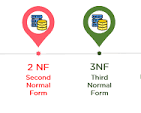
AI Overview

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In a database, the three normal forms (1NF, 2NF, 3NF) represent levels of data organization, where 1NF ensures each cell contains a single value, 2NF eliminates partial dependencies on the primary key, and 3NF removes transitive dependencies between non-key attributes, progressively reducing data redundancy and improving database integrity.

Breakdown:

* **First Normal Form (1NF):**

Each cell in a table holds only one value, eliminating repeating groups within a single column.

* **Second Normal Form (2NF):**

All non-key attributes must depend on the entire primary key, preventing partial dependencies where a column is only related to a part of the primary key.

* **Third Normal Form (3NF):**

Builds on 2NF by ensuring that no non-key attribute is dependent on another non-key attribute, removing transitive dependencies.

Key points:

* Normalization is the process of organizing data into these normal forms to minimize redundancy and improve data consistency.
* Moving from one normal form to the next involves splitting tables to remove unnecessary dependencies.
* While 3NF is often considered the desired level for most database designs, situations may require further normalization depending on complexity.
* Database normalization description - Microsoft 365 Apps | Microsoft Learn

Jun 6, 2024



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* Normalization in DBMS: A Detailed Guide - Simplilearn.com

Jan 3, 2025 — The normalization in DBMS involves following five rules: \* First Normal Form: Involves atomicity and removes duplicate...



Simplilearn.com

* Normal Forms in DBMS - GeeksforGeeks

Jan 9, 2025 — First Normal Form (1NF): This is the most basic level of normalization. In 1NF, each table cell should contain only a s...



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* Show all

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