Instructor's Summary for

Murach's ASP.NET 4.5 Web Programming with C# 2012

This summary is intended to introduce you to the components of our Instructor's CD and to help you get started using them. At the least, we recommend that you read the topics under "What's on the Instructor's CD," because they not only describe the components but also our underlying instructional philosophy.

But first, some thoughts about the modular structure of this book that you should be aware of. That's important because it gives you instructional options that you just don't have with other books.

About the modular structure of the book

After your students complete the first two sections of this book, you can continue with any of the other sections of the book. In other words, sections 3, 4, and 5 are written as independent modules that require only sections 1 and 2 as prerequisites. That's what we mean by *modularity*, and that lets you choose the subjects that you want to teach as well as the sequence in which you teach them.

Beyond that, you have some options as to which chapters you assign for each section of the book. Those options are described in the topics that follow. Once you understand your options, you should have no problem selecting the chapters and teaching sequence that's best for your course.

Section 1: The essence of ASP.NET programming

Section 1 is designed to get your students off to a fast start. It shows them how to use Visual Studio and ASP.NET to develop both one-page and multi-page Web Forms applications that get data from a database and use session state to pass data from one web page to another. It shows them how to integrate HTML5 and CSS3 into their applications. And it shows them how to test and debug their applications. These are the skills that are required by almost every ASP.NET application.

Section 2: ASP.NET essentials

The six chapters of section 2 present the other features that are used in most ASP.NET applications. Chapters 6 and 7 show how to use the standard server and validation controls. Chapter 8 goes more into state management and shows how to use cookies and URL encoding. Chapter 9 shows how to use master pages. Chapter 10 shows how to use themes. And chapter 11 shows how to use the site navigation controls as well as ASP.NET routing and friendly URLs.

If you want to skip chapters 10 and 11 and go on to the other sections, you can do that because those chapters aren't required by any of the applications in the rest of the book. However, since ASP.NET routing is a new feature that is getting quite a bit of attention, you probably won't want to skip that part of chapter 11.

Section 3: ASP.NET database programming

The six chapters of section 3 present the essential skills for developing web applications that work with databases. That includes using SQL data sources and five of the ASP.NET data controls: GridView, DetailsView, FormView, ListView, and DataPager. It also shows how to use object data sources to build 3-layer applications that let you separate the presentation code from the data access code. The chapters in this section are best read in sequence, but you can skip chapter 16 or chapters 16 and 17 if you're short on time.

Section 4: Finishing an ASP.NET application

The four chapters in this section present the skills you need for finishing a professional application. That includes skills like securing an application, authenticating and authorizing users, sending email, providing custom error pages, handling back-button refreshes, and configuring and deploying applications. Although you may not have the time to teach all of these chapters in a single course, you can decide which chapters are most important and assign those. Since the chapters in this section are modular, you can teach them in whatever sequence you prefer.

Section 5: Going to the next level

If your students master the skills in the first four sections, they will be able to build e-commerce web sites at a professional level. Then, the three chapters in this section start them on their way to the next level. Chapter 22 shows how to use ASP.NET Ajax to update pages without round trips. Chapter 23 shows how to create and consume both WCF and Web API services. And chapter 24 introduces ASP.NET MVC, which is a completely different way to develop web applications with Visual Studio that is slowly gaining acceptance. Like section 4, the chapters in this section are modular, so you can teach them in whatever sequence you prefer.

About the student download for this book

To help your students get the most from our book, our web site lets your students download the files for the book applications, the files that are required for each exercise, and *the solutions to the exercises*. Appendix A in the book shows them how to do that. Please note, however, that instructors don't have to download these items because they will be installed along with the other materials on the Instructor's CD.

Book applications

All of the applications in this book are stored in a folder named book_applications when they're downloaded. Once these applications are downloaded, the students can run them to see how they work. They can review all of the code in any application when the book doesn't present it all. And they can copy and paste code from the book applications into their own applications.

