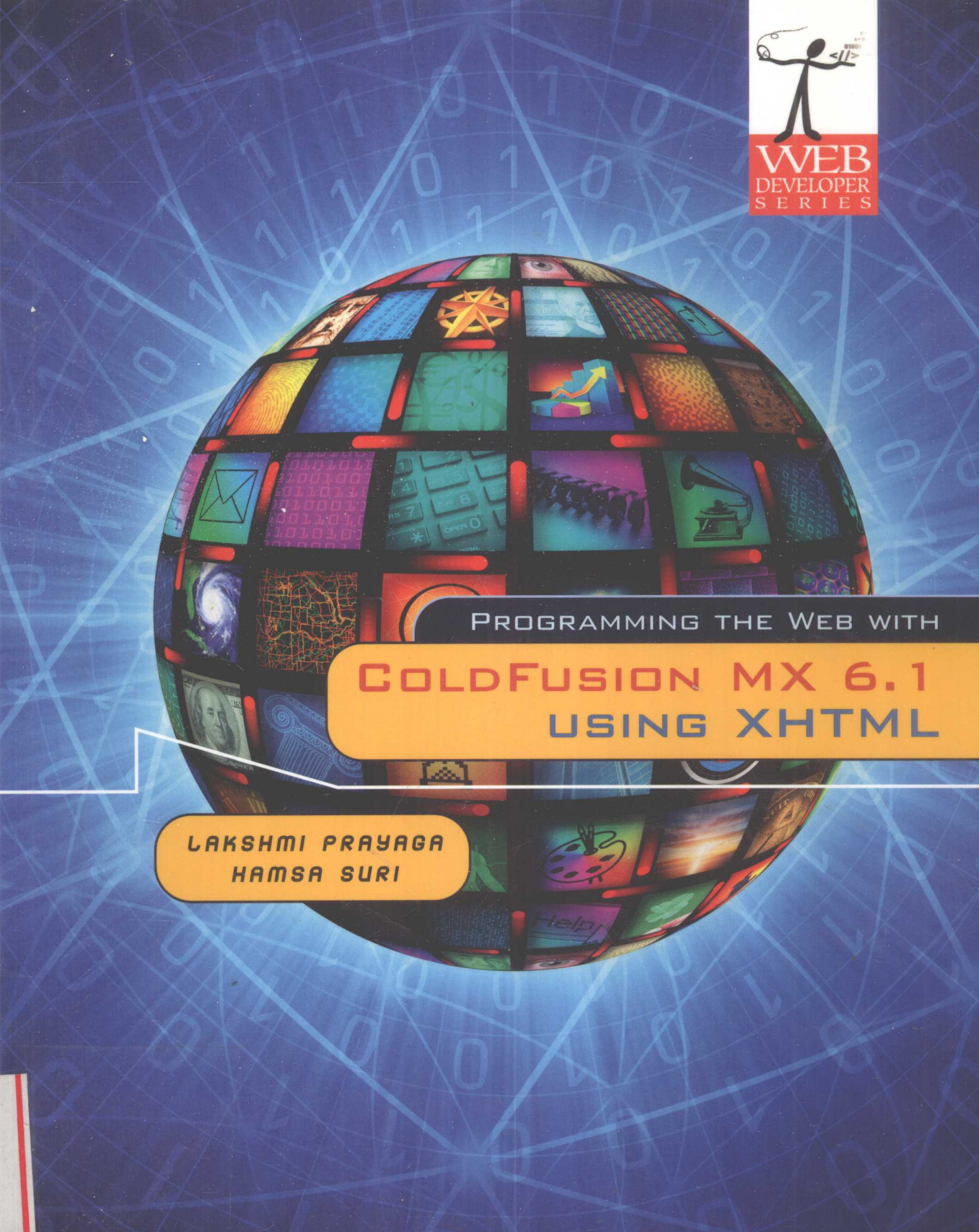
WEB
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SERIES
PROGRAMMING THE WEB WITH
COLDFUSION MX 6.1
USING XHTML
LAKSHMI PRAYAGA
HAMSA SURI

Programming the Web with ColdFusion MX 6.1 Using XHTML

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PROGRAMMING THE WEB WITH COLDFUSION MX 6.1 USING XHTML
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This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 0 DOC/DOC 0 9 8 7 6 5 4

