

Objective: To learn about Primary Key, Foreign Key and Check constraints on table.

- 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.
- Most tables should have a primary key, and each table can have only ONE primary key.
- Primary Key can be given either on column level or table level

- Column Level PK :

- CREATE TABLE Persons
(
P_Id varchar2(10) primary key,
LastName varchar2(10),
FirstName varchar2(10))

- Table Level PK :

- Create Table Student
(
Roll_No number(3),
Branch,
Contact_No number(10),
Primary Key(Roll_No, Branch)
)
- It is also known as Composite Primary Key.

- Foreign Key : A FOREIGN KEY in one table points to a PRIMARY KEY in another table.
- Example :

P_Id	LastName	FirstName	Address	City
1	Hansen	Ola	Timoteivn 10	Sandnes
2	Svendson	Tove	Borgvn 23	Sandnes
3	Pettersen	Kari	Storgt 20	Stavanger

O_Id	OrderNo	P_Id
1	77895	3
2	44678	3
3	22456	2
4	24562	1

Creating Foreign Key:

```
CREATE TABLE Orders
(
O_Id number(10) primary key,
OrderNo number(10),
P_Id number(10) references Person(P_Id),
)
```

Creating Foreign Key Table Level:

```
CREATE TABLE Orders
(  
O_Id number(10) primary key,  
OrderNo number(10),  
P_Id number(10),  
  
Foreign Key P_Id references Person(P_Id)  
)
```

Foreign Key with ON DELETE CASCADE

A foreign key with cascade delete means that if a record in the parent table is deleted, then the corresponding records in the child table will automatically be deleted. This is called a cascade delete in Oracle.

```
CREATE TABLE Orders
(  
O_Id number(10) primary key,  
OrderNo number(10),  
P_Id number(10),  
  
Foreign Key P_Id references Person(P_Id) ON DELETE CASCADE  
)
```

Explore ON DELETE SET NULL Option as an assignment.

CHECK Constraint:

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

If you define a CHECK constraint on a single column it allows only certain values for this column.

If you define a CHECK constraint on a table it can limit the values in certain columns based on values in other columns in the row.

Column Level :

Create Table Acc

(

Name Varchar2(20),

Bal number **check (Bal > 500)**

)

CHECK at Table

Level:

Create Table Booking

(

Date_From Date ,

Date_To Date,

Check (Date_From < date_To)

)

Default Value:

The DEFAULT constraint is used to insert a default value into a column.

Create table Order

(

Order_status char(1) check (Order_status in('C','P')) default 'P'

..)