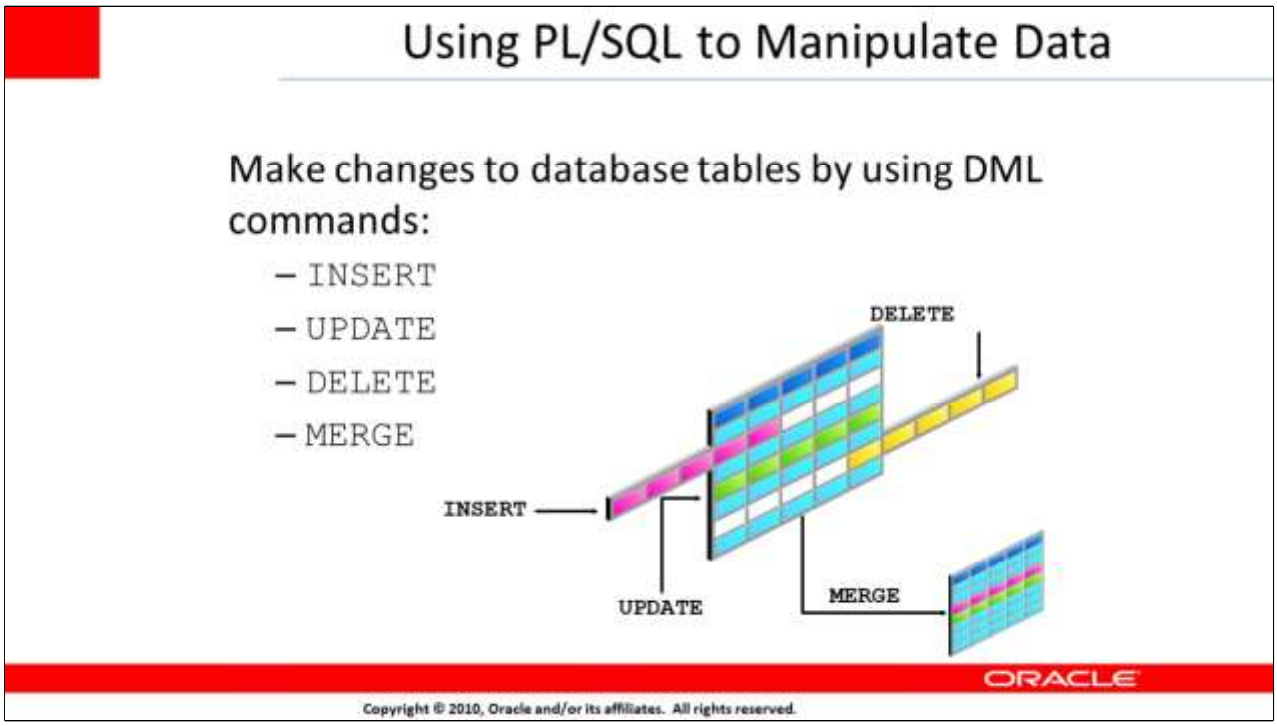


Using PL/SQL to Manipulate Data

You manipulate data in the database by using DML commands. You can issue DML commands such as INSERT, UPDATE, DELETE, and MERGE without restriction in PL/SQL. Row locks (and table locks) are released by including the COMMIT or ROLLBACK statements in the PL/SQL code.

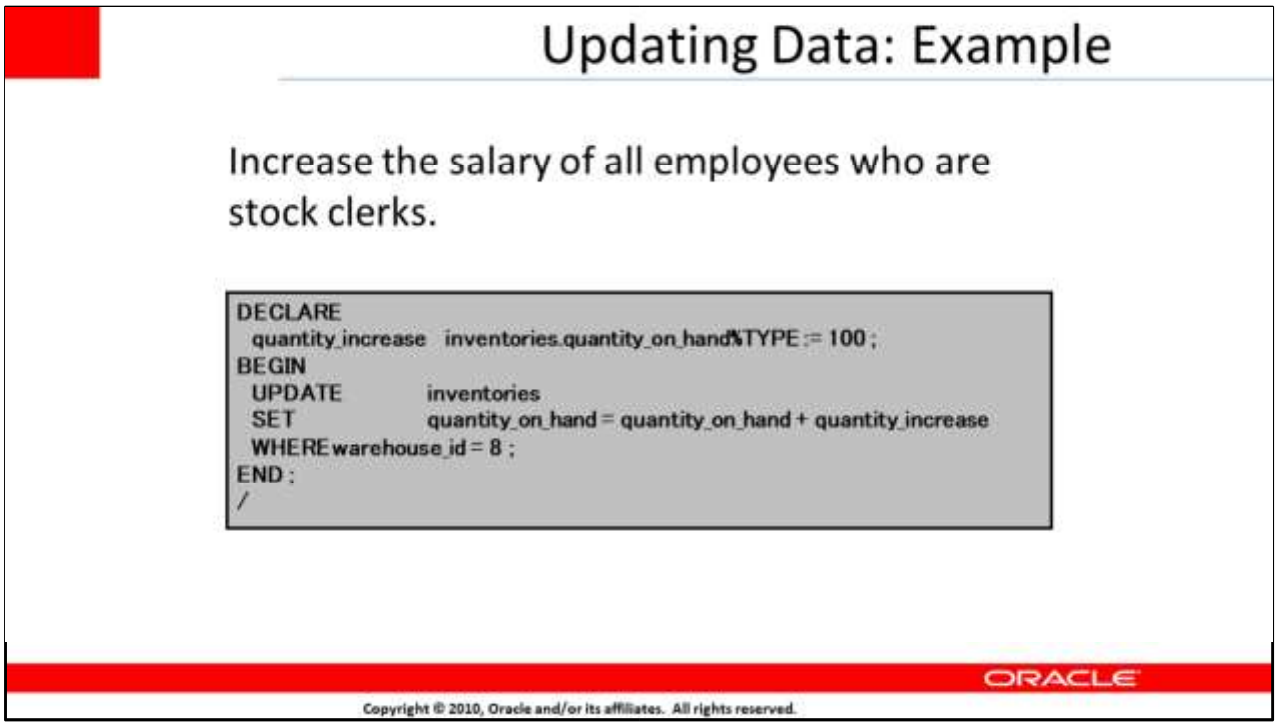
The INSERT statement adds new rows to the table.

