CONSTRAINTS :

It is a rule given to a column for validation.

Types of Constraints :

1. UNIQUE
2. NOT NULL
3. CHECK
4. PRIMARY KEY
5. FOREIGN KEY

1. **UNIQUE** : *It is used to avoid duplicate values into the column.*

2. **NOT NULL** : *It is used to avoid Null.*

3. **CHECK** : *It is an extra validation with a condition.*
   If the condition is satisfied then the value is accepted elseRejected.

4. **PRIMARY KEY** : *It is a constraint which is used to identify a record Uniquely from the table*
   .

   Characteristics of Primary key :
   ➢ We can have only 1 PK in a table
   ➢ PK cannot accept duplicate / repeated values.
   ➢ PK cannot accept Null
   ➢ PK is always a combination of Unique and Not Null Constraint.

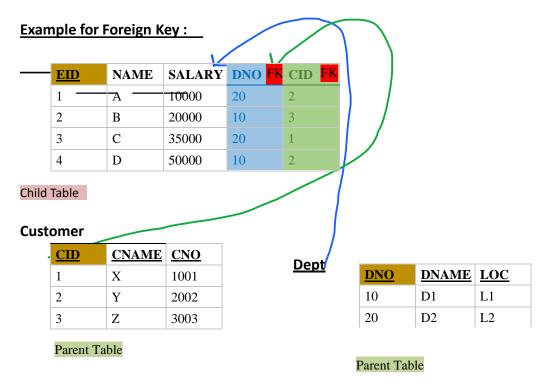5. **FOREIGN KEY** : *It is used to establish a connection between the tables.*

   Characteristics of Foreign key :
   ➢ We can have only Multiple FK in a table
   ➢ FK can accept duplicate / repeated values.
   ➢ FK can accept Null
   ➢ FK is not a combination of Unique and Not Null Constraint.
   ➢ For an Attribute (column) to become a FK, it is mandatory
   That it must be a PK in its own table.

Example :

EMP

Primary key				
		Check (Salary > 0)		Check (length(phone) = 10)
Not Null	Not Null	Not Null	Not Null	Not Null
Unique				Unique
EID	NAME	SALARY	DOJ	PHONE
Number(2)	Varchar(10)	Number(7,2)	Date	Number(10)
1	A	10000	'20-JUN-20'	9876543210
2	B	20000	'20-JUN-19'	9876543222
3	C	35000	'01-JAN-18'	9876543333
4	D	50000	'01-OCT-19'	9876511111

Example for Foreign Key :

EID	NAME	SALARY	DNO	FK	CID	FK
1	A	10000	20		2	
2	B	20000	10		3	
3	C	35000	20		1	
4	D	50000	10		2	

Child Table

Customer

CID	CNAME	CNO
1	X	1001
2	Y	2002
3	Z	3003

Parent Table

Dept

DNO	DNAME	LOC
10	D1	L1
20	D2	L2

Parent Table

ASSIGNMENT :

1. Differentiate between Primary key and Foreign key .

PRIMARY KEY	FOREIGN KEY
It is used to identify a records Uniquely from the table.	It is used to establish a connection Between the tables
It cannot accept Null	It can accept Null
It cannot accept duplicate values	It can accept duplicate values
It is always a combination of Not Null and Unique constraint	It is not a combination of Not Null and Unique constraint
We can have only 1 PK in a table	We can have Multiple FK in a table

NOTE : NULL

Null Is a *keyword* which is used to represent Nothing / Empty Cell.

Characteristics of Null :
➢ Null doesn't represent 0 or Space.
➢ Any operations performed on a Null will result in Null itself.
➢ Null doesn't occupy any Memory.
➢ We cannot equate Null.