



Tables are organised into columns, a record consists of values entered into those columns, each record which is inserted into the table must conform to the structure of the columns.

Columns are defined by the following...

Name

Datatype

Size (Maximum length)

Mandatory (Null or Not Null)

Constraints



Table Manipulation – Creating Indexes for Tables

To speed Data retrieval, record identification and data integrity the User should define at least one column as the 'Primary Key' Index.

The Primary Key will be used as the main method of identifying required records and will not allow any duplicates in the column, the Primary Key in a table will generally be a serial number, staff number etc a value which is unique to the record.

Any column which is made a Primary Key will be mandatory.



Table Manipulation – Creating Indexes for Tables

As a rule of thumb, the Primary Key is generally the first column specified in a Table, and this is then followed by the most significant columns, these will need to be identified in advance before creating the Table.

Whenever possible place all mandatory (non-null) columns before any columns which are nullable.



Table Manipulation – Naming Tables and Columns

There is a limit of 30 characters for the name of the table (and columns), most Databases use underscores to separate words in the Names, this makes Tables easier to read.

Generally aim for a Tablename which reflects the contents, for example, a table which holds Wages details could be called 'WAGES_DETAILS' !

The same applies to Columns, in addition a lot of Databases prefix column names with an acronym of the Table it belongs to, taking the above as an example, all columns would start 'WD_' ...



In addition, Columns which are Date datatypes generally are suffixed with '_DATE'

Try to avoid difficult to spell words in the name such as 'necessary', 'stationary' etc ... these will slow up usage, and also avoid names which can be spelled in an English or American way such as 'ORGANISATION' ...

Oracle will not allow duplicate Column names within the Table and will not allow duplicate Table names within the Schema.

Table Manipulation – Creating Tables



To create a Table right click in the Connections Navigator when the mouse is over the Table section ...

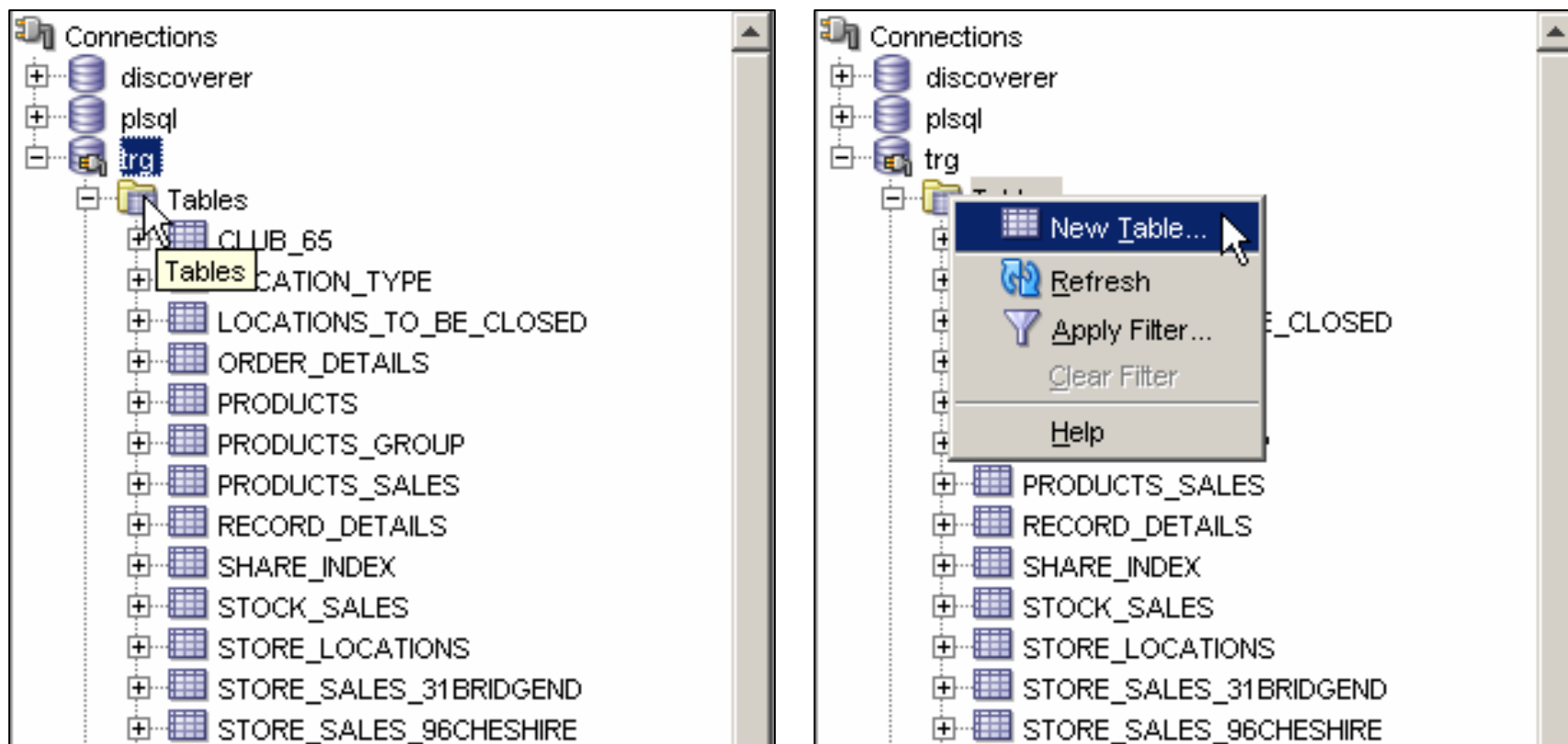




Table Manipulation – Creating Tables

This will display the Create Table dialog, of which there are two versions, the first one examined is when the Advanced option is not clicked on ...

