

Pro .NET 2.0 Extreme Programming



Greg Pearman and James Goodwill

Pro .NET 2.0 Extreme Programming

Copyright © 2006 by Greg Pearman and James Goodwill

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): 978-1-59059-480-3

ISBN-10 (pbk): 1-59059-480-0

Printed and bound in the United States of America 9 8 7 6 5 4 3 2 1

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: Dominic Shakeshaft

Technical Reviewer: Jason Lefebvre

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: Sofia Marchant

Copy Edit Manager: Nicole LeClerc

Copy Editor: Marilyn Smith

Assistant Production Director: Kari Brooks-Copony

Production Editor: Kelly Winquist

Compositor: Lynn L'Heureux

Proofreaders: April Eddy, Lori Bring

Indexer: Carol Burbo

Artist: Kinetic Publishing Services, LLC

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

About the Authors	xv
About the Technical Reviewer	xvii
Acknowledgments	xix

PART 1 ■ ■ ■ XP Introduction

■ CHAPTER 1	Introducing XP	3
	The Waterfall Methodology	3
	The Agile Methodologies	4
	What Is XP?	5
	Four XP Values	5
	Fifteen XP Principles	6
	Fourteen XP Practices	8
	Other Agile Methodologies	15
	Lean Development	15
	Dynamic Systems Development Method	15
	Adaptive Software Development	16
	Crystal	16
	Scrum	16
	Feature Driven Development	16
	Is XP the Best Agile Method?	16
	When Shouldn't You Use XP?	17
	Summary	17

CHAPTER 2	Assembling the Team	19
	XP Roles and Responsibilities	19
	The Customer	19
	The Development Coach	20
	The Business Coach	21
	The Developer	22
	The System Engineer/Business Analyst	23
	The Tracker	23
	The Tester	24
	The Big Boss	24
	Team Assembly	25
	Your XP Environment	25
	Summary	26
CHAPTER 3	Release Planning	27
	The Exploration Phase	27
	User Story Writing	28
	User Story Estimating	32
	The Planning Game	33
	Story Prioritization	33
	Velocity Determination	33
	User Story Selection	34
	The Release Plan	34
	Summary	35
CHAPTER 4	Iteration Planning	37
	Iteration Velocity	37
	Story Subselection	37
	Task Determination	38
	Task Assignment and Estimation	38
	Task Points and Task Point Velocity	38
	Task Sign-Up	39
	Iteration Balancing	40
	The Iteration Plan	40
	Summary	41

CHAPTER 5	The Iteration	43
	What Is an Iteration?	43
	Design Sessions	43
	Stand-Up Meetings	44
	Paired Programming	44
	Test, Code, and Refactor	44
	Building Tests and Refactoring	45
	Keeping the Customer Involved	46
	Acceptance Testing	46
	Tracking	46
	Coaching	47
	Summary	48

PART 2 ■ ■ ■ XP Tools

CHAPTER 6	Build Environment Tool: NAnt	51
	What Is NAnt?	51
	Installing NAnt	52
	Creating a Build File	53
	Understanding the Build File	53
	Saving the Build File	56
	Testing the Build File	56
	Summary	57
CHAPTER 7	Test Environment Tool: NUnit	59
	What Is NUnit?	59
	Installing NUnit	60
	Building a Unit Test	60
	Creating the Test Class	61
	Creating the Application Class	63
	Integrating with NAnt	64
	Running the Build File	66
	Summary	67

CHAPTER 8	Simulation Environment Tool: NMock	69
	What Is NMock?	69
	Installing NMock	70
	Creating a Mock Object	71
	Defining an Interface	71
	Creating the Classes	71
	Incorporating NMock	77
	Running the Test	80
	Summary	82
CHAPTER 9	Automation Environment Tool: CruiseControl.NET	83
	What Is CCNet?	83
	Installing CCNet	84
	Setting Up the CCNet Server	84
	Creating the CCNet Configuration File	84
	Starting the CCNet Server	86
	Setting Up CCTray	87
	Starting CCTray	87
	Configuring CCTray	87
	Using CCTray	89
	Setting Up the Web Dashboard	90
	Installing the Web Dashboard	90
	Running the Web Dashboard	94
	Summary	96
CHAPTER 10	Refactoring	97
	Visual Studio 2005 and Refactoring	97
	Extract Method	98
	Rename	100
	Encapsulate Field	101
	Extract Interface	102
	Promote Local Variable to Parameter	105
	Remove Parameters	106
	Reorder Parameters	106
	Summary	108

PART 3 ■ ■ ■ XP in Action

CHAPTER 11	Release Planning—The Journey Begins	111
	Business Problem Introduction	111
	Story Writing	112
	Helping the Customer Write the Stories	113
	Creating a High-Level Design	121
	Comparing the Stories with the Mission	123
	Story Estimating	123
	Reviewing Each Story	124
	Getting the Big Picture	127
	Declared Velocity	128
	Story Selection	128
	Prioritizing the Stories	128
	Selecting a Subset of Stories	129
	Refining the Subset Selection	130
	Coach's Journal	131
	Summary	131
CHAPTER 12	Iteration Planning for the First Iteration	133
	Story Selection	133
	Story Tasking and Assignment	135
	Breaking Up the Stories into Tasks	136
	Signing Up for Tasks	141
	Iteration Balancing	145
	Coach's Journal	146
	Summary	146
CHAPTER 13	First Iteration	149
	Daily Stand-Ups	149
	Design Meeting	149
	Developers' Duties: Pair Up and Test, Code, and Refactor	150
	Developing the Login User Story	151
	Developing the Browse Catalog User Story	168
	Developing the Remaining User Stories	198

Other Team Members' Duties	198
Acceptance Tester	199
Tracker	199
Customer	199
Coach	200
Coach's Journal	200
Summary	200
 CHAPTER 14 Iteration Planning for the Second Iteration	201
Velocity Adjustment	201
Story Selection	202
Story Tasking and Assignment	204
Breaking Up the Stories into Tasks	204
Signing Up for Tasks	209
Iteration Balancing	212
Coach's Journal	212
Summary	213
 CHAPTER 15 Second Iteration	215
Refactoring	215
Design Meeting	220
Developers' Duties	220
Developing the Display Checkout Confirmation User Story	220
Acceptance Testing	276
Developing the Remaining User Stories	277
Coach's Journal	277
Summary	277
 APPENDIX A Preparing Your Development Environment	279
Visual Studio Setup	279
Creating the Northwind Solution	279
Creating the DataLayer Project	281
Creating the BusinessLayer Project	282
Creating the NorthwindWeb Project	284
Creating the TestLayer Project	285
Running a Unit Test	286

The Database Setup	291
Setting Up the ODBC Data Source	291
Connecting to the Database	292
Browsing the Database	294
■ APPENDIX B .NET C# Coding Conventions	297
Naming Conventions	297
Indentation	299
Declarations	299
Statements	299
Comments	302
White Space	302
Solution and Project Organization	303
■ APPENDIX C XP Resources	305
Websites	305
Mailing Lists	306
Conferences	306
■ INDEX	307