



JULIA CASE BRADLEY  
ANITA C. MILLSPAUGH

---

# PROGRAMMING IN **VISUAL BASIC 2010**

---



# PROGRAMMING IN VISUAL BASIC 2010

Julia Case Bradley  
Mt. San Antonio College

Anita C. Millspaugh  
Mt. San Antonio College





## PROGRAMMING IN VISUAL BASIC 2010

Published by McGraw-Hill, a business unit of The McGraw-Hill Companies, Inc., 1221 Avenue of the Americas, New York, NY, 10020. Copyright © 2011 by The McGraw-Hill Companies, Inc. All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of The McGraw-Hill Companies, Inc., including, but not limited to, in any network or other electronic storage or transmission, or broadcast for distance learning.

Some ancillaries, including electronic and print components, may not be available to customers outside the United States.

This book is printed on acid-free paper.

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

ISBN 978-0-07-351725-4

MHID 0-07-351725-9

Vice president/Editor in chief: *Elizabeth Haefele*  
Vice president/Director of marketing: *John E. Biernat*  
Executive sponsoring editor: *Scott Davidson*  
Director of development: *Sarah Wood*  
Developmental editor II: *Alaina Grayson*  
Editorial coordinator: *Alan Palmer*  
Marketing manager: *Tiffany Wendt*  
Lead digital product manager: *Damian Moshak*  
Digital development editor: *Kevin White*  
Director, Editing/Design/Production: *Jess Ann Kosic*  
Project manager: *Marlena Pechan*  
Buyer II: *Sherry L. Kane*  
Senior designer: *Srdjan Savanovic*  
Manager, Digital production: *Janean A. Utley*  
Media project manager: *Cathy L. Tepper*  
Cover design: *Jon Resh*  
Typeface: *11/13 Bodoni*  
Compositor: *Aptara®, Inc.*  
Printer: *Worldcolor*  
Cover credit: © *Veer*

### Library of Congress Cataloging-in-Publication Data

Bradley, Julia Case.  
Programming in Visual Basic 2010 / Julia Case Bradley, Anita C. Millspaugh.  
p. cm.  
Includes index.  
ISBN-13: 978-0-07-351725-4 (alk. paper)  
ISBN-10: 0-07-351725-9 (alk. paper)  
1. Microsoft Visual BASIC. 2. BASIC (Computer program language) I. Millspaugh, A. C. (Anita C.) II. Title.  
QA76.73.B3B6968 2011  
005.2'768—dc22

2010013744

The Internet addresses listed in the text were accurate at the time of publication. The inclusion of a Web site does not indicate an endorsement by the authors or McGraw-Hill, and McGraw-Hill does not guarantee the accuracy of the information presented at these sites.

# PREFACE

Visual Basic (VB) has become such a popular programming language for several reasons. VB is easy to learn, which makes it an excellent tool for understanding elementary programming concepts. In addition, it has evolved into such a powerful and popular product that skilled Visual Basic programmers are in demand in the job market.

Visual Basic is fully object-oriented and compatible with many other languages using the .NET Framework. This book incorporates object-oriented concepts throughout, as well as the syntax and terminology of the language.

Visual Basic is designed to allow the programmer to develop applications that run under Windows and/or in a Web browser without the complexity generally associated with programming. With very little effort, the programmer can design a screen that holds standard elements such as buttons, check boxes, radio buttons, text boxes, and list boxes. Each of these objects operates as expected, producing a “standard” Windows or Web user interface.

## About This Text

---

This textbook is intended for use in an introductory programming course, which assumes no prior knowledge of computer programming. The later chapters are also appropriate for professional programmers who are learning a new language to upgrade their skills.

This text assumes that the student is familiar with the Windows operating environment and can use an Internet browser application.

## Approach

---

This text incorporates the basic concepts of programming, problem solving and programming logic, as well as the design techniques of an object-oriented, event-driven language. VB is a fully object-oriented language, which includes inheritance and polymorphism. Object-oriented programming (OOP) is introduced in Chapter 1, and its features appear in every chapter of the book.

Chapter topics are presented in a sequence that allows the programmer to learn how to deal with a visual interface while acquiring important programming skills such as creating projects with objects, decisions, loops, and data management.

A high priority is given to writing applications that are easy for the user to understand and to use. Students are presented with interface design guidelines throughout the text.