

Instructor's Summary for *Murach's MySQL (3rd Edition)*

The instructor's materials for *Murach's MySQL (3rd Edition)* will help any college instructor or corporate trainer run an effective course based on the book. This summary introduces you to these materials and helps you get started using them.

At the least, we recommend that you read the topics under "What's included in the instructor's materials" because they not only describe the components but also our underlying instructional philosophy. Then, when you're ready to evaluate the materials yourself, "How to get started with our materials" provides the installation procedures that you'll need and gives you tables that summarize the components at a glance.

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

About the structure of the book	2
Section 1: An introduction to MySQL.....	2
Section 2: More SQL skills as you need them.....	2
Section 3: Database design and implementation	2
Section 4: Stored program development.....	2
Section 5: Database administration.....	3
About the modularity of the book.....	3
What's included in the student download	3
The database creation script and book examples	4
Solutions to the exercises in the book.....	4
What's in the instructor's materials	4
The student download files	4
Objectives	4
Test banks	5
A second set of exercises and solutions.....	5
PowerPoint slides	6
How to get started with our materials.....	6
How to install the executable file on a Windows system	6
How to install the zip file on any operating system.....	6
The student download files that get installed.....	7
The instructor materials that get installed.....	7
Any comments?	7



Mike Murach & Associates, Inc.

1-800-221-5528 • (559) 440-9071 • Fax: (559) 440-0963

murachbooks@murach.com • www.MurachForInstructors.com

Copyright © 2019 Mike Murach & Assoc. Inc. All rights reserved.

About the structure of the book

To present the MySQL skills that your students need in a manageable progression, *Murach's MySQL (3rd Edition)* is divided into five sections. Here's a brief overview of each, along with some ideas on how you can adjust the sequencing to deliver the course that's right for your students.

Section 1: An introduction to MySQL

Section 1 presents five chapters that get your students off to a great start with MySQL. That includes learning the concepts related to relational databases, a must for writing effective SQL statements. It includes using MySQL Workbench to enter and execute statements, which we think is the best way for your students to test their work. And it includes writing SQL statements that retrieve data from one or more tables and writing SQL statements that insert, update, and delete data.

Section 2: More SQL skills as you need them

The four chapters in this section present other skills that every MySQL developer should have. That includes how to code summary queries and subqueries, how to work with data types, and how to use functions. Your students will have some experience with most of these subjects from section 1, but these chapters will help you raise their skills to a new level.

Since all of the chapters in this section are written as independent modules, you can assign them in whatever sequence you prefer, and you don't have to assign all of the material in each chapter. This makes it easy for you to adapt this book to the time constraints and requirements of your course. Keep in mind, though, that to be effective developers, your students should have the core skills taught in each of these chapters.

Once your students master these core skills, they'll have the perspective that they need for learning new skills. From that point on, you can select the other chapters that you want to include in your course...and you can teach them in whatever sequence you think is best for your course.

Section 3: Database design and implementation

The three chapters in this section present the most important skills for designing, creating, and maintaining databases. These are tasks that programmers are often asked to perform for smaller applications. But even if they aren't, the skills presented in this section will help them use SQL more effectively.

Section 4: Stored program development

The first chapter in this section presents the language skills your students will need to code all four types of stored programs that are covered: stored procedures, functions, triggers, and events. Then, the second chapter presents the skills for managing transactions within these programs. Finally, the third and fourth chapters teach your students how to create all four types of stored programs.

Depending on the emphasis of your course, you can skip to this section right after you complete chapters 1-5 and 8 and 9. Then, you can return to the chapters that you skipped at a later time.

Section 5: Database administration

The three chapters in this section teach your students some of the most important skills for administering a MySQL database. That includes monitoring and configuring a server, securing a database, and backing up and restoring a database. As a result, your students will have a starting set of DBA skills that they can build on in the future.

About the modularity of the book

For most courses, *Murach's MySQL (3rd Edition)* will present more concepts and skills than you can cover in a single course. So please keep in mind that our book has a modular design, which means you don't have to teach the chapters in sequence, and you can choose which ones to cover in your course. With that in mind, we offer these thoughts on how you can use our book:

- When your students complete section 1, they will have a solid foundation for learning additional MySQL skills.
- In section 2, you can teach the chapters in any sequence you prefer.
- After you complete section 1 plus chapters 8 and 9, you can continue to section 3 or skip to section 4 or 5.
- In section 3, you should teach the chapters in sequence.
- In section 4, you should teach chapters 13 and 14 before chapter 15 or 16.
- In section 5, you should teach chapter 17 before chapter 18 or 19.

So if your students are completely new to programming, you can focus on sections 1 and 2, teaching them at a pace that won't leave anyone behind. But if they're able to move more quickly through those sections, you have a number of options as to what to cover next, depending on your own interests and those of your students.

Beyond that, instructors often tell us that their students keep our books for reference on the job later on. So don't worry if you don't have the time to teach all the chapters...your students will still get their money's worth out of our book!

What's included in the student download

To help your students get the most from our book, our website lets them download (1) a SQL script that creates the three databases that are used throughout the book, (2) SQL scripts that contain the SQL statements for the book examples, and (3) the solutions to the exercises that are at the end of each chapter in the book.

Two appendixes are included at the end of the book that show how to install and use these files on Windows and macOS systems. Please note, however, that these items are all included with the instructor's materials. So you don't have to download them separately unless you want to try out the appendix procedures that your students will be using.

