

数据库管理系统 (DBMS) 和管理信息系统 (MIS) (一)

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MANAGEMENT SYSTEMS (DBMS) AND MANAGEMENT INFORMATION SYSTEM (MIS) You know that a database is a collection of logically related data elements that may be structured in various ways to meet the multiple processing and retrieval needs of organizations and individuals . There ' s nothing new about databases early ones [1] were chiseled in stone , penned on scrolls , and written on index cards . But now databases are commonly recorded on magnetizable media , and computer programs are required to perform the necessary storage and retrieval operations . You ' ll see in the following pages that complex data relationships and linkages may be found in all but the simplest databases [2] . The system software package that handles the difficult tasks associated with creating , accessing , and maintaining database records is called a database management system (DBMS) . The programs in a DBMS package establish an interface between the database itself and the users of the database . (These users may be applications programmers , managers and others with information needs , and various OS programs .) A DBMS can organize , process , and present selected data elements from the database . This capability enables decision makers to search , probe , and query database contents in order to extract answers to nonrecurring and unplanned questions that aren ' t available in regular reports [3] . These

questions might initially be vague and / or poorly defined , but people can “ browse ” through the database until they have the needed information . In short , the DBMS will “ manage ” the stored data items and assemble the needed items from the common database in response to the queries of those who aren ’ t programmers . In a file-oriented system , users needing special information may communicate their needs to a programmer , who , when time permits , will write one or more programs to extract the data and prepare the information[4] . The availability of a DBMS , however , offers users a much faster alternative communications path (see Fig. 7-1) . 数据库管理系统

(DBMS) 和管理信息系统 (MIS) 众所周知 , 数据库是逻辑上相关的数据元的汇集。这些数据元可以按不同的结构组织起来 , 以满足单位和个人的多种处理和检索的需要。数据库本身不是什么新鲜事—早期的数据库凿在石头上 , 记在名册上 , 以及写在索引卡中。而现在 , 数据库普遍记录在可磁化的介质上 , 并且需要用计算机程序来执行必需的存储和检索操作。如下所述 , 所有数据库 (最简单的除外) 中都有复杂的数据关系及其链接。处理与创建、访问以及维护数据库记录有关的复杂任务的系统软件包叫做数据库管理系统

(DBMS) 。 DBMS 软件包中的程序在数据库与其用户间建立接口。(这些用户可以是应用程序员、管理员、及其他需要信息的人员和各种操作系统程序) 。 DBMS 可组织、处理和表示从数据库中选出的数据元。该功能使决策者能搜索、探查和查询数据库的内容 , 从而对在正规报告中没有的、不再出现的且无法预料的问题作出回答。这些问题最初可能是模

糊的并且（或者）是定义不恰当的，但是人们可以浏览数据库直到获得所需的信息。简言之，DBMS将“管理”存储的数据项，并从公共数据库中汇集所需的数据项以回答非程序员的询问。在面向文件的系统中，需要特定信息的用户应将他们的要求传送给程序员。该程序员在时间允许时，将编写一个或多个程序以提取数据和准备信息。然而，DBMS的可用性为用户提供了一个更快的替代通信通道（如图7-1所示）。100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com