Instructor's Summary for

Murach's Oracle SQL and PL/SQL for Developers (2nd Edition)

This summary is intended to introduce you to the instructor's materials for this book and to help you get started using them. At the least, we recommend that you read the topics under "What the instructor's materials include," 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 this structure gives you some instructional options that you don't have with other books.

About the modular structure of the book 2
Section 1: An introduction to SQL 2
Section 2: The essential SQL skills 2
Section 3: Database design and implementation 2
Section 4: The essential PL/SQL skills 2
Section 5: Advanced data types 2

What's in the student download 3
Database scripts 3
Book examples 3
Solutions to the exercises in the book 3

What the instructor's materials include 3
Database scripts, book examples, and exercise solutions 4
Objectives 4
Test banks 4
A second set of exercises and solutions 5
PowerPoint slides 5

How to get started 5
How to install the files and directories of the CD 6
The directories and files 6

Any comments? 7

Mike Murach & Associates, Inc.
1-800-221-5528 • (559) 440-9071 • Fax: (559) 440-0963
murachbooks@murach.com • www.murach.com

About the modular structure of the book

After your students complete the first four chapters of this book, you can continue with any of the other chapters in section 2 or with any of the other sections of the book. In other words, the chapters in section 2 as well as sections 3, 4, and 5 are written as independent modules that require only chapters 1 through 4 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 can select the chapters and teaching sequence that's best for your course.

Section 1: An introduction to SQL

This section introduces relational databases and SQL and then shows how to use Oracle SQL Developer to run SQL statements. This is required background for all of the sections that follow.

Section 2: The essential SQL skills

The six chapters of section 2 present the essential SQL skills. But after you teach the first two chapters in this section, you can skip to any of the other chapters in this section or to any of the other sections in the book.

This means, for example, that could assign chapters 3 and 4, then skip to the first two chapters of section 3, and later come back to the other chapters in this section. Or, you could skip from chapters 3 and 4 to chapter 7 (how to insert, update, and delete data), then go on to any of the other sections, and come back to chapters 5 (summary queries), 6 (subqueries), and 8 (data types and functions) whenever you think the time is right. Of course, there are many other options too.

Section 3: Database design and implementation

At some point in your course, you're probably going to want to assign chapters 9 (database design), 10 (how to create tables, indexes, and sequences), and chapter 11 (how to create views), but you may not have time for chapter 14 (how to manage database security).

Section 4: The essential PL/SQL skills

At some point in your course, you're probably going to want to assign chapters 13 (how to write PL/SQL code), 14 (transactions and locking), and 15 (stored procedures and functions), but you may not have time for chapter 16 (triggers).

Section 5: Advanced data types

The first chapter in this section presents timestamps and intervals, the second one presents large objects. Since these chapters are written as independent modules, you can assign either chapter, both chapters, or neither chapter.

What's in the student download

To help your students get the most from our book, our website lets them download three types of files: database scripts, book examples, and exercise solutions. Appendix A at the end of the book explains how to install and use these files as shown throughout the book; appendix B covers the details for Oracle 12c users. Please note, however, that these items are also included in the instructor's materials so you don't have to download them separately.

Database scripts

Before you can run the SQL examples in the book or work on the exercises, you need to have the Oracle databases set up. So the download provides the batch files and scripts that are used to create the database tables and users for the examples and exercises in the book.

The download includes two versions of these files. One is for the Express Edition of Oracle Database 11g, which is the only Express Edition that's available at this time and is the one covered in this book. The other is for the Personal Edition of Oracle Database 12c, which you need to install if you want your students to use any of the 12c features covered in the book. The Personal Edition requires more set-up and more system resources than the Express Edition, but appendix B covers the details of installing it and creating the databases for it.

Book examples

The book is filled with SQL and PL/SQL examples that illustrate various coding features and techniques, and the download includes them all. As a result, your students can run the examples to see how they work. And they can copy code from the examples for use in their own applications.

Solutions to the exercises in the book

To help students get over any learning obstacles when they're working on their own, the download also provides the solutions to the chapter exercises in the book. That way, the students can check the solutions to see how something is done whenever they get stuck on an exercise. We think that providing the solutions is the right approach didactically because it 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 materials include a second set of exercises and their solutions that can be used for testing.

