

# Instructor's Summary for *Murach's Java Servlets and JSP (3<sup>rd</sup> Edition)*

This summary introduces you to the instructional components that we provide for our book, *Murach's Java Servlets and JSP (3<sup>rd</sup> Edition)*. Please be sure to read the topics under "What's on the Instructor's CD," because they not only describe the components but also our underlying instructional philosophy. We hope that these materials will make it much easier for you to run a course based on our book!

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## What's in the student download

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To help your students get the most from our book, our website lets them download three types of files: book applications, exercise starts, and exercise solutions.

### Book applications

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The book is filled with sample applications that illustrate various coding features and techniques, and the download includes them all. As a result, your students can run the applications to see how they work, review all of the code for an application when the book doesn't show it all, and copy model code from the book applications for use in their own applications.

### Exercise starts

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To help your students master the skills that are taught in the book, each chapter ends with a set of practice exercises. The download includes applications that provide starting points for these exercises. Since the students don't have to start each exercise from scratch, they are able to practice critical skills without redoing trivial code. In other words, they get more practice in less time.

### Exercise solutions

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The solutions to the exercises in the book are also included in the download. As a result, your students can get past the learning obstacles that can occur when they're working on their own, avoid getting hung up on trivial coding errors, and check their solutions against the author's solution to see what, if anything, they could have done better. We think this helps students learn faster and better.

We realize, however, that this makes it difficult for you to use the book exercises to test your students. That's why the Instructor's CD includes a second set of exercises that can be used for evaluation purposes. The Instructor's CD also includes their solutions, and we don't make those available to anyone else.

## What's on the Instructor's CD

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The Instructor's CD for *Murach's Servlets and JSP (3<sup>rd</sup> Edition)* contains a complete set of instructional materials that will help any college instructor or corporate trainer run an effective course. Besides the materials in the student download, this includes instructional objectives, PowerPoint slides, test banks, a set of chapter exercises that aren't in the book, starting points for those exercises, solutions to those exercises, projects, and solutions to those projects. A summary of these materials follows.

### Book applications, exercises, and solutions

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These are the same materials that your students can download from our website. We've put them on the CD so that you can easily demonstrate and review the book applications and exercise solutions in class.

## Objectives

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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 students should have when they complete a chapter, and you should be able to test whether they have those skills.

Beyond that, we've tried to make sure that each objective describes a skill that a professional programmer should have. So, if your 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 web applications. These of course are the critical objectives of a programming course, and they are best tested by having the students do exercises and projects like the ones 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 topic. 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 described by the objectives, their study becomes more focused and efficient.

Note, however, that we also provide our objectives as a Word document so you can easily modify them to make them more appropriate for your class. For instance, you may want to delete some of our objectives or add some of your own. That's a good way to focus your students on what you think are the critical learning objectives.

## PowerPoint slides

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Because our book uses the paired-pages method of presentation, all of the critical information is presented in the figures. As a result, the PowerPoint slides present abridged versions of that information. 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. In addition, the slides for each chapter start with the instructional objectives, so you can review them in class.

If you want to modify any of the PowerPoint slides, you should know that we prepared them by abridging and editing Word documents and copying them into the 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 up in Word, make modifications to the text in Word, and click outside the text to return to PowerPoint.

If you try this, though, you'll see that it's an easy process. You can also use PowerPoint in the normal way to add slides, delete slides, or add your own presentation notes to our slides.

## Test banks

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To test comprehension, the Instructor's CD includes one test bank for each chapter in the book. Each test bank provides questions that test the skills 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 are only 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 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 servlet/JSP programmer 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, starts, and solutions

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In the document named *Extra exercises*, you'll find a second set of chapter exercises that aren't in the book. Since each of these exercises can be done in 15 to 45 minutes, they provide a quick way to test the progress of your students. Some of these exercises also give the students a chance to apply what they've learned in a new context. We provide these exercises as a Word document, as well as a PDF, so you can easily modify them if you want to customize them for your class.

The starting folders and files for each exercise are also on the Instructor's CD so you can distribute them to your students. Likewise, the folders and files for the solutions are provided on the CD so you can check your students' work and demonstrate and review the solutions in class. And unlike the book exercises, these solutions are provided *only* on the CD.

## Projects and solutions

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The best way to test your students' ability to develop applications is to have them develop complete applications from scratch. To that end, our Instructor's CD provides a document named *Projects*. It presents a series of projects that have the student create a web application from scratch and then make various enhancements to it.

