RECENT ADVANCES IN JAVA TECHNOLOGY
THEORY, APPLICATION, IMPLEMENTATION

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Preface

Since its launch, the Java programming language has quickly established itself as a backbone technology in many areas of computer science and information systems. By leveraging the power, reliability and portability of the Java framework, application developers have harnessed a means of creating robust and mobile applications. In this book, we investigate the present day widespread use of Java and Java related technologies to provide a platform for cutting-edge developments in computer software.

The chapters give some idea of the breadth of application of the Java programming language. The applications presented here range from simulation, databases, networks, cryptography and software localisation, right through to voice and music applications. Other chapters, relating to the foundations of the language itself, reflect the evolving nature of the technology, and the prospect for further innovations in programming language design.

Also explored are issues relating to the design and engineering of intermediate representations, of which Java bytecode is an example. These compare prominent, widely-used systems such as the Java Virtual Machine and the Common Language Infrastructure, as well as related systems and architectures ranging from Forth to Oberon. Such work is of prime importance in laying the foundations for future technologies that build on the example of Java.

Finally, Java has quickly established itself as the language of choice for teaching programming in universities and third-level institutions, and six of the chapters discuss issues in this domain. These chapters are based on the experiences of educators who have used Java, and offer a selection of practical reports and solutions.


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James Power
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Editors.
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