

## Second Normal Form (2NF)

- All non-key fields depend on all components of the primary key.
- Guaranteed when primary key is a single field.

EXAMPLE :->

Item	Color	Price	Tax
T-Shirt	Red	12.00	0.80
T-Shirt	Blue	12.00	0.80
Polo	Red	12.00	0.80
Polo	Yellow	12.00	0.80
SweatShirt	Blue	25.00	1.25
SweatShirt	Black	25.00	1.25

Table is not in second normal form because:

- price and tax depend on item, but not color.

SOLUTION:->

Item	Color
T-Shirt	Red
T-Shirt	Blue
Polo	Red
Polo	Yellow
SweatShirt	Blue
SweatShirt	Black

Item	Price	Tax
T-Shirt	12.00	0.80
Polo	12.00	0.80
SweatShirt	25.00	1.25

## Third Normal Form (3NF)

- No non-key field depends upon another.
- All non-key fields depend only on the primary key.

Item	Color
T-Shirt	Red
T-Shirt	Blue
Polo	Red
Polo	Yellow
SweatShirt	Blue
SweatShirt	Black

Item	Price	Tax
T-Shirt	12.00	0.80
Polo	12.00	0.80
SweatShirt	25.00	1.25

Tables are not in third normal form because:

- tax depends on price, not item

Solution:->

Item	Color
T-Shirt	Red
T-Shirt	Blue
Polo	Red
Polo	Yellow
SweatShirt	Blue
SweatShirt	Black

Item	Price
T-Shirt	12.00
Polo	12.00
SweatShirt	25.00

Price	Tax
12.00	0.80
25.00	1.25

Tables are now in third normal form.