**Constraints with syntax examples**

1. **Default Constraint:** Default constraint in SQL Server is used to fill the column with a default value
2. **UNIQUE KEY constraint:** It won’taccept any duplicate values
3. **NOT NULL constraint:** When you want a column not to accept NULL then you need to apply the NOT NULL constraint to that column.
4. **CHECK KEY constraint:** CHECK constraint is used to limit the value range that can be placed in a column.
5. **PRIMARY KEY constraint:** it will not allow either **NULL** or **Duplicate** values into a column or columns on which the primary key constraint is applied

\*NULLs should not be allowed.

\*It should be unique

\*It can not be modified.

1. **FOREIGN KEY constraint:** Foreign Key constraint is used for binding two tables with each other

A FOREIGN KEY is a field in one table, that refers to the PRIMARY KEY in another table

PRIMARY KEY constraint uniquely identifies each record in a table.

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

Primary key on alter table:

ALTER TABLE Persons  
ADD PRIMARY KEY (ID);

ALTER TABLE Persons  
ADD CONSTRAINT PK\_Person PRIMARY KEY (ID,LastName);

Drop a primary key constraint:

ALTER TABLE Persons  
DROP CONSTRAINT PK\_Person;

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

Note: We need to create two tables for foreign key

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

Foreign key on alter table:

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

Drop a foreign key

ALTER TABLE Orders  
DROP FOREIGN KEY FK\_PersonOrder;

CHECK constraint is used to limit the value range that can be placed in a column.

Example:

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

Check on alter table:

ALTER TABLE Persons  
ADD CHECK (Age>=18);

Drop a check constraint

Example:

ALTER TABLE Persons  
DROP CONSTRAINT CHK\_PersonAge;

DEFAULT constraint is used to set a default value for a column.

Example:

CREATE TABLE Persons (  
    ID int NOT NULL,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255),  
    Age int,  
    City varchar(255) DEFAULT 'Sandnes'  
);