## Pro .NET 2.0 Windows Forms and Custom Controls in VB 2005

Matthew MacDonald

## Pro .NET 2.0 Windows Forms and Custom Controls in VB 2005

## Copyright © 2006 by Matthew MacDonald

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without the prior written permission of the copyright owner and the publisher.

ISBN-13 (pbk): 978-1-59059-694-4 ISBN-10 (pbk): 1-59059-694-3

Printed and bound in the United States of America 987654321

Trademarked names may appear in this book. Rather than use a trademark symbol with every occurrence of a trademarked name, we use the names only in an editorial fashion and to the benefit of the trademark owner, with no intention of infringement of the trademark.

Lead Editor: Jonathan Gennick Technical Reviewer: Manish Jayaswal

Editorial Board: Steve Anglin, Ewan Buckingham, Gary Cornell, Jason Gilmore, Jonathan Gennick, Jonathan Hassell, James Huddleston, Chris Mills, Matthew Moodie, Dominic Shakeshaft, Jim Sumser,

Keir Thomas, Matt Wade Project Manager: Elizabeth Seymour Copy Edit Manager: Nicole LeClerc

Copy Editor: Heather Lang

Assistant Production Director: Kari Brooks-Copony

Senior Production Editor: Laura Cheu Compositor: Susan Glinert Stevens

Proofreader: Liz Berry Indexer: Michael Brinkman

Artist: April Milne

Cover Designer: Kurt Krames

Manufacturing Director: Tom Debolski

Distributed to the book trade worldwide by Springer-Verlag New York, Inc., 233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax 201-348-4505, e-mail orders-ny@springer-sbm.com, or visit http://www.springeronline.com.

For information on translations, please contact Apress directly at 2560 Ninth Street, Suite 219, Berkeley, CA 94710. Phone 510-549-5930, fax 510-549-5939, e-mail info@apress.com, or visit http://www.apress.com.

The information in this book is distributed on an "as is" basis, without warranty. Although every precaution has been taken in the preparation of this work, neither the author(s) nor Apress shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this work.

The source code for this book is available to readers at http://www.apress.com in the Source Code section.

## **Contents at a Glance**

Foreword	xxv	
About the Author		
About the Technica	al Reviewer	
Acknowledgments	xxxi	
	xxxiii	
PART 1	Windows Forms Fundamentals	
CHAPTER 1	User Interface Architecture 3	
CHAPTER 2	Control Basics	
CHAPTER 3	Forms71	
CHAPTER 4	The Classic Controls	
CHAPTER 5	Images and Resources	
CHAPTER 6	Lists and Trees	
CHAPTER 7	Drawing with GDI+209	
CHAPTER 8	Data Binding	
PART 2 Custom Controls		
1 AILI Z	Oustoin Controls	
CHAPTER 9	Custom Control Basics	
CHAPTER 10	User Controls	
CHAPTER 11	Derived Controls365	
CHAPTER 12	Owner-Drawn Controls	
CHAPTER 13	Design-Time Support for Custom Controls	

PARI 3	Modern Controls
CHAPTER 14 CHAPTER 15 CHAPTER 16 CHAPTER 17	Tool, Menu, and Status Strips477The DataGridView519Sound and Video577The WebBrowser589
PART 4	Windows Forms Techniques
CHAPTER 18	Validation and Masked Editing
CHAPTER 19	Multiple and Single Document Interfaces651
CHAPTER 20	Multithreading689
CHAPTER 21	Dynamic Interfaces and Layout Engines729
CHAPTER 22	Help Systems777
PART 5	Advanced Custom Controls
CHAPTER 23	Skinned Forms and Animated Buttons811
CHAPTER 24	Dynamic Drawing with a Design Surface
CHAPTER 25	Custom Extender Providers871
CHAPTER 26	Advanced Design-Time Support885
APPENDIX A	Creating Usable Interfaces927
APPENDIX B	ClickOnce
INDEX	963