

# Chapter 1

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## Introduction

### **Welcome!**

There isn't a backpack large enough to carry all the reference books you would need to build an Oracle8*i* or 9*i* server, create users, write programs, interface to the Web, and perform database administrator (DBA) tasks. And, at least in most states, it is still illegal to take shopping carts out of bookstores. Besides, how would you get the carts up and down the steps at your office or university?

Instead, we offer you this succinct, step-by-step manual for the entire Oracle cycle. You don't have to go out and build a new bookcase for your office, you don't have to start weight training to carry the reference manuals around. Start with this source, build your system and get it operational, and then you can consult other books for details on specific areas. By that point you will know enough to ask the right questions, and you will also know where to look in the application-specific guides and manuals for the information you need.

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Enjoy, have fun, and get frustrated once in a while. Make contacts on list servers and bulletin boards, and be proud once your system is up and running.

## **Oracle8i and 9i the Guerrilla Way**

In this book you will play all the professional roles necessary to turn an NT or Windows 2000 server into an Oracle server, configure both the Oracle server and client PCs, enable remote access, work with your customers on designing the database, normalize the data, turn the concepts into a real relational database, design the GUI forms, write the code, produce the reports, and then Web-enable your system. You will be the DBA, programmer, business analyst, and everything else that it takes to build a fully working database system.

Chapter by chapter you will be led through the necessary steps to ultimately produce a fully functional database system. In fact, you may end up selling your creation as is, or simply modifying it to fit other business environments.

What will you be building? Let's suppose that your goal is to produce a system that will test incoming students on the basics of computer literacy. The company, school, or college that has hired you currently offers a class, Computer Science 101, that is mandatory for all personnel. Many students who have taken the class have complained that it is boring and too simple, that they already know the material.

Your job is to produce an online, graphical user interface (GUI), user-friendly system that will let the students take an exam, will automatically grade the exam, will log the test, will allow professors to add additional questions, will provide online inquiry for the professors, and will produce reports, in addition to allowing the exam to be taken over the Web. You will learn more details on the system specs as we go along, but these are the overall goals. If you are successful, you will make life a little better for incoming students, and you will demonstrate your technical skills.

Oh, I forgot: There is one other requirement. The company or university has lots of information about its legacy system, and it wants you to migrate the data to your new Oracle system. Don't panic; we'll cover a neat utility called SQL\*Loader that will make this task much more manageable. (Get used to hearing "Oh, I forgot" and "Oh, by the way" statements. These have been and always will be part of the environment in which we live and work.)

We encourage you to think of other uses for the system that you will be building. For example, with a little modification it could become an online, Web-based system for a video store that would allow customers to check availability

as well as reserve videos, and that would give store employees access to all sorts of information. In this instance you could have some additional fun tying a bar code reader into the database to allow easy inventory of the films.

Our starting point is the idea that Oracle SQL\*Plus, PL/SQL, relational database management systems (RDBMSs), and Oracle Server are all about databases. And databases are all about transforming data into information.

However, moving from raw data to a database information system in a Windows environment, especially a relational database system such as an Oracle database, is a complex process. First a computer environment must be built that will support the database, the programming, the applications, and the Web access. This includes (1) starting with the Windows NT or 2000 server, (2) installing the Oracle database server, (3) installing and defining the Oracle database software, then (4) creating the basic database security schema, and (5) formalizing the database backup plans.

Once the hardware and software foundation has been established, the database can be defined, created, and manipulated. (6) Data has to be defined around a concept, a business need, or in many cases, a migration from a legacy system to the Oracle relational database model. (7) Then the concept becomes solidified as the data is organized according to the principles of relational database theory. (8) Next the now formalized data becomes tables, and (9) SQL\*Plus programs and user interfaces are created against the tables. A further extension is (10) to make the relational database Web accessible and even move the application into the e-commerce world.

This book will take you through these major steps. If you now have an NT or Windows 2000 server and your Oracle8i or 9i licenses, along with an operational local area network (LAN), you will be able to use the explanations and instructions in this book to build your own Oracle database environment. You will learn how to configure the server, configure the security, and define and build the database. Then, using SQL\*Plus, PL/SQL, Oracle Forms, Oracle Reports, and Oracle Web tools, you will create systems that your business, customer, or students can use. By duplicating the examples in this book, you can gain hands-on experience with all the major steps in creating a successful Windows Oracle environment.

As you gain expertise and confidence, we encourage you to go further and consult other books, read the extensive Oracle documentation, join Oracle Web groups, and visit Oracle's home page. And as I just mentioned, duplicating what is shown in this book in your own work environment or classroom is an excellent way to become familiar with the steps necessary to successfully install and program an Oracle database.

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Where, you may be asking, did the *guerrilla* in *Guerrilla Oracle* come from? There is an approach to systems development, programming, or just about any project that emphasizes rapid development. In this approach we know the intended goal, we have a limited amount of time (usually less than a year), and we do not have all the specs. But we're confident that we will complete the missing parts as we go along and that we will complete the project; that's the *guerrilla* part—an attitude that we will get the job done even though we're starting with somewhat insufficient information.

And that's what this book is about. I expect you to jump right in, even though you do not yet have much, if any, information about Oracle. But I believe that you have the initiative and tenacity to stay with the book and get the whole overview.