Preface

The goal of this text is to provide a solid foundation in the fundamentals of database technology—considered essential for students of management to be able to operate successfully in the increasingly dynamic and competitive environment of every kind of present-day business activity. Database administration is more important today than ever in all spheres of business disciplines and has become a paramount prerequisite for increased productivity. A management student is unlikely to get involved in database design and development or ever write a sizable application program, which are all engineering processes. But, he is invariably required to understand user requirements leading to selection of a suitable language and other parameters for the development of a software product. It therefore also helps to be equipped with basic knowledge of one or more high level languages and other issues involved.

The management students have always been taught a contemporary high level language such as Pascal (1980s), C(1990s), Java (2000 onwards). The emphasis is on introducing them to various aspects of programming. They are not expected to become experts. These languages are vast and proficiency can be achieved only by practice.

This book covers Relational Database Management Systems. An engineering student takes a course in Database Management Systems to learn about the technical aspects so that he may implement a database solution for an organization. A manager on the other hand is a user of the database system and presents the relevant data in a desired format to help the organization in decision-making processes.

Computer hardware and software constitute the foundation on which programs and database solutions run. A basic knowledge of computer hardware and software is therefore also essential for management students. I have tried to include the basic material in this book.

My objective in writing this book is therefore to provide the material that is covered in a first course in computing. The book is organized into four units:

Unit I deals with Database Management Systems in general and Relational Database Mangement Systems in particular, discussing various phases of database development process and the entity relationship model.

Unit II describes how to create and run Java programs. It also explains control structures, data structures, arrays, characters, strings and string buffers.

Unit III teaches how to get connected to an Oracle Server through a Java program, pass an SQL Statement, receive and display the results.

Unit IV elaborates on the fundamentals of computers and networks.

Writing this book has been a rewarding experience in which many people contributed. Manu reviewed the unit on Java meticulously. Gita made some figures for me. Mahalaxmi, Sunita and Kumkum checked all the programs and queries. Peeyush was happy to get a learning opportunity while the programs were being tested. Deepak, Kishore and Avinash reviewed some chapters of the book. Prof. Rajat Moona reviewed and gave feedback on a couple of chapters. I.P. Singh typed without complaining about my handwriting.

My sincere appreciation goes to the Continuing Education Cell of IIT Kanpur for providing seed money for the book. I am happy to be part of the IME department at IIT Kanpur that provides the best possible environment for working.

It gives me pleasure to dedicate this work to my family members who always support me in my academic ventures.

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