THE
SYSTEMS
PROGRAMMING
SERIES

An
Introduction
to Database
Systems

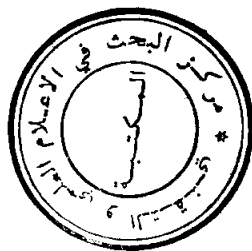## Third Edition

C. J. DATE

An Introduction to Database Systems

Third Edition

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IBM Corporation

Foreword

The field of systems programming primarily grew out of the efforts of many programmers and managers whose creative energy went into producing practical, utilitarian systems programs needed by the rapidly growing computer industry. Programming was practiced as an art where each programmer invented his own solutions to problems with little guidance beyond that provided by his immediate associates. In 1968, the late Ascher Opler, then at IBM, recognized that it was necessary to bring programming knowledge together in a form that would be accessible to all systems programmers. Surveying the state of the art, he decided that enough useful material existed to justify a significant codification effort. On his recommendation, IBM decided to sponsor The Systems Programming Series as a long term project to collect, organize, and publish those principles and techniques that would have lasting value throughout the industry.

The Series consists of an open-ended collection of text-reference books. The contents of each book represent the individual author's view of the subject area and do not necessarily reflect the views of the IBM Corporation. Each is organized for course use but is detailed enough for reference. Further, the Series is organized in three levels: broad introductory material in the foundation volumes, more specialized material in the software volumes, and very specialized theory in the computer science volumes. As such, the Series meets the needs of the novice, the experienced programmer, and the computer scientist.

Taken together, the Series is a record of the state of the art in systems programming that can form the technological base for the systems programming discipline.

The Editorial Board

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