NORMALIZATION :

Thursday, April 23, 2020 10:40 AM

What is Normalization ?

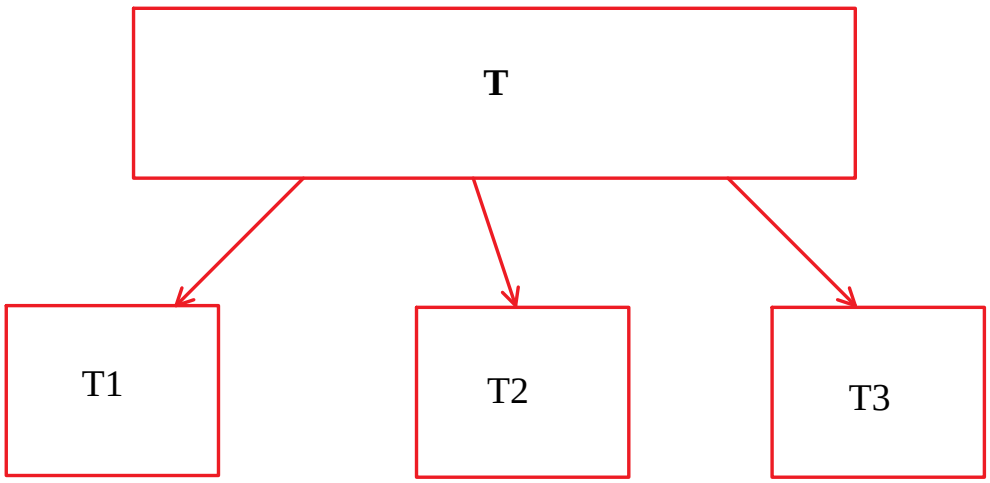
" It is the process of reducing a large table into smaller tables in order to remove redundancies and anomalies by identifying their functional dependencies is known as Normalization . "

Or

"The process of decomposing a large table into smaller table is known as Normalization ."

Or

"Reducing a table to its Normal Form is known as Normalization . "



What is **Normal Form** ?

A table without redundancies and anomalies are said to be in Normal Form .

Types of Normal From .

1. **First Normal Form (1NF)**
2. **Second Normal Form (2NF)**
3. **Third Normal Form (3NF)**
4. **Boyce - Codd Normal Form (BCNF)**

Note : **If any Table / entity is reduced to 3NF , then the table is said to be normalized.**

1. ***First Normal Form (1NF) :***

- No duplicates records .
- Multivalued data should not be present .

QSPIDERS

QID	NAME	COURSE
1	A	JAVA
2	B	JAVA , SQL
3	C	MT , SQL
1	A	MT

QID	NAME	C1	C2	C3
1	A	JAVA		MT
2	B	JAVA	SQL	
3	C		SQL	MT

2. ***Second Normal Form (2NF)***

- Table should be in 1NF
- Table should not have Partial Functional Dependency .

EMPLOYEE - (EID , ENAME , SAL , DEPTNO , DNAME , LOC)

EID	ENAME	SAL	DEPTNO	DNAME	LOC
1	A	100	10	D1	L1
2	B	120	20	D2	L2
3	C	320	10	D1	L1
4	D	251	10	D1	L1

Eid - ename ,sal
Deptno - dname , loc

:- (***Eid , deptno***) -> (Ename , Sal , Dname , Loc)
composite key attribute results in PFD

R1 - (**EID** , ENAME , SAL)
R2 - (**DEPTNO** , DNAME , LOC)

R1

Eid	Ename	Sal
1	A	100
2	B	120
3	C	320

R2

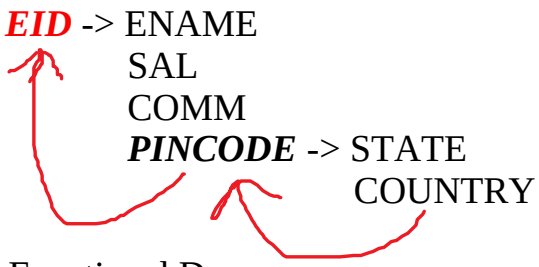
Deptno	dname	Loc
10	D1	L1
20	D2	L2

4	D	251

3. *Third Normal Form (3NF)*

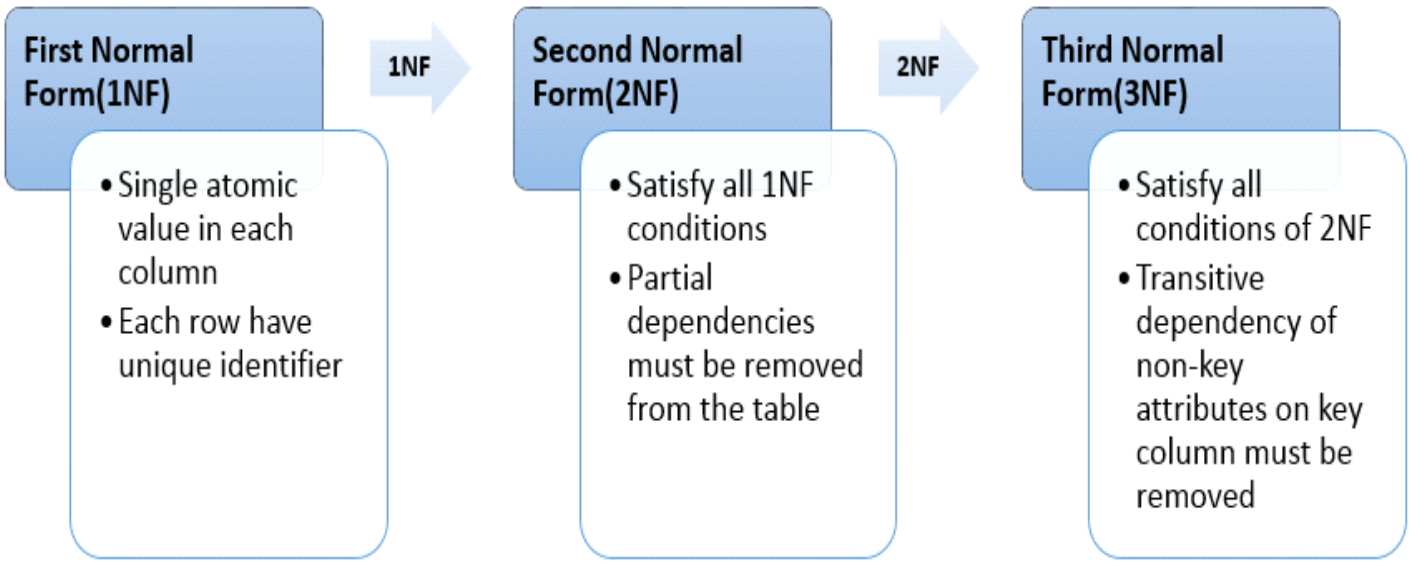
- Table should be in **2NF .**
- Table should not have Transitive Functional Dependency .

Employee - (EID , Ename , Sal , comm , Pincode , state , country)



:- Transitive Functional Dep

R1- **(EID** , ename , comm)
R2- (**PINCODE** , state , country)



Instagram :	**Ro_sql_helpmate / rohan_singh_ro**
Facebook :	**Rohan Singh Ro**
Mail id :	**Ro.helpmate@gmail.com**