SQL Course

Delete Statement

- To introduce the syntax used to delete data from the database.
- To note any restrictions the SQL standard places on the use of the **DELETE** statement.
- To illustrate the use of the **DELETE** statement using examples.

To delete a particular value then the **UPDATE** command must be used by setting the intended value to **NULL** , as in the following example:

UPDATE *aircraft* **SET** *no_club_seats* = **NULL;**

The delete command has the form:

DELETE FROM *tablename* [**WHERE** <*search condition*>]**;**

- The table identified by the table name must be update-able.
- Which rows are to be deleted is determined by the **WHERE** clause.
- The number of rows identified can be any number between zero and the total number of rows in the table.
- If the **WHERE** clause is omitted then all the rows in the table will be deleted.
- The **WHERE** clause can contain **SELECT** queries. The result returned by the query will determine which rows are to be deleted from the table.
- If the table identified is a view, then the rows deleted are the rows in the base table from which the identified rows in the view are defined.

It is important to note that even when the table is empty i.e. contains no rows, it still exists. If you wish to get rid of a table totally you have to execute a **DROP TABLE** statement.

Since the **FROM** clause in the **DELETE** identifies a single table, there is no way to use a join to identify the rows to be deleted. Sub-queries can be used instead. Sub-queries can also be used to delete rows from one table based on the values found in another table.
Conceptually, SQL applies the **WHERE** clause to each row of the target table, deleting those where the search condition yields a **TRUE** result and retaining those where the search condition yields a **NULL** or **FALSE** result. Because this type of **DELETE** statement searches through a table for the rows to be deleted, it is sometimes called a searched **DELETE** statement. There is also a positional **DELETE** which always deletes a single row.
The following example modifies table *Aircraft* by deleting all the records where the value in column *call_sign* is equal to 'C171'.

DELETE FROM *aircraft* **WHERE** *call_sign* = 'C171'**;**

Call Sign	Aircraft Name	Model	Club Seats	Econ Seats
N410C	Eagle Flyer	ATR42	22	40
C171	Jolly Roger	BS68	23	30
N7255U	NULL	Boeing 727-200	34	100
N301SW	NULL	Boeing 737-200	8	120

Table after the delete statement

Call Sign	Aircraft Name	Model	Club Seats	Econ Seats
N410C	Eagle Flyer	ATR42	22	40
N7255U	NULL	Boeing 727-200	34	100
N301SW	NULL	Boeing 737-200	8	120

The following example modifies table *Aircraft* by deleting all records in the table.

DELETE FROM *aircraft*;