

# LET'S START WITH DBMS :).

## Normalisation and its types

### 5NF(Fifth Normal Form) or Project-Join Normal Form (PJNF)

A relation is in 5NF if it satisfies the following conditions:

- 1.It is in 4NF
- 2.The decomposition should be lossless.

Lossless decomposition : It ensures that when a relation R is decomposed/breaked into two or more relations, no data is lost, and the original relation R can be again reconstructed by joining these decomposed relations.

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## Normalisation and its types

### 5NF(Fifth Normal Form)

There is a relation  $R(A,B,C)$  with CK as A

A	B	C
1	2	3
4	5	6

R

Step 1: Lets decompose the relation based on the CK or SK of the given R

Decomposed relations:  $R1(A,B)$  and  $R2(A,C)$

A	B
1	2
4	5

R1

A	C
1	3
4	6

R2

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## Normalisation and its types

### 5NF(Fifth Normal Form)

There is a relation  $R(A,B,C)$  with CK as A

A	B	C
1	2	3
4	5	6

R

Step 2: Lets perform a natural join between R1 and R2

When we do R1 natural join R2 we get the original relation back(lossless)

A	B	C
1	2	3
4	5	6

R1 natural join R2