



# ممم جداً

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي على اقل من 20٪ مما يتم شرحه في الفيديوهات الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

يجب عليك مشاهدة فيديو الدرس كاملا

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع لا تنسونا من دعائكم

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Second Normal Form 3NF





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### 3<sup>rd</sup> Normal Form (3NF)

Third Normal Form (3NF) is a higher level of database normalization that builds on the rules of First Normal Form (1NF) and Second Normal Form (2NF). It requires that each non-key column in a table be dependent only on the primary key, and not on any other non-key columns.

To satisfy the requirements of 3NF:

- 1. Table must first be in 1NF and 2NF, and then have:
- No transitive dependencies: Each non-key column in the table must be dependent only on the primary key, and not on any other non-key columns.





#### Books

<b>Book ID</b>	Book Title	Author Name	Author Email
1	Pride and Prejudice	Jane Austen	jausten@example.com
2	1948	George Orwell	gorwell@example.com
3	Emma	Jane Austen	jausten@example.com
4	Animal Farm	George Orwell	gorwell@example.com
5	Sense and Sensibility	Jane Austen	jausten@example.com

#### Authors Table:

Author ID	Author Name	Author Email
1	Jane Austen	jausten@example.com
2	George Orwell	gorwell@example.com

#### Books Table:

Book ID	Book Title	Author ID
1	Pride and Prejudice	1
2	1984	2
3	Emma	1
4	Animal Farm	2
5	Sense and Sensibility	1

In this example, we have split the original table into two tables, each with its own primary key. The Authors Table now contains only information about authors, while the Books Table contains information about the books and the authors who wrote them. This satisfies the requirements of 3NF.