ISBN 0-07-289032-0

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Cover image: *©2003 Masterfile Corporation. Bill Frymire,* Globe with Arts and Technology Mosaic and Binary Code.
Typeface: *10/12 New Baskerville*
Compositor: *PreMediaOne/Black Dot Group*
Printer: *R. R. Donnelley*

Library of Congress Cataloging-in-Publication Data

Prayaga, Lakshmi.
Programming the Web with ColdFusion MX 6.1 using XHTML / Lakshmi Prayaga, Hamsa Suri.
p. cm.
Includes index.
ISBN 0-07-289032-0 (alk. paper)
1. ColdFusion. 2. Web databases. 3. Database design. 4. XHTML (Document markup language). I. Suri, Hamsa. II. Title.
QA76.9.W43P73 2004
005.75'8–dc22

2003071093

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Lakshmi dedicates this book to her husband, Chandra,

and Hamsa dedicates this book to her husband, Prem, and their two children, Vinay and Pranay,

without whose love, support, and encouragement it would have been impossible to complete this project.

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Preface

To the Instructor

Programming the Web with ColdFusion MX 6.1 Using XHTML has been designed to lead the student from the beginner's level all the way through the intricacies of Internet programming. The book also contains advanced topics that can be used as course material for students with some programming experience but who need to apply their knowledge to web programming. Two categories of students are targeted: one is the traditional CS/CIS major and the other, the interdisciplinary category with little or no training in programming.

Internet Programming Courses for CS/CIS Majors

The growth of the Internet over the past few years has exposed the scope and potential of web programming to impact every facet of life, which in turn has increased the need for Internet/web programmers. Many universities and community colleges have responded to this need by including Internet programming courses in their curriculum. *Programming the Web with ColdFusion MX 6.1 Using XHTML* provides a strong foundation to build dynamic web applications with an up-to-date introduction to ColdFusion MX 6.1 using XHTML. The textbook also includes chapters on advanced data types of ColdFusion MX 6.1 such as arrays and structures, custom tags, XML, charts and graphs, reusable components, modular coding, file processing, and database processing. These topics are highly suitable for an advanced course in Internet/web programming for traditional computer science or computer information science majors. The book walks students through a shopping cart project, gradually building up the shopping cart as the chapters progress. The end of the book completes a fully functional shopping cart application.

Internet Technologies for Interdisciplinary Students

The second set of students the book targets is the interdisciplinary students. These are typically non-CS majors. *Programming the Web* uses the simplicity of ColdFusion MX 6.1 to explain abstract traditional programming concepts with easy-to-understand, concrete examples. The simplicity of ColdFusion MX 6.1 makes it a natural choice to be used to teach programming to nontraditional computer science students. Chapters 1 through 7 can be very easily covered in one semester for this set of students. This part of the book covers all of the essential topics to build a ColdFusion application. These chapters help the students to build a simple version of the database-driven shopping cart application.

To the Student

This textbook is designed to introduce you to web programming with Cold Fusion MX 6.1 with a step-by-step approach. It includes a comprehensive yet simple discussion of ColdFusion MX 6.1 as a server-side technology. We have taken great care to introduce programming concepts related to web development one at a time. All the code segments in this book are complete hands-on exercises that illustrate various aspects of Internet programming that relate to CFMX 6.1. The end-of-chapter exercises, which include project building exercises that incrementally increase in complexity, reinforce the key concepts discussed in each chapter.

Key Features

Several key features have been included in *Programming the Web with ColdFusion MX 6.1 Using XHTML* to increase its pedagogical effectiveness:

- **Each code segment** is a complete working program, accompanied by screen shots of the code as displayed in a browser.
- **Tech Tip boxes and Important boxes** are placed where necessary to advise and draw students' attention to crucial aspects of that segment of code.
- **Complete discussions of database concepts** (from connectivity to dynamic SQL) demonstrate the crucial role played by a database in a web application.
- **Real-world examples** use built-in ColdFusion functions; complex data types such as lists, arrays, and structures; modular coding techniques such as custom tags; ColdFusion components; and user-defined functions.
- **Interesting topics** such as sending email, creating graphs, and generating XML through ColdFusion templates are made simple and easy to understand.
- **Comprehensive end-of-chapter material** is provided, including
  - Summary of the chapter.
  - Key Terms list.
  - Review Questions and True or False questions to help reinforce material discussed in the chapter.
  - Hands-on Programming Exercises that let students demonstrate their understanding of programming concepts discussed in the chapter.

