

6NF / NORMALIZATION FORM

This is the highest stage of normalization. In 6NF the relation variables are decomposed into irreducible components. Means we can't reduce the table in more smaller tables.

For a table to become in 6NF, only if,

1. It should be in 5NF
2. All the relation in table shows trivial join dependency.

$$X \twoheadrightarrow Y$$

X	Y	Z	A
SID	Student Name	Exam	Marks

X	Y
SID	Student Name

X	Z
SID	Exam

X	A
SID	Marks

ELEMENTARY KEY NORMAL FORM OR EKNF

This is fall between 3NF and BCNF. Its much stricter then 3NF but lenient then BCNF. Its main objective to opt all the salient features of 3NF and BCNF but should avoid problems of both the forms.

When there is more than one unique compound key in a table and the keys are overlapped then this tends to the redundancy.

A table is in EKNF if

1. A table is 3NF converted.
2. Each and every non-trivial functional dependency in the table attached with a super key or an elementary key's subkey.

3. ESSENTIAL TUPLE NORMAL FORM OR ETNF

ETNF is Essential tuple normal form which exists between 4NF and 5NF. It is stricter than 4NF but lenient then 5NF. ETNF is used to remove the redundancy found in tuples.

A table is in ETNF if

1. A table is BCNF converted.
2. Some key values have only one attribute.
3. Some component of every explicitly declared join dependency is a super-key.

DOMAIN-KEY NORMAL FORM OR DKNF

This form stands between 5NF and 6NF. In this normal form the database contains only two constraints which are as per given below:

1. Domain constraints
2. Key constraints

Here domain constraint ensures that for a given attribute the permissible values are allowed only.

key constraint is used to specify the attributes which uniquely identify a row in a given table.

So, if a database consists from the values permissible from above mentioned constraints then data redundancy will not be generated.