

<<数据库>>

图书基本信息

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前言

20世纪末,以计算机和通信技术为代表的信息科学和技术,对世界的经济、军事、科技、教育、文化、卫生等方面的发展产生了深刻的影响,由此而兴起的信息产业已经成为世界经济支柱。

进入21世纪,各国为了加快本国的信息产业,加大了资金投入和政策扶持。

为了加快我国信息产业的进程,在我国《国民经济和社会发展第十个五年计划纲要》中,明确提出“以信息化带动工业化,发挥后发优势,实现社会生产力的跨越式发展。

”信息产业的国际竞争将日趋激烈。

在我国加入WTO后,我国信息产业将面临国外竞争对手的严峻挑战。

竞争成败最终将取决于信息科学和技术人才的多少与优劣。

在20世纪末,我国信息产业虽然得到迅猛发展,但与国际先进国家相比,差距还很大。

为了赶上并超过国际先进水平,我国必须加快信息技术人才的培养,特别要培养一大批具有国际竞争能力的高水平的信息技术人才,促进我国信息产业和国家信息化水平的全面提高。

为此,教育部高等教育司根据教育部吕福源副部长的意见,在长期重视推动高等学校信息科学和技术的教学的基础上,将实施超前发展战略,采取一些重要举措,加快推动高等学校的信息科学和技术等相关专业的教学工作。

在大力宣传、推荐我国专家编著的面向21世纪和“九五”重点的信息科学和技术课程教材的基础上,在有条件的高等学校的某些信息科学和技术课程中推动使用国外优秀教材的影印版进行英语或双语教学,以缩短我国在计算机教学上与国际先进水平的差距,同时也有助于强化我国大学生的英语水平。

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内容概要

本书自1994年初版以来,已成为学习、设计及使用关系数据库人员的一本经典教材。

它从理论和实践两方面对数据库设计和编程均做了严谨的表述。

其内容包括关系理论、数据库设计、数据库编程及运行-转储结果。

每一部分均从基本原理出发,再用实际系统中的实例来说明。

本次修订版反映了6年来数据库领域总体的进步和发展动态,书中重点讲述了对象关系模型;介绍了一些系统(如Oracle、DB2和Informix等)中通用的新概念;对隔离技术作了更新介绍;对运行结果的表述更现代。

相对于初始标准来说,SQL数据库语言有了非常重要的变化,所以对对象关系给予特别讲述。

本书还介绍了SQL-99设计方法及与之相关的原理方法及主要产品。

本书的作者是在数据库界工作30多年的资深专家,富于教学和实践经验。

本书力图在数据库领域各不相同的思想和趋势中找到一个统一的观点提供给读者。

本书对于初接触数据库系统的读者不啻为一本极好的教材;对于那些对数据库领域的发展还未给予足够关注的人是一本易于接受的参考书;同时也是设计人员和编程人员及时更新知识的有用的参考书

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作者简介

Parick O'Neil is a professor of computer science at the University of Massachusetts at Boston. He is responsible for a number of important results in transactional performance and disk access algorithms, and he holds patents for his work in these and other database areas. Elizabeth O'Neil is a professor of computer science at the University of Massachusetts at Boston. She serves as a consultant to Sybase IQ in Concor, Massachusetts, and has worked with a number of other corporations, including Microsoft and Bolt, Beranek, and Newman.

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插图：The Courses table in Figure 1.1a lists the set of courses offered, with course number given by `cno`, course name by `cname`, the room where the course meets by `croom`, and the days and period it meets by `time`. The time column values are encoded: for example, `MW2` means Monday and Wednesday during period 2. The enrollment table has only three columns: each row of the table pairs up a student with given student ID, `sid`, and a course that the student is taking, represented by `cno`, together with whether (Yes or No) the course is in the student major, `major`. For example, student 1 has a declared major in mathematics and student 3 has a major in modern languages. The three tables of Figure 1.1a together represent a relational database. Note that we use lowercase names (in monospace type) for tables and column names, but many other texts use uppercase names. A number of other concepts governing the tabular representation of data in the relational model will be covered starting in Chapter 2, but we mention one concept now, known as the first normal form rule: in the relational model, a column of a table must contain a single, unstructured value. The unstructured value constraint implies, for example, that we cannot place both the last name and first name as separate values that can be separately set and retrieved in a single column: that is, we cannot create a column that looks like a C struct or Java class.

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