Exercise starts

To help your students master the skills that are taught in each chapter, the book provides exercises at the end of each chapter in the first three sections of the book. For all but a few of these exercises, the students start from folders and files that contain some of the code that the exercise requires. That way, your students get the most practice in the least time. When downloaded, these files are stored in a top-level folder named exercises.

 If you review the exercises in the book, you'll see that they guide the students through the process of building web sites. They also force the students to use all of the critical skills that are needed for web site development. In fact, if your students can successfully do all of the exercises, they will be well on their way to a professional level of competence.

Exercise solutions

To help students get over any learning obstacles when they're working on their own, the download also provides the solutions to the exercises in a top-level folder named solutions. That way, the students can check the solutions to see how something is done whenever they're wasting time on what is likely to be a trivial coding mistake. We think that providing the solutions is the right approach didactically because it helps students learn faster and better.

We realize, however, that providing the solutions means that it's more difficult for an instructor to use the book exercises to test their students. That's why the Instructor's CD includes a second set of exercises that can be used for testing the competency of students. We refer to these exercises as "extra exercises", and the Instructor's CD also includes their solutions.

What's on the Instructor's CD

As we see it, the Instructor's CD for *Murach's ASP.NET 4.5 Web Programming with C# 2012* contains a starting set of instructional materials that by themselves will help any corporate trainer or college instructor run an effective course. Those materials include instructional objectives, test banks, a second set of exercises and solutions, projects and project solutions, and PowerPoint slides. A summary of these materials follows.

Book applications, exercises, and solutions

These are the same materials that your students can download from our web site. But you don't have to download them because we've put them on the Instructor's CD. This makes it easy for you to demonstrate and review the book applications and exercise solutions.

Objectives

Since we believe that instructional objectives should be the start of any educational methodology, we provide a set of objectives for each chapter in the book. We prepared these objectives based on the principles presented by Robert F. Mager in his classic book, Preparing Instructional Objectives. As a result, our objectives describe the skills that your trainees or students should have when they complete a chapter, and you should be able to test whether they can apply those skills.

Beyond that, we've tried to make sure that each objective describes a skill that a professional programmer should have. This gives our objectives a real-world context that you usually won't find in the objectives for other books. So, if your trainees or students can do what the objectives state when the course is over, you can be sure that they have learned the skills that they will actually need on the job.

If you review the objectives for one of the chapters, you'll see that the first objectives for each chapter are what we refer to as *applied objectives*. These ask the students to apply what they've learned as they develop ASP.NET applications. These of course are the critical objectives of a programming course, and they are best tested by having the trainees or students do the extra exercises and projects that we provide.

After the applied objectives for each chapter, you'll find what we refer to as *knowledge objectives*. These objectives define skills like identifying, describing, and explaining the required concepts, terms, and procedures. These objectives determine whether your students are able to talk intelligently about the topics that are presented. And these objectives can be tested by the test banks that we provide.

To help you get the most from the instructional objectives, we have included them at the start of the PowerPoint slides for each chapter. As we see it, if you can convince your students that they only need to have the skills that are described by the objectives, their study becomes far more focused and efficient.

Test banks

To test comprehension, the Instructor's CD includes one test bank for each chapter in the book. We developed these test banks in ExamView, and we provide them on the CD in several formats: ExamView, Rich Text (RTF), the current Blackboard formats, and Respondus.

As you would expect, each test bank provides questions that are designed to test the skills that are described by the objectives for that chapter, and each test question is designed to test the skill described by one objective. This keeps the promise to the students that they will only be expected to have the skills that are described by the objectives.

In our test banks, we use only completion and multiple-choice test questions because they have the highest validity. To us, that means that the trainees or students who get the best scores are also the ones with the best knowledge and skills. In contrast, matching and true/false questions have low validity, so we don't use them.

