

SECOND NORMAL FORM (2NF)

A relation is in 2NF if it is in the first normal form and all non-key attribute are fully functionally dependent on key, that is there is no partial dependency.

Class (CourseId, Rollno, Name, Tid, Room, Grade)

above table is not in 2NF because there is redundancy & anomalies as well. From FD given below. We break the table and make it in 2NF.

$\text{CourseId, Rollno} \rightarrow \text{Name, Tid, Room, Grade}$

$\text{Rollno} \rightarrow \text{Name}$

$\text{CourseId} \rightarrow \text{Tid, Room}$

2NF \rightarrow $\left[\begin{array}{l} \text{Student} (\text{Rollno}, \text{Name}) \\ \text{Course} (\text{CourseId}, \text{Tid}, \text{Room}) \\ \text{Class} (\text{CourseId}, \text{Rollno}, \text{grade}) \end{array} \right.$