

Exploring Popular SQL Implementations

Any tour into the realm of writing SQL functions should begin with a solid foundation of the basic principles of SQL. In this chapter, we will be discussing the ins and outs of creating, querying, and modifying databases using basic SQL syntax. This chapter is the basis upon which we will build in the following chapters. This will help you unravel the mystery of using the power of built-in functions available across the various relational database management systems (RDBMS) platforms and to introduce new functionality into your applications by developing your own user-defined functions (UDFs).

Introduction to SQL

Structured Query Language (otherwise known as SQL and pronounced “SEE-kwul”) was first developed by IBM in the mid- to late 1970s for their DB2 platform RDBMS. At the time, its purpose was to provide a way in which the RDBMS could retrieve data in a declarative way. Declarative “programming” was a way in which the RDBMS developer could specify what data would be selected, inserted, updated, or deleted without having to necessarily know where the data was or how it was stored. That was the job of the RDBMS. The main goal of SQL was to provide the following functionality to the RDBMS:

- ☐ Query the database to retrieve the data stored therein.
- ☐ Update existing data within the database.
- ☐ Insert new data into the database.
- ☐ Remove unwanted data from the database.
- ☐ Add permissions to RDBMS objects (databases, tables, and so on).
- ☐ Modify a database’s structure.
- ☐ Change security settings.