To make the projects as useful as possible, we've tried to provide a range of difficulty levels. Your students should be able to finish some in an hour or two. As a result, you can use these projects as tests that can be done in computer lab. That of course is the only sure way to see whether your students can do the applied objectives for this book. Other projects may take several days to finish. As a result, you can assign these projects as midterm or final projects.

As with the extra exercises, we provide these project descriptions in a Word document, as well as a PDF, so it's easy for you to modify them. That way, you can make them easier or harder so they're more appropriate for your class.

## How to get started

To do a preliminary review of our instructional materials, you can open and review the files that are on the CD. But if you decide to adopt the book, you'll want to install the directories and files on your computer as described below.

### The directories and files

The table that follows presents the directories and files that are on the Instructor's CD. It also shows you where they'll be installed when you run the Install file.

All of the applications for the book, its exercises, and its projects are stored in the netbeans directory. Within that directory, the first four subdirectories that are shaded (book\_applications, ex\_starts, ex\_solutions, and libs) are installed on your students' computers when they download the source code for this book from our website. However, the student download does *not* include the extra exercises or projects; those are available only to the instructor.

The items in the table that are *not* shaded are the materials that are available only to instructors. That's true whether they're installed in the netbeans or the instructors directory.

	murach\servlet_and_jsp\	Contents
<b>Students</b>	db	The files needed to create the databases used by this book.
	netbeans\book_apps\ netbeans\ex_starts\ netbeans\ex_solutions\ netbeans\libs\	One project for each book app. One project for each chapter exercise in the book, to be used as a starting point for that exercise. One solution for each chapter exercise in the book. Some shared libraries.
	netbeans\more_ex_starts\ netbeans\more_ex_solutions\ netbeans\project_solutions\ instructors\Instructor's summary.pdf	One project for each exercise in the <i>Extra exercises</i> document in the instructors directory, to be used as a starting point for that exercise. One solution for each exercise in the <i>Extra exercises</i> document in the instructors directory. One solution for each project in the <i>Projects</i> document in the instructors directory. This instructor's summary in PDF format.
	instructors\Objectives.docx instructors\Objectives.pdf instructors\Extra exercises.docx instructors\Extra exercises.pdf instructors\Projects.docx instructors\Projects.pdf instructors\slides\ instructors\test_banks\ instructors\test_banks\	A document in both Word and PDF formats that contains the instructional objectives for all chapters. A document in both Word and PDF formats with additional exercises that are similar to those in the book. (The exercise starts and solutions are in the netbeans directory.) A document in both Word and PDF formats with descriptions of projects that are done from scratch. One PowerPoint file for each chapter. ExamView, RTF, Blackboard, and Respondus directories that contain one test bank for each chapter in the book.

## How to install on a PC

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From the root of the Instructor's CD, double-click on the file named `Install.exe` and respond to the dialog boxes that follow. This installs the directories and files of the Instructor's CD onto your C drive here:

```
C:\murach\servlet_and_jsp
```

## How to install on a Mac

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Create a directory named `murach` directly on your hard drive. Then, from the root of the Instructor's CD, drag the file named `MacInstall.zip` to the `murach` directory. Finally, double-click on the file. This should unzip the directories and files here:

```
murach/servlet_and_jsp
```

## If you're upgrading from the previous edition...

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The 3<sup>rd</sup> Edition of *Murach's Java Servlets and JSP* has many chapters in common with the previous edition of the book. However, we have moved some chapters and restructured others in an attempt to show the best practices first. This has allowed us to streamline the book by dropping some old material that most servlet/JSP programmers won't ever need. This is especially true for sections 1 and 2. In addition, we have added some new chapters for skills that are in high demand today. If you've been running a course with the previous edition, you will need to make some adjustments to your course, but we hope you'll appreciate our new approach.

## What's new in the book

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The table that follows lists the chapters that are new or that have been added to the book:

Chapters	Description
13	How to use JPA to work with a database
17	More security skills
21	How to work with JavaServer Faces

All of these chapters are logical additions to the previous edition. As a result, you should be able to integrate them into an existing course without any trouble.

## What's new in the student and instructor's materials

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All of the materials have been updated to reflect the changes in the 3<sup>rd</sup> Edition of our book. That includes the objectives, test banks, projects, and slides. In addition, since we now include the exercise solutions in the student download, we have created a second set of exercises and solutions that are available only to instructors. As a result, instructors can use these exercises to test their students.

## Any comments?

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If you have any comments about or suggestions for *Murach's Java Servlets and JSP (3<sup>rd</sup> Edition)* or any of its student or instructor's materials, we would appreciate hearing from you. We'll also be glad to answer any questions that you have. The easiest way to reach us is to send us an email. And thanks for reviewing our book and course materials.

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