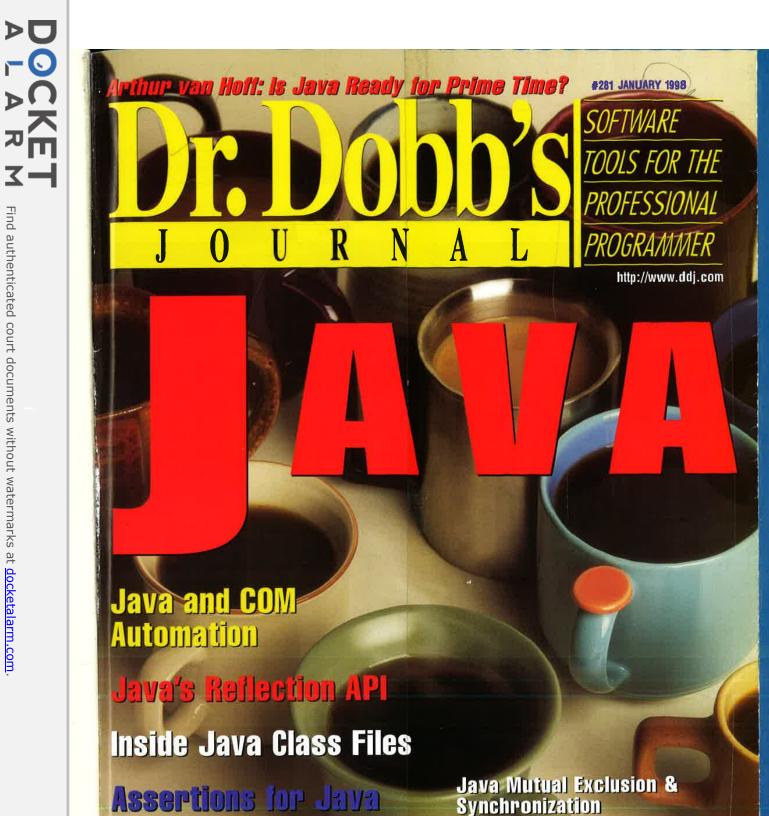
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#### FEATURES 🔬

#### JAVA: GETTING DOWN TO BUSINESS

*by Artbur van Hoff* A Java pioneer looks at the state of the art, Java-wise, and wonders if it is ready for prime-time business applications.

#### JAVA AND COM AUTOMATION

by Kenneth Bandes

Ken examines the ActiveX technology called Automation (formerly "OLE Automation"), and shows how you can implement it in Java.

#### JAVA REFLECTION

#### by Paul Tremblett

With the JDK 1.1 Reflection API, you can not only discover the fields, methods and constructors of loaded classes, but also dynamically manipulate them within the basic security framework. Chris Howard adds a note on the relationship between reflection and JavaBeans.

#### **IMPLEMENTING ASSERTIONS FOR JAVA**

*by Jeffery E. Payne, Michael A. Schatz, and Matthew N. Schmid* Assertions act like watchdogs that assist you in finding bugs earlier in the development process. Our authors show how you implement assertions for Java.

#### INSIDE JAVA CLASS FILES

#### by Matt T. Yourst

Matt explores the class file format—the key to Java's binary portability. He then presents JavaDump, a program that documents structures in class files, and StripDebug, which removes extra debug information from classes.

#### THE JAVA INTERNATIONALIZATION API

by Carol A. Jones

"Internationalization" is the process of preparing programs to run in other languages. Carol examines Java's Internationalization API and shows how you can use it to design global software.



# EMBEDDED SYSTEMS

#### MUTUAL EXCLUSION AND SYNCHRONIZATION IN JAVA by Dan Ford

Dan discusses Java's concurrency features, presenting classes for mutual exclusion and synchronization that mimic the behavior and interfaces of the synchronization mechanisms available in the Win32 API.

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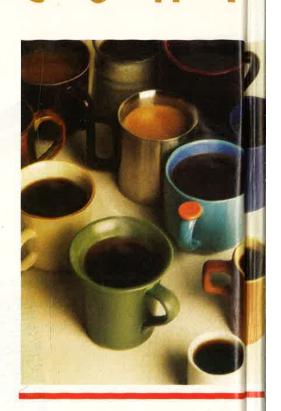
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Cover photography by Pat Johnson Studios

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# PROGRAMMER'S TOOLCHEST

#### EXAMINING JDBC DRIVERS

by Mukul Sood

JDBC, short for "Java Database Connectivity," provides a programming-level interface for communicating with databases in a uniform way. Mukul discusses the different categories of JDBC drivers, then compares them in terms of performance.

#### EXAMINING MICROSOFT'S J/DIRECT

by Andrew Wilson

Microsoft's J/Direct, which ships as part of Internet Explorer 4.0 (and with future versions of Windows 95/NT and Internet Information Server) simplifies the Java native code calling process almost to the point where a DLL function can be directly called from within a Java applet or application.

# COLUMNS

#### PROGRAMMING PARADIGMS

by Michael Swaine Will the next killer app really be a "FUDchecker"? And, if so, will it be written in Java?

#### **C PROGRAMMING**

by Al Stevens Conferences, committees, and CodeWizard are the three Cs that Al sails this month.

#### **ALGORITHM ALLEY**

*by John Boyer* Resizable data structures are flexible, but array-based structures are fast. John shows you how to get the best of both worlds.

#### JAVA Q&A

by Cliff Berg This month, Cliff addresses centralized systems administration using Marimba's Castanet 2.0 channel (and JavaSoft's HotJavaBean) for distributing secure, signed content to users.

#### UNDOCUMENTED CORNER

#### by Robert R. Collins

The 80386 introduced microprocessor support for emulating multiple 8086s. Robert looks under the hood of these Virtual Mode Extensions, which are mostly used by memory managers and DOS boxes in Windows.

#### **PROGRAMMER'S BOOKSHELF**

by Gregory V. Wilson

Greg looks at *Visual Basic 5 from the Ground Up*, by Gary Cornell; *UML Distilled*, by Martin Fowler (with Kendall Scott); *The CRC Card Book*, by David Bellin and Susan Suchman Simone; and *GUI Design Essentials*, by Susan Weinschenk, Pamela Jamar, and Sarah C. Yeo.



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# RESOURCE CENTER

As a service to our readers, source code (and related files), back-referenced articles, and relevant links are available electronically at this month's online Table of Contents at http://www.ddj.com/. Source code is also available via anonymous FTP from ftp.ddi.com (199 125 85.76), the DDJ Forum on CompuServe (type GO DDJ), and DDJ Online (650-358-8857, 14.4 kbps, 8-N-1). Source-code diskettes can be ordered (\$14.95, California residents add sales tax) by mail, fax (650-358-9749), or phone (650-655-4100 x5701). Letters to the editor and article proposals/submissions should be mailed or faxed to the DDJ office or sent electronically to editors@ddj.com\_Author\_guidelines\_are\_available at http://www.ddj.com/ Send inquiries or requests to Dr. Dobb's Journal, 411 Borel Ave., San Mateo, CA 94402. For subscription questions (including change of address), call 800-456-1215 (U.S. and Canada); other countries, call 303-678-0439 or fax 303-661-1885. E-mail subscription questions to 71572 341@compuserve.com or write to Dr. Dobb's Journal, P.O. Box 56188, Boulder, CO 80322-6188.



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