

SQL Course

Create View Statement

- To show how to create views in SQL syntax.
- To illustrate the syntax of the SQL statement.
- To demonstrate the use of the **CREATE VIEW** statement using examples.
- Views are created using the **CREATE VIEW** command.
- Each view consists of at least one column.
- Each column has a :
 - Name.
 - Type.
 - Size (depending on the type).
 - Optional integrity constraints.

The creation of a view assigns a name to the view, a name to each of its column, and a virtual content. The content is defined by an SQL **SELECT** statement. The types of each column are automatically derived from the **SELECT** statement. Assigning alias names to a views column is optional. If you don't give names in the **CREATE VIEW** clause, the views columns inherit their names from the columns in the underlying table(s).

The create view command has the form:

```
CREATE VIEW viewname ( column-name, column-name, ...) AS SELECT statement  
[WITH [LOCAL|CASCADED] CHECK OPTION];
```

In certain circumstances names must be assigned to the columns of the view.

The circumstances in which this would arise would be:

- When one or more of the views columns are derived from an arithmetic expression, a built in function or a constant.
- When two or more of the columns in the view will end up with the same name.

View definitions may not be self-recursive, i.e. the view name of the view being defined may not be used directly or indirectly in the definition.

The **WITH CHECK OPTION** may only be specified if the view is update-able and a view is update-able only if the query expression is update-able. In general, if a **WITH CHECK OPTION** is specified then no **INSERT** or **UPDATE** statement may result in a row being created that will not appear in the view. If the **LOCAL** option is used then the constraint specifically provides that, if the row appears in the directly underlying table or view after the change, it must also appear in the view itself. If the **CASCADED** option is specified then the same check is carried out for each underlying view regardless of whether it has a **WITH CHECK OPTION** and of which sort.

The structure of the view is defined at the time at which the view is created. If the query expression had been of the form "**SELECT * FROM** *t* ..." then the ***** means all the columns of *t* that are defined at the moment the **CREATE VIEW** is executed. If columns are subsequently added to *t* then these will not appear in the view, unless the view is subsequently dropped and recreated.

This statement creates a view called `inserviceplanes` which takes its values from the

`aircraft` and `aircraft_flight` tables, using the field `call_sign` in both tables. This produces a view of all Planes inservice.

```
CREATE VIEW inserviceplanes (inser_name, inser_model, inser_flight_no) AS  
SELECT aircraft_name, model, flight_no FROM aircraft, aircraft_flight WHERE  
aircraft.call_sign = aircraft_flight.call_sign;
```