24.10 Stored Procedures

Many database-management systems can store individual or sets of SQL statements in a database, so that programs accessing that database can invoke them. Such named collections of SQL statements are called **stored procedures**. JDBC enables programs to invoke stored procedures using objects that implement the interface `CallableStatement`. `CallableStatement`s can receive arguments specified with the methods inherited from interface `PreparedStatement`. In addition, `CallableStatement`s can specify **output parameters** in which a stored procedure can place return values. Interface `CallableStatement` includes methods to specify which parameters in a stored procedure are output parameters. The interface also includes methods to obtain the values of output parameters returned from a stored procedure.

Portability Tip 24.5

Although the syntax for creating stored procedures differs across database management systems, the interface `CallableStatement` *provides a uniform interface for specifying input and output parameters for stored procedures and for invoking stored procedures.*

Portability Tip 24.6

According to the Java API documentation for interface `CallableStatement`, *for maximum portability between database systems, programs should process the update counts (which indicate how many rows were updated) or* `ResultSet`*s returned from a* `CallableStatement` *before obtaining the values of any output parameters.*