Besides matching our questions to the objectives, we use this guideline to check the validity of each question: *A professional ASP.NET developer should be able to get the right answer.* This guideline eliminates questions that test the knowledge of trivial details that no one should be expected to remember. This guideline also forces us to focus on questions that test the concepts and skills that are required on the job.

Extra exercises and solutions

Because we provide the solutions for the book exercises in the download for this book, the Instructor's CD includes a second set of exercises that we refer to as "extra exercises." That way, you can assign exercises that your students don't have the solutions for. The extra exercises also include exercises for the chapters in sections 4 and 5 in the book, which don't have exercises at the ends of the chapters.

The extra exercises are provided in a Word document so you can modify them if you want to, as well as a PDF document that you can distribute to your students if you don't want to make any modifications. The starting folders and files for each exercise are also on the Instructor's CD so you can distribute them to your students. And the folders and files for the solutions are provided on the CD so you can demonstrate and review them in class.

Since both the book exercises and the extra exercises force the students to use the critical skills for web development, you can assign exercises from either set or both to your students. The main differences are (1) the students will have the solutions for the book exercises, and (2) the extra exercises provide less guidance than the book exercises (which you may prefer). The advantages of using the book exercises are (1) they are included in the book, and (2) the folders and files for the exercises are part of the download. As a result, you don't have to distribute anything.

To make the extra exercises as useful as possible, we've tried to keep each one short enough so it can be done in a single computer lab. That way, you can use selected exercises as tests that are done in computer lab. Also, since the steps of the extra exercises are in a top-down sequence, the students do the most important tasks first. That

means it's easy to tell how well your students are doing by checking how far they've gotten in a single computer lab.

Projects and project solutions

The Instructor's CD also provides a series of projects that are part of the development of a Technical Support application. In general, each project asks the students to develop one web page that requires the skills that are presented in the related chapter or chapters.

These projects are like the exercises and extra exercises, except the projects provide less guidance, focus solely on building web pages, and are all part of a single application. This gives your students a more comprehensive view of how the web pages of an application work together.

These projects require a TechSupport database, and we provide a SQL Server Express LocalDB version of that database that the students can use on their own PCs. We also provide batch and script files that the students can use to create the database if they're using SQL Server Express instead of LocalDB. You can distribute the required files to them by distributing the TechSupport.exe file that's on the Instructor's CD. This is an executable Zip file that contains the TechSupport.mdf and TechSupport_log.ldf files for use with LocalDB. It also contains batch and script files named create_TechSupport.bat and create_TechSupport.sql that can be used to create the database for use with SQL Server Express. This is explained in "How to prepare for using the TechSupport database" in the project descriptions.

Here again, to make the projects as useful as possible, we've tried to keep each one short enough so it can be done in an hour or two. That way, you can use selected projects as tests that are done in computer lab. You can also combine two or more of the short projects as part of a larger project that the students can do on their own.

The Instructor's CD also provides the solutions for all of the projects so you can present them in class or compare them with your students' solutions. Note, however, that these solutions use tables rather than HTML and CSS for all but the basic page layout and formatting. That way, the focus is on ASP.NET and not on the skills required to use HTML and CSS.

PowerPoint slides

The PowerPoint slides on the CD present all of the critical information that's presented in the figures of the book. That includes all of the screen shots, diagrams, tables, and code that you may want to review in class. As a result, these slides make it easy for you to review any of the skills that your students have difficulty with.

Beyond the book information, the slides for each chapter start with the instructional objectives, so you can review them in class. The slides for each chapter also end with the screen shots for the extra exercises. That makes it easy for you to answer questions and provide additional information about these exercises.

If you want to modify any of the PowerPoint slides, you should know that we prepared them by abridging and editing the Word text for each figure and copying it into PowerPoint slides. As a result, you can't use PowerPoint to modify the text in the normal way. Instead, you need to double-click on the text for a slide to open it in Word, make modifications to the text in Word, and click outside the text to return to PowerPoint. You can also use PowerPoint in the normal way to add slides, delete slides, or add your own presentation notes to our slides.

