

# PRACTICAL-1

Aim-To study data-types of D.B.M.S in Oracal

Code	Data Types	Description
1	VARCHAR2( <i>size</i> [BYTE   CHAR])	<p>Variable-length character string having maximum length <i>size</i> bytes or characters. You must specify <i>size</i> for VARCHAR2. Minimum <i>size</i> is 1 byte or 1 character. Maximum size is:</p> <ul style="list-style-type: none"><li>• 32767 bytes or characters if MAX_STRING_SIZE = EXTENDED</li><li>• 4000 bytes or characters if MAX_STRING_SIZE = STANDARD</li></ul>
1	NVARCHAR2( <i>size</i> )	<p>Variable-length Unicode character string having maximum length <i>size</i> characters. You must specify <i>size</i> for NVARCHAR2. The number of bytes can be up to two times <i>size</i> for AL16UTF16 encoding and three times <i>size</i> for UTF8 encoding. Maximum <i>size</i> is determined by the national character set definition, with an upper limit of:</p> <ul style="list-style-type: none"><li>• 32767 bytes if MAX_STRING_SIZE = EXTENDED</li><li>• 4000 bytes if MAX_STRING_SIZE = STANDARD</li></ul>
2	NUMBER [ ( <i>p</i> [, <i>s</i> ])]	<p>Number having precision <i>p</i> and scale <i>s</i>. The precision <i>p</i> can range from 1 to 38. The scale <i>s</i></p>

		can range from -84 to 127. Both precision and scale are in decimal digits. A NUMBER value requires from 1 to 22 bytes.
8	LONG	Character data of variable length up to 2 gigabytes, or $2^{31} - 1$ bytes. