Throughout this book you will find SQL*Plus is the predominant tool used for sample code, learning concepts, and putting Oracle through its paces. In this chapter, we are going to get you acquainted with using SQL*Plus to interface with your Oracle databases. You'll learn the different ways to start it up. You'll learn how to use it to query your database for application data or to get descriptions of your database. You'll learn how to configure SQL*Plus to your needs.

Once we have a grip on using SQL*Plus, we are going to roll up our sleeves and start learning how to use Oracle. We'll take a quick tour of the SQL language and use Oracle to utilize it. In this section of the chapter, we will take an in-depth look at SELECT statements and what all the related SQL constructs are. We'll look at performing different types of queries, such as UNIONS and INTERSECTS. We'll even take a quick look at joining tables in your queries.

After we learn about SQL queries, we'll walk through using INSERT, UPDATE, and DELETE statements to modify the data stored in our databases. By the end of this chapter, you should expect to be comfortable using SQL*Plus to connect to the database, and to play with database objects and the data stored within those objects.

To summarize at this point, you should expect to learn the following in the course of this chapter:

- How to connect to a database and perform queries using a tool called SQL*Plus
- How to configure SQL*Plus for formatted query results
- The different categories of SQL statements
- The anatomy of a SQL statement
- How to write queries against the database to view your data
- How to modify data stored in the database
Introduction To SQL*Plus

SQL*Plus is a tool for interfacing with the Oracle database. Using it, you can connect to either a database located on the same server machine, or a database located on a different server across a network. It is a great tool for working with Oracle, as it has a number of capabilities that cater for Oracle users and administrators, including:

- Executing SQL and PL/SQL in the database
- Updating data in your database
- Performing queries on your data
- Formatting the result sets of those queries into reports
- Create, edit, retrieve, and execute SQL scripts
- Help Oracle users tune their SQL queries
- Administer the database
- Describe tables and PL/SQL objects in your database
- Copy data from one database to another
- Send messages to users, and accept input from those users

These are just a few of SQL*Plus's capabilities. We will cover the basics in this chapter, and we will get into more detail in Chapter 7.

While there are other tools besides SQL*Plus available for interacting with Oracle, we will use SQL*Plus throughout this book for the following reasons:

1. It's free!
2. Everybody with an Oracle database should have access to SQL*Plus.
3. It lends itself to writing and modifying the examples provided throughout this book to aid your learning.

Differentiating Between SQL, PL/SQL, and SQL*Plus

Structured Query Language, or SQL, is the language used to put data into the database, retrieve data from the database, control transactions, and administer your database. We are going to look at using SQL later in this chapter, and in more depth in the next chapter.

PL/SQL is the procedural programming language of Oracle, and with it you can write custom programs and procedural code for execution inside the database. Just as Oracle has a SQL engine, it also has a PL/SQL engine that executes PL/SQL code. PL/SQL programs can be stored inside the database for use in your applications and day-to-day operations. This lets you implement business logic close to your data, in a programming language that was designed and architected with the Oracle database in mind.