FIRST NORMAL FORM(1NF)

Example : Suppose a company wants to store the names and contact details of its employees. It creates a table that looks like this-

Emp_id	Emp_name	Emp_address	Emp_contact
111	Gon	Tohoku	9865324785 9876547854
112	Killua	Kanto	7845693256 7896352499
113	Hisoka	Chubu	9494856858
114	Kite	Chugoku	8956784588 6458978548

To make the table complies with 1NF we should have the data like this:

Emp_id	Emp_name	Emp_address	Emp_contact
111	Gon	Tohoku	9865324785
111	Gon	Tohoku	9876547854
112	Killua	Kanto	7845693256
112	Killua	Kanto	7896352499
113	Hisoka	Chubu	9494856858
114	Kite	Chugoku	8956784588
114	Kite	Chugoku	6458978548

SECOND NORMAL FORM(2NF)

Example : Suppose a school wants to store the data of teachers and the subjects they teach. They create a table that looks like this- Since a teacher can teach more than one subjects, the table can have multiple rows for a same teacher.

Teacher_id	Subject	Teacher_age
111	Maths	38
111	Physics	38
112	Biology	38
113	Physics	40
113	Chemistry	40

To make the table complies with 2NF we can break it in two tables like this:

Teacher_details table:

Teacher_id	Teacher_age
111	38
112	38
113	40

Teacher_subject table:

Teacher_id	Subject
111	Maths
111	Physics
112	Biology
113	Physics
113	Chemistry

THIRD NORMAL FORM(3NF)

Example : Suppose a company wants to store the complete address of each employee, they create a table named employee_details that looks like this-

Emp_id	Emp_name	Emp_zip	Emp_state	Emp_city
1001	Ramesh	859645	TN	Tambaram
1002	Suresh	859647	AP	Guntur
1003	Mukhesh	859674	AP	Vizag
1004	Lokesh	859632	TS	Hyderabad
1005	Sohail	859612	UP	Agra

To make this table complies with 3NF we have to break the table into two tables-

Employee_table:

Emp_id	Emp_name	Emp_zip
1001	Ramesh	859645
1002	Suresh	859647
1003	Mukhesh	859674
1004	Lokesh	859632
1005	Sohail	859612

Employee_zip table:

Emp_zip	Emp_state	Emp_city
859645	TN	Tambaram
859647	AP	Guntur
859674	AP	Vizag
859632	TS	Hyderabad
859612	UP	Agra