图书基本信息

书名:《数据库设计与关系理论》

13位ISBN编号: 9787564138905

10位ISBN编号:7564138904

出版时间:2013-1

出版社:东南大学出版社

作者: 戴特

页数:260

版权说明:本站所提供下载的PDF图书仅提供预览和简介以及在线试读,请支持正版图书。

更多资源请访问:www.tushu111.com

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。

作者简介

作者: (英国) 戴特(C.J.Date)

书籍目录

Preface PART SETTING THE SCENE 1 Chapter 1 Preliminaries 3 Some quotes from the literature 3 A note on terminology 5 The running example 6 Keys 7 The place of design theory 8 Aims of this book 11 Concluding remarks 12 Exercises 12 Chapter 2 Prerequisites 15 Overview 15 Relations and relvars 16 Predicates and FUNCTIONAL DEPENDENCIES. propositions 18 More on suppliers and parts 20 Exercises 22 PART BOYCE/CODD NORMAL FORM, AND RELATED MATTERS 25 Chapter 3 Normalization: Some Generalities 27 Normalization serves two purposes 29 Update anomalies 31 The normal form hierarchy 32 Normalization and constraints 34 Concluding remarks 35 Exercises 36 Chapter 4 FDs and BCNF (Informal) 37 First normal form 37 Functional dependencies 40 Keys revisited 42 Second normal form 43 Third normal form 45 Boyce/Codd normal form 45 Exercises 47 Chapter 5 FDs and BCNF (Formal) 49 Preliminary definitions 49 Functional dependencies 50 Boyce/Codd normal form 52 Heath's Theorem 54 Exercises 56 Chapter 6 Preserving FDs 59 An unfortunate conflict 60 Another example 63 Andanother 64 And still another 66 A procedure that works 67 Identity decompositions 71 More on the conflict 72 Independent projections 73 Exercises 74 Chapter 7 FD Axiomatization 75 Armstrong's axioms 75 Additional rules 76 Proving the additional rules 78 Another kind of closure 79 Exercises 80 Chapter 8 Denormalization 83 "Denormalize for performance"? 83 What does denormalization mean? 84 What denormalization isn't () 86 What denormalization isn't () 88 Denormalization considered harmful () 90 Denormalization considered harmful () 91 A final remark 92 Exercises 92 PART JOIN DEPENDENCIES. FIFTH NORMAL FORM, AND RELATED MATTERS 95 Chapter 9 JDs and 5NF (Informal) 97 Join dependencies-the basic idea 98 A relvar in BCNF and not 5NF 100 Cyclic rules 103 Concluding remarks 104 Exercises 105 Chapter 10 JDs and 5NF (Formal) 107 Join dependencies 107 Fifth normal form 109 JDs implied by keys 1 I0 A useful theorem 113 FDs aren't JDs 114 Update anomalies revisited 114 Exercises 116 Chapter 11 Implicit Dependencies 117 Irrelevant components 117 Combining components 118 Irreducible JDs 119 Summary so far 121 The chase algorithm 123 Concluding remarks 127 Exercises 127 Chapter 12 MVDs and 4NF 129 An introductory example 129 Multivalued dependencies (informal) 131 Multivalued dependencies (formal) 132 Fourth normal form 133 Axiomatization 134 Embedded dependencies 135 Exercises 136 Chapter 13 Additional Normal Forms 139 Equality dependencies 139 Sixth normal form 141 Superkey normal form 143 Redundancy free normal form 144 Domain-key normal form 149 Concluding remarks 150 Exercises 152 PART ORTHOGONALITY 155 Chapter 14 The Principle of Orthogonal Design 157 Two cheers for normalization 157 A motivating example 159 A simpler example 160 Tuples vs. propositions 163 The first example revisited 166 The second example revisited 168 The final version 168 A clarification 168 Concluding remarks 170 Exercises 171 REDUNDANCY 173 Chapter 15 We Need More Science 175 A little history 177 Database design is predicate design 178 Example 1 180 Example 2 181 Example 3 181 Example 4 181 Example 5 182 Example 6 183 Example 7 185 Example 8 187 Example 9 188 Example 10 189 Example 11 190 Example 12 190 Managing redundancy 191 Refining the definition 193 Concluding remarks 200 Exercises 200 APPENDIXES 201 Appendix A Primary Keys Are Nice but Not Essential 203 Arguments in favor of the PK:AK distinction 204 Relvars with more than one key 206 The invoices and shipments example 208 One primary key per entity type? 211 The applicants and employees example 212 Concluding remarks 214 Appendix B Redundancy Revisited 215 Appendix C Historical Notes 219 Appendix D Answers to Exercises 223 Chapter 1 223 Chapter 2 224 Chapter 3 227 Chapter 4 227 Chapter 5 232 Chapter 6 235 Chapter 7 237 Chapter 8 240 Chapter 9 242 Chapter 10 244 Chapter 11 245 Chapter 12 247 Chapter 13 250 Chapter 14 253 Chapter 15 253 Index 255

章节摘录

版权页: More terminology: We say aJD like the one that applies in the SPJ example is tupleforcing. because if certain tuples appear, it forces certain additional tuples to appear as well. In Fig. 9.1, for example, the appearance of the tuples (\$1,P1,J2), (\$1,P2,J1), and (\$2,P1,J1) forces the appearance of the tuple (\$1,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 ourselvesfor a moment, it'll tum out later that a relvar that's subject to a tuple forcing JD can't be in 5NF (though as the SPJexample shows, it can be in BCNF). CYCLIC RULES Observe now the cyclic nature of the business rule in the SPJ example ("ifs is connected top andp is connected tojandj is connected back to sagain, then s andp and 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 thatit'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 in5NF 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, inpractice, most relvars, if they're in at least BCNF, are probably in 5NF as well. Indeed, it's guite 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 worldexamples myself from time to time. In other words, the fact that such relvars are unusual doesn't mean you don'tneed to worry about them, or about JDs and 5NF.

编辑推荐

《数据库设计与关系理论(影印版)(英文版)》回答了如下问题:为什么Heath定理如此重要?什么是正交设计原则为什么有些联合检测可以规约而另一些不行?依赖保持性有什么作用?需要总是避免数据冗余吗?可能吗?《数据库设计与关系理论(影印版)(英文版)》为你展示了如何使用重要的理论知识来创建良好的数据库设计。

精彩短评

- 1、已弃
- 2、理论确实不太好理解 比较枯燥
- 3、翻译的一塌糊涂,作者写的感觉也一般,想入手的悠着点

版权说明

本站所提供下载的PDF图书仅提供预览和简介,请支持正版图书。

更多资源请访问:www.tushu111.com