

## <<数据库设计与关系理论>>

### 图书基本信息

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作者：戴特

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### 内容概要

《数据库设计与关系理论(影印版)(英文版)》的每一章都包含一组练习，它或者展示了如何把理论知识应用到实践中，或者提供了更多的信息，或者要求你验证一些简单的理论结果。如果你非常熟悉数据库的关系模式，并且你希望深入了解数据库设计，那么此书就完全适合你。

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作者简介

作者：（英国）戴特（C.J.Date）

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## 章节摘录

版权页：插图： More terminology: We say a JD like the one that applies in the SPJ example is tuple forcing, because if certain tuples appear, it forces certain additional tuples to appear as well. In Fig. 9.1, for example, the appearance of the three tuples (S1,P1,J2), (S1,P2,J1), and (S2,P1,J1) forces the appearance of the tuple (S1,P1,J1). Note carefully that not all JDs are tuple forcing; for example, the join dependency { {SNO,SNAME,CITY}, {CITY,STATUS} } holds in relvar S, but there's no question of it forcing additional tuples to appear. Note: To jump ahead of ourselves for a moment, it'll turn out later that a relvar that's subject to a tuple forcing JD can't be in 5NF (though as the SPJ example shows, it can be in BCNF). CYCLIC RULES Observe now the cyclic nature of the business rule in the SPJ example ("if s is connected to p and p is connected to j and j is connected back to s again, then s and p and j must all be directly connected, in the sense that they must all appear together in the same tuple"). Let's agree to say this rule is "3-way cyclic." Then we can say in general that it's if an n-way cyclic rule exists for some  $n > 2$  that we might be faced with a relvar that's (a) in BCNF and not in 5NF and therefore (b) can be nonloss decomposed into n projections and not into fewer. That said, I have to say too that in my experience such cyclic rules are rare in practice--which means that, in practice, most relvars, if they're in at least BCNF, are probably in 5NF as well. Indeed, it's quite unusual in practice to find a relvar that's in BCNF and not in 5NF. Unusual, but not unknown!--I've encountered a few real world examples myself from time to time. In other words, the fact that such relvars are unusual doesn't mean you don't need to worry about them, or about JDs and 5NF.

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