The screenshot shows the 'Create Table' dialog box with the following details:

- Schema: SQL1000_USER
- Name: TABLE3
- Advanced:
- Table DDL tabs
- Table structure:

Column Name	Type	Size	Not Null	Primary Key
COLUMN1	VARCHAR2	4000	<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Add Column, Remove Column, Help, OK, Cancel



Note that the Name of the Table and the first Column have been defaulted, these can be overwritten and its best to change the tablename before a mistake is made, although this can be renamed at a later date.

The User can also change the Schema to create the Table in, this is only possible if sufficient privileges have been granted.

One thing that cannot be changed easily is the order of the Columns so it is best to work out before hand the columns needed in a Table, any columns added after creation will be added to the bottom of the Table.



Table Manipulation – Creating Columns

The User can now concentrate on creating columns, these are added one after another, after each column has had its name, type, size, not null and primary key specified.

The type in the simple creation area is limited to the following ...

Column Name	Type	Size	Not Null	Primary Key
COLUMN1	VARCHAR2	4000	<input type="checkbox"/>	<input type="checkbox"/>

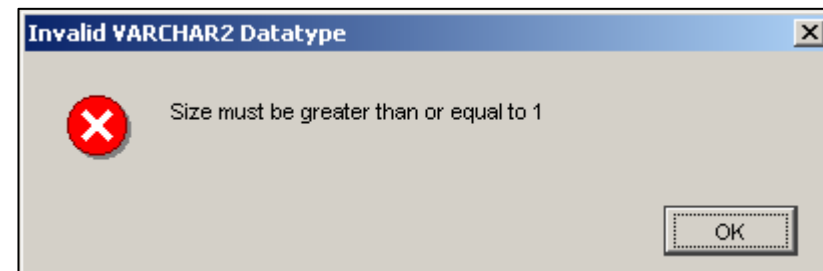
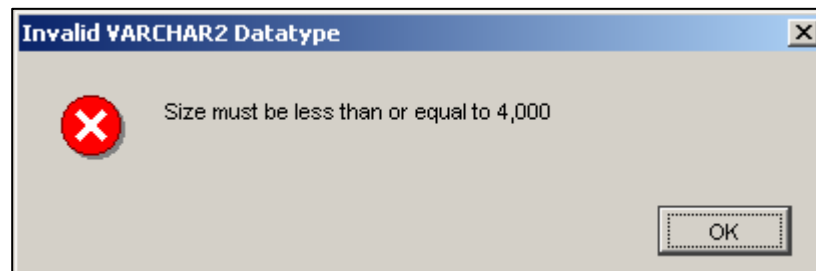
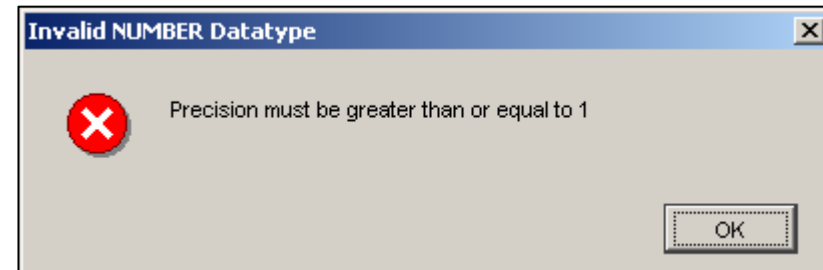
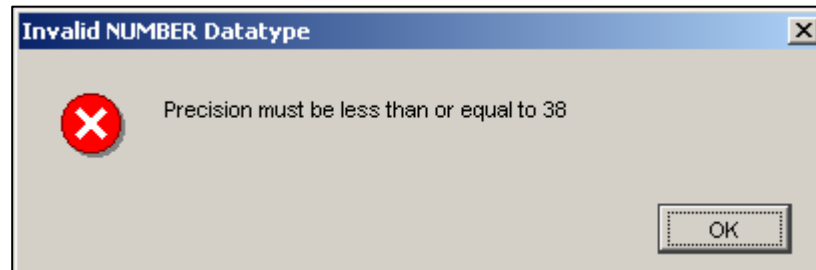
The 'Type' dropdown menu is open, showing the following options: VARCHAR2, CLOB, INTEGER, NUMBER, and DATE. The 'INTEGER' option is currently selected.

Neither Date, Clob or Integer can have their sizes set, Varchar2 is a maximum of 4000 and number, 38

Table Manipulation – Creating Columns



Click on the Size box to set the Number and Varchar2 sizes, error messages will be displayed if the sizes are specified wrong ...





Most Tables should have at least a few mandatory columns, these are values which the row must have to identify the record or which must be present before the record is reasonably useable.

Examples of mandatory columns would be Last Name, Post Town etc ...

Examples of non-mandatory columns would be values which can only be filled out as the record 'matures' or values such as Mobile Phone, Email Address etc ...

Table Manipulation – Table Creation DDL



This example shows a Table ready to be created ...

Schema: SQL1000_USER Advanced

Name: CAR_DETAILS

Table DDL

Column Name	Type	Size	Not Null	Primary Key
CD_REG_NUMBER	VARCHAR2	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CD_MANUFACTURER	VARCHAR2	25	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CD_MODEL	VARCHAR2	40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CD_COLOUR	VARCHAR2	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CD_CREATED_BY	VARCHAR2	30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CD_CREATED_DATE	DATE		<input checked="" type="checkbox"/>	<input type="checkbox"/>
CD_UPDATED_BY	VARCHAR2	30	<input type="checkbox"/>	<input type="checkbox"/>
CD_UPDATED_DATE	DATE		<input type="checkbox"/>	<input type="checkbox"/>

Add Column Remove Column

Help OK Cancel