The database creation script and book examples

Once your students have run the SQL script that creates the databases, they can start experimenting with the SQL scripts for the book examples to see how they work. They can run them as is to get the results shown in the book. But they can also start experimenting with the code to see how various changes affect the results. What's more, they can copy-and-paste code from these scripts as a starting point for their own SQL script files.

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, 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 or grade 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's in the instructor's materials

The instructor's materials for our MySQL book are designed to save you time in preparing and running an effective course based on the text. So besides the materials in the student download, we provide you with instructional objectives, test banks, PowerPoint slides, a set of chapter exercises that aren't in the book, and solutions to those exercises. A summary of these materials follows.

The student download files:

DB creation script, 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 that you can easily demonstrate and review the book examples and exercise solutions in class, without having to download them yourself.

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 developed these based on the principles presented in Robert F. Mager's 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. This gives our objectives a real-world context that you usually won't find in the objectives for other books. 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 are what we refer to as *applied objectives*. These ask the students to apply what they've learned as they develop SQL scripts. These of course are the critical objectives of a programming course, 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 topics that are presented. And these objectives can be tested by the questions in our test banks.

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 more focused and efficient.

Test banks

To test comprehension, you can use the test banks that we've created; there's one for each chapter in the book. We developed these test banks in ExamView, and we provide them in multiple formats, including those that can be used in various LMSs (like Blackboard, D2L, and Canvas) as well as Rich Text Format (for Word).

Each test bank provides questions that are designed to 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 will only be expected to have the skills that are described by the objectives.

In our test banks, we use only multiple-choice test questions because they are the easiest to score and 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. By contrast, matching and true/false questions have low validity, so we don't use them.

A second set of exercises and solutions

Because we provide the solutions for the book exercises in the student 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 in the instructor's materials so you can distribute them to your students. And the solutions are provided 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 MySQL skills, you can assign either set of exercises to your students. The only significant differences are (1) the students will have the solutions for the book exercises and (2) the My Guitar Shop exercises require you to distribute the exercise specifications and any starting files.

Because the book exercises are so easy to use, we suggest that you assign them first, to give your students some hands-on practice in what they've just learned. Then, you can use the My Guitar Shop exercises for testing. For some exercises, you may want to distribute the solution for an earlier chapter so the students can start from the previous solution.

PowerPoint slides

The PowerPoint slides present all of the critical information from the figures of the book. That includes all of the screenshots, 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.

How to get started with our materials

Once you have an instructor account at our instructor website (www.murachforinstructors.com), you can request the instructor's materials for our book and download them from your account page. The download is available as an executable file (for Windows systems) or as a zip file (for any operating system). Then, you can install the materials on your computer as described below.

Once the installation is done, you can do a thorough review of the materials. In particular, you'll want to run some of the book scripts, as well as some of the solutions for the book exercises and the second set of exercises to see the level of competence that our book develops. You'll also want to click through some of the PowerPoint slides to see how they can help you review and reinforce the information that's presented in the book. To help you find what you're looking for, the entire file structure for the instructor's materials is shown on page 7.

How to install the executable file on a Windows system

1. Find the .exe file that you downloaded from your account page at our instructor site.
2. Double-click on the file and respond to the dialog boxes that follow. This will install the directories and files onto your C drive in a directory structure that starts with

```
c:\murach\mysql
```

How to install the zip file on any operating system

1. Find the .zip file that you downloaded from your account page at our instructor site. Double-click on it to unzip it. This creates the mysql directory and its subdirectories.
2. If you don't already have one, create a directory named *murach* on your hard disk. On macOS, you can make that easy to do by modifying the preferences for Finder so it includes your hard disk in its sidebar.
3. Move the mysql directory into the murach directory so that all the files are in a directory that starts with:

```
/murach/mysql
```

The student download files that get installed

murach\mysql\student_download\	Contents
db_setup\	A SQL script for creating and restoring the three databases required by the book, along with scripts for creating each database individually. For more information, please refer to appendix A (Windows) or B (macOS) in the book.
book_scripts\	The SQL scripts for the examples presented in this book.
ex_solutions\	The solutions to the exercises that are at the end of each chapter.
java\	The source code for the Java example in chapter 1.
php\	The source code for the PHP example in chapter 1.
diagrams\	The MySQL Workbench files for the diagrams presented in chapter 10.

The instructor materials that get installed

murach\mysql\instructors\	Contents
Instructor's summary.pdf	This instructor's summary in PDF.
Objectives.docx Objectives.pdf	The instructional objectives for all chapters in both Word and PDF. (The individual chapter objectives are repeated in the chapter slides.)
My Guitar Shop exercises.docx My Guitar Shop exercises.pdf	Additional exercises that are similar to those in the book in both Word and PDF.
mgs_ex_starts\ mgs_ex_solutions\ slides\ test_banks\	The script file for creating the My Guitar Shop database, along with a few starting script files for some of the exercises. Subdirectories by chapter that contain the solutions for the My Guitar Shop exercises. One PowerPoint file for each chapter. One test bank for each chapter in various formats: ExamView, RTF (Word), Blackboard (which can be imported into Canvas and D2L), Respondus, and IMS QTI (the standard test bank format).

Any comments?

If you have any comments about or suggestions for *Murach's MySQL (3rd 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.

Joel Murach, Author
joel@murach.com

Judy Taylor, Educational Liaison
judy@murach.com