- Project Building Exercises that introduce students to the steps involved in planning and creating a well-planned "interactive web application." Students are advised to complete this set of exercises after each chapter, since these exercises build on one another throughout the text.

- *Programming the Web with ColdFusion MX 6.1 Using XHTML* helps the student build two versions of the shopping cart application:
  - The first version guides the student through all phases of the application from the product-listing page to the final page where the customer's order is saved to the database. This version allows for the purchase and saving of an order with one item from the online store. The student can complete this version of the project by the end of Chapter 7.
  - The second version of the shopping cart application allows the purchase of multiple items from the online store. The students, on completion of Chapter 8, can complete a working version. The students can build a more sophisticated version using advanced ColdFusion MX 6.1 features in Chapters 9 and 10. A complete solution is provided in Chapter 11. Chapter 11 also gives suggestions on additional web applications with suggested design tips and techniques.

Appendices

Programming the Web with ColdFusion MX 6.1 Using XHTML includes two appendices to supply students with quick reference material for commonly used SQL statements and XHTML tags. These appendices by no means should be considered a complete discussion of SQL and XHTML.

- Appendix A contains coverage of SQL statements.
- Appendix B contains coverage of XHTML tags.

Instructor's Resource Kit

The Instructor's Resource Kit is a CD-ROM containing the Instructor's Manual in both MS Word and .pdf formats, ExamView Pro test-generating software, and accompanying test item files in both MS Word and .pdf formats for each chapter. Test Bank files are also available on the Instructor's Resource Kit.

Instructor's Manual

The Instructor's Manual contains the following teaching tools:

- Overview.
- Teaching tips and strategies.
- Lecture notes.

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- Solutions to the end-of-chapter material.
- Example code to include URLs for images in a database.

The Test Bank

The Test Bank, which uses ExamView Pro testing software, contains 550 questions with page references to the text. There are 50 questions per chapter. The Test Bank consists of 20 multiple choice, 15 true/false, 10 fill-in-the-blank, and 5 short answer questions.

Custom Website

The course website, http://www.mhhe.com/webdev/prayaga, includes source code examples from the text, additional exercises for students, the instructor's resource kit, and other related information about the book.

About the Authors

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Acknowledgments

We would like to acknowledge the support and cooperation we have had from both our families, especially from our respective husbands, Chandra Prayaga and Prem Suri, for spending so many hours editing and correcting the text and providing us with their valuable inputs and soothing our frayed nerves. We thank them for solidly supporting us throughout this project and keeping their patience even when we lost ours.

Programming the Web with ColdFusion MX 6.1 Using XHTML has been reviewed and tested in several academic settings. It was class tested in the University of West Florida in fall 2002, spring 2003, and fall 2003 for several sections of students. It also was class tested at the National Computer Educator's Institute conference at the University of Central Oklahoma in the summer of 2003. We would like to take this opportunity to extend our thanks to all these participants for their valuable input that has contributed to the successful completion of this project.

We also would like to thank the following reviewers for their helpful suggestions:

- Rochelle Casolaro, Professor of Information Technology, University of Redlands
- Dr. Lei-da Chen, Assistant Professor of Information Systems and Technology, Creighton University
- Elizabeth Crane, Washtenaw Community College
- Dr. Stephen Floyd, Associate Professor of Management Information Systems, University of Alabama–Huntsville
- Dr. Edward J. Garrity, Associate Professor of Information Systems, Canisius College
- Gary Hackbarth, Professor of Management Information Systems, Iowa State University
- Jintae Lee, Professor of Information Systems, University of Colorado–Boulder
- Sathasivam Mathiyalakan, Assistant Professor of Management Information Systems, Syracuse University
- Dr. Robert Minch, Professor of Networking and Telecommunications, Boise State University
- Emily Powell, Senior Instructor of Computer Science Technology, Texas State Technical College–West Texas
- Vincent Ribiere, Assistant Professor, CAP Department, American University
- Dr. Andrew L. Wright, Assistant Professor of Computer Information Systems, University of Louisville

We also would like to thank the following technical editors for the time and effort they put into reviewing every piece of code in the book:

- Emily Powell, Senior Instructor of Computer Science Technology, Texas State Technical College–West Texas
- Jintae Lee, Professor of Information Systems, University of Colorado–Boulder

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