

Third Normal Form

Objectives

- Identify transitive dependencies in a data model
- Define the rule of Third Normal Form in the normalization process
- Examine a nonnormalized entity and determine which rule (or rules) of normalization are being violated
- Apply the rule of Third Normal Form to resolve a violation in the model

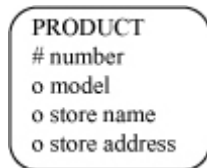
Vocabulary

Directions: Identify the vocabulary word for each definition below.

1. _____ The form of database normalization where all non-key fields are dependent on the key, the whole key and nothing but the key.
2. _____ A condition that exists when any attribute in an entity is dependent upon any other non-UID attribute in that entity.

Try It / Solve It

1. Identify the transitive dependency in the model below. State which attributes violate Third Normal Form.



2. Define the rule of Third Normal Form.
3. A color scheme for a car includes specifications for paint color for the body and the interior colors and materials. For example: The "Desert" color scheme includes silver paint and gray leather interior; the "Sunburst" color scheme includes gold paint and cream leather interior. Does the model below follow the rules of Third Normal Form? If you spot a violation, correct it.



4. Assume the following business rules:

- An athlete employs one agent.
- An agent may work for one or more athletes.
- An athlete may play for one team.
- A team may have one or more players

Does the model below contain one or more transitive dependencies? Identify the attributes involved in the transitive dependencies.



5. Now that you have an idea of what makes a good UID, you need to be aware of the controversy, benefits, and difficulty of uniquely identifying someone. Consider the idea of a national ID card. What kinds of problems would the card create and what kinds of problems would it solve? If your country already uses a national ID card, what are the benefits and issues associated with this? In your opinion, could DNA mapping become the national ID card? Why or why not?