# Populating Databases

Data manipulation language (DML) is a subset of the SQL language which invokes actions from the DBMS to manipulate data in the database.

Using DML statements you can:

* Select data from a table
* Insert data values into tables as rows
* Update existing data values in rows
* Delete certain rows from certain tables

The DML statements all begin with:

* INSERT - adding rows
* UPDATE - changing existing values
* DELETE - deleting rows
* SELECT – querying the database

The first three statements are concerned with populating the database whereas the fourth is concerned with manipulating the database.

INSERT

* INSERT INTO tablename (column1, column2) VALUES (constant1, constant2, ...) | DEFAULT VALUES;
* If the column lost is omitted then the INSERT statement will add a new row to the table, giving a value for every column in the row
* When you add data in some, but not all, of the columns in a row, you need to specify those columns. The order in which you list the column names does not matter as long as the order in which you list the data values matched it

UPDATE

* The UPDATE statement alters values in existing rows of a table. The smallest unit of data that can be modified being a single column of a single row
* The statement can update a single row or multiple rows
* Example: table Aircraft by changing the value in the column no\_club\_seats to 20 for all records where the value in column call\_sign is equal to 'C171'.
* UPDATE aircraft SET no\_club\_seats = 20 WHERE call\_sign = ‘C171’;

DELETE

* Has the form: DELETE FROM table name WHERE search condition;
* Important to note that even an empty table still exists, to delete a whole table the DROP TABLE statement must be used.