The UPDATE statement modifies existing rows in the table.

The DELETE statement removes rows from the table.

The MERGE statement selects rows from one table to update or insert into another table. The decision whether to update or insert into the target table is based on a condition in the ON clause.

Note: MERGE is a deterministic statement. That is, you cannot update the same row of the target table multiple times in the same MERGE statement. You must



have INSERT and UPDATE object privileges on the target table and SELECT privilege on the source table.

Inserting Data

In the example in the slide, an INSERT statement is used within a PL/SQL block to insert a record into the employees table. While using the INSERT command in a PL/SQL block, you can:

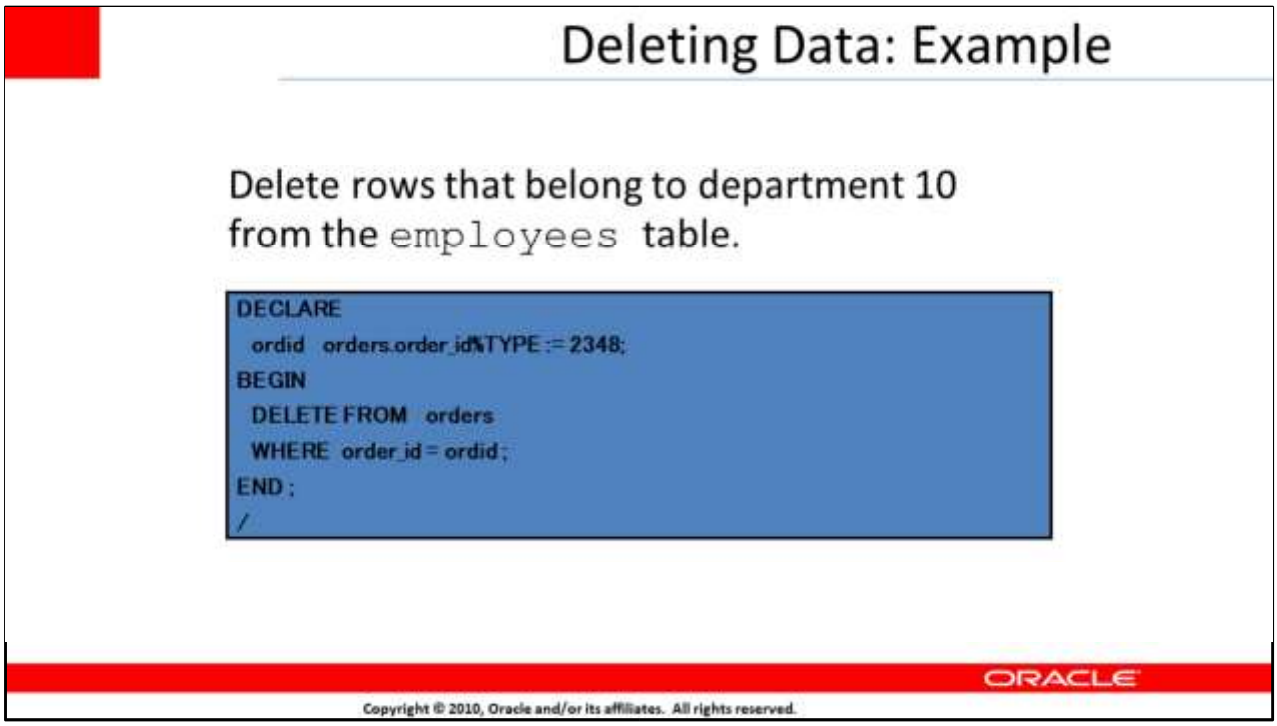
Use SQL functions such as USER and CURRENT_DATE

Generate primary key values by using existing database sequences

Derive values in the PL/SQL block

Updating Data

There may be ambiguity in the SET clause of the UPDATE statement because, although the identifier on the left of the assignment operator is always a database column, the identifier on the right can be either a database column or a PL/SQL variable. Recall that if column names and identifier names are identical



in the WHERE clause, the Oracle Server looks to the database first for the name.

Remember that the WHERE clause is used to determine the rows that are affected. If no rows are modified, no error occurs (unlike the SELECT statement in PL/SQL).

Note: PL/SQL variable assignments always use :=, and SQL column assignments always use =.

Deleting Data

The DELETE statement removes unwanted rows from a table. If the WHERE clause is not used, all the rows in a table can be removed if there are no integrity constraints.