What the instructor's materials include

The instructor's materials for *Murach's Oracle SQL and PL/SQL* 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, and solutions to those exercises. Here's a summary of these materials.

Database scripts, book examples, and exercise solutions

These are the same materials that your students can download from our website. We've included them in the instructor's materials so you can demonstrate and review the book examples and exercise solutions in class.

Objectives

We believe that instructional objectives should be the start of any educational methodology, so 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 work with an Oracle database. These of course are the critical objectives of a database course that focuses on SQL, and they are best tested by having the students do exercises 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 the critical learning objectives for your course.

Test banks

To test comprehension, the instructor's materials include 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: *An Oracle professional 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.

A second set of exercises and solutions

Because we provide the solutions for the book exercises in the download for this book, the instructor's materials include a second set of exercises and solutions. These exercises are analogous to the book exercises and solutions, but this time the students work with a database for an online music store called My Guitar Shop.

These exercises are provided in a Word document so you can modify them if you want, as well as a PDF document that you can distribute to your students if you don't want to make any modifications. The starting scripts are also included in the instructor's materials so you can distribute them to your students. And the solutions are included so you can demonstrate and review them in class.

Since both the book exercises and the My Guitar Shop exercises force the students to use all of the critical Oracle skills, you can assign either set to your students. The only significant differences are (1) the students will have the solutions for the book exercises, (2) the My Guitar Shop exercises provide less guidance than the book exercises (which you may prefer), and (3) the My Guitar Shop exercises require you to distribute the exercises and any starting files for the exercises.

Because the book exercises are so easy to use, we suggest that you start by assigning them to your students. Then, you can use the My Guitar Shop exercises for testing purposes. Please note, however, that the extra exercises for two chapters require starting components. Specifically, chapter 2 requires scripts that the students will open and run in the exercises. And chapter 18 requires some image files that the students will save in the database.

PowerPoint slides

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 (1) double-click on the text for a slide to open it up in Word, (2) make modifications to the text in Word, and (3) click outside the text to return to PowerPoint. You can also use PowerPoint in the normal way to add your own slides, delete slides, or add your own presentation notes to our slides.

How to get started

You can get the instructor's materials for our book as a download from our website or on an Instructor's CD. If you get the CD, you can do a preliminary review of our materials by opening and reviewing the files 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.

How to install the files and directories of the CD

From the root directory of the Instructor's CD or in the directory for the downloaded instructor's materials, 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 CD onto your C drive in a directory structure that starts with c:\murach\oracle_sql.

The directories and files

The table that follows summarizes the directories and files for the instructor's materials after they're installed.

The first five subdirectories…the ones that are shaded…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 My Guitar Shop exercises and solutions; those are available only to the instructor.

The items in the table that are *not* shaded are available only to instructors. All of these materials are stored in the instructors subdirectory of the oracle_sql directory.

	c:\murach\oracle_sql\	Contents
Students	db_setup	The script files for creating the three databases required by the examples and exercises for the Express Edition of 11g and earlier as described in appendix A.
	db_setup_12c	The script files for creating the three databases required by the examples and exercises for the Personal Edition of 12c and later as described in appendix B.
	scripts	The script files for the SQL examples presented in this book.
	ex_solutions	The solutions for the exercises that are at the end of each chapter.
	java	The source code for the Java examples presented in chapters 1 and 18.
Instructors only	instructors\Instructor's summary.pdf	This instructor's summary in PDF format.
	instructors\Objectives.docx instructors\Objectives.pdf	A document in both Word and PDF formats that contains the instructional objectives for all chapters.
	instructors\My Guitar Shop exercises.docx instructors\My Guitar Shop exercises.pdf	A document in both Word and PDF formats with additional exercises that are similar to those in the book.
	instructors\mgs_ex_starts	The script file for creating the My Guitar Shop database described in the *My Guitar Shop exercises* document, as well as a few starting script files.
	instructors\mgs_ex_solutions	One solution for each exercise in the *My Guitar Shop exercises* document.
	Instructors\slides	One PowerPoint file for each chapter.
	instructors\test_banks\	ExamView, RTF, Blackboard, and Respondus directories that contain one test bank for each chapter in the book.

Any comments?

If you have any comments or suggestions for us on *Murach's Oracle SQL and PL/SQL for Developers* or on 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.

Mike Murach
Publisher
murachbooks@murach.com

Joel Murach
Author
joel@murach.com