used to specify rules for the data in a table.

## Syntax

```
CREATE TABLE table_name (  
    column1 datatype constraint,  
    column2 datatype constraint,  
    column3 datatype constraint,  
    ....  
);
```

## NOT NULL Constraint

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

## UNIQUE Constraint

```
CREATE TABLE Student (  
    ID int NOT NULL UNIQUE,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int  
);
```

## PRIMARY KEY Constraint

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

# CHECK Constraint

## Syntax

```
CREATE TABLE Student (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    CHECK (Age>=18)  
);
```

# SQL DEFAULT Constraint

```
CREATE TABLE Student (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    Country varchar(255) DEFAULT 'USA'  
);
```

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# FOREIGN KEY Constraint

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

## Table 1:

```
CREATE TABLE Customer (  
    Cus_ID int NOT NULL Primary key,  
    Cus_Name varchar(20) NOT NULL,  
    Cus_Contact int,  
  
);
```

## Table 2:

```
CREATE TABLE Orders (  
    Order_ID int NOT NULL Primary key,  
    Order_Number int NOT NULL,  
    Cus_ID int,  
    FOREIGN KEY (Cus_ID) REFERENCES Customer(Cus_ID)  
  
);
```



