According to Coronel and Morris, SQL commands can be grouped into several major categories, data definition language (DDL), data manipulation language (DML), data control language (DCL), and transaction control language (TCL) (2019, Ch. 7).

DDL consisting of the commands CREATE, ALTER, DROP, TRUNCATE, COMMENT, and RENAME, deal with database schemas and descriptions and how they reside in the database. CREATE is used to create a database and its objects. ALTER is used when altering an existing database. DROP deletes objects from a database. TRUNCATE removes all records from a table. COMMENT adds comments to the data dictionary of a database. Lastly, RENAME is used to rename an object.

**Example:**

*CREATE TABLE tbl\_employee (emp\_id int(6), emp\_fName varchar(25), emp\_lName varchar(25));*

Creates a table with three columns for id, first name, and last name.

DML is used for the manipulation of data in a database. The commands associated with DML are SELECT, INSERT, UPDATE, DELETE, MERGE, CALL, EXPAIN PLAN, and LOCK TABLE. SELECT retrieves data from a database, INSERT puts into a table, UPDATE updates existing data within a table, DELETE will delete all records from a database table, etc.

**Example:**

*SELECT \**

*FROM tbl\_employee;*

This example will select all of the columns from the table tbl\_employee.

DCL commands deal with permissions, rights and access controls. GRANT and REVOKE are DCL commands that either give or remove permission for a user to access objects in a database.

**Example:**

*GRANT CREATE TABLE TO username;*

This example gives “username” permission to create a table in the database.

Finally, TCL includes such commands as COMMIT and ROLLBACK to perform transactions on a database.

**Example:**

*START TRANSACTION;*

*INSERT INTO tbl\_employee (emp\_fName, emp\_lName) VALUES (‘Mickey’, ‘Mouse’);*

*COMMIT;*

This example finishes the transaction, storing all of the changes made during the transaction.

**References**

Coronel, C., & Morris, S. (2019). [*Database systems: Design, implementation, and management*](https://ashford.instructure.com/courses/74798/modules/items/3783232) (13th ed.). Retrieved from https://www.vitalsource.com