How to get started

To get started with the instructional materials, you need to install the files on the CD onto your PC. Then, you can run the book applications, exercises, and extra exercises to see how far they're going to take your students.

How to install the files and directories of the CD

From the root directory of the Instructor's CD, double-click on the file named Install.exe and respond to the dialog boxes that follow. This will install the directories and files of the Instructor's CD onto your C drive in a directory structure that starts with:

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C:\Murach\aspnet45_cs\
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The student folders and files that get installed

C:\Murach\aspnet45_cs\ Student download\…	Contents
book_applications	One folder for each book application.
database	The files for the LocalDB version of the Halloween database, as well as files for creating the database.
exercises	One folder for the start of each exercise.
solutions	One folder for the solution to each exercise.

The instructor folders and files that get installed

C:\Murach\aspnet45_cs\ Instructors\…	Contents
Instructor's summary.pdf	This document in PDF format.
Objectives.docx Objectives.pdf	A document in both Word and PDF formats that contains the instructional objectives for all chapters. These objectives are also presented at the start of the PowerPoint slides for each chapter.
Extra exercises\Extra exercises.docx Extra exercises\Extra exercises.pdf	A document in both Word and PDF formats that presents the extra exercises for this book.
Extra exercises\exercises_extra	One folder for the start of each extra exercise.
Extra exercises\solutions_extra	One folder for the solution to each extra exercise.
Projects\Projects.docx Projects\Projects.PDF	A document in both Word and PDF formats that contains the descriptions for all of the projects, including information about how to use the database.
Projects\project_solutions	One folder for the solution to each project.
Projects\database	The files for the LocalDB version of the TechSupport database, as well as files for creating the database.
Projects\TechSupport.exe	An executable Zip file that contains the files for the TechSupport database as well as files for creating the database.

C:\Murach\aspnet45_cs\ Instructors\…	Contents
Slides	One PowerPoint file for each chapter.
Test banks	ExamView, RTF, Blackboard, and Respondus subdirectories that contain one test bank for each chapter in the book in their respective formats.

How to run the book applications and exercise solutions

If you want to run any of the book applications or exercise solutions on your own PC, you can use the techniques presented in figure 2-6 of chapter 2 to do that. In brief, after you start Visual Studio, you open the web site for an application or exercise, and then assign it to IIS Express. For a multi-page web site that doesn't have a Default.axpx page, you should also use the first technique in figure 4-4 of chapter 4 to set the starting page of the web site.

This should work for all of the applications and exercise solutions, except for these applications in sections 4 and 5 of the book:

- The chapter 18 application uses SSL, so you need to enable SSL for that application before you can run it. To do that, you can use the technique in figure 18-2, or you can step through the process by doing the extra exercise for chapter 18.

- The chapter 19 application requires that you log in before you can view most of the pages. To do that, you can use "Administrator" as the user name and "Admin$1234" as the password. Or, you can step through the process of running this application by doing the extra exercise for chapter 19.

- The chapter 20 application sends email. For this to work, you will need to install an SMTP server as shown in figure 20-2. Or, you can step through the process of running this application by doing the extra exercise for chapter 20.

- The chapter 23 applications create and consume WCF and Web API services. To test the services and to run the applications that consume them, you need to use the techniques presented in that chapter. Or, you can step through the process of testing and consuming the services by doing the extra exercises for chapter 23.

Any comments?

If you have any comments about our book or its instructional materials, we would be delighted to hear from you. If you discover any errors in our applications or solutions, we would appreciate hearing about them. And if you want to let us know that you're going to adopt our book for your course, that would make our day.

Just e-mail us at the addresses below. But whether or not we hear from you, we want to thank you for your interest in our ASP.NET book.

Anne Boehm, Author   Judy Taylor, Educational Liaison
anne@murach.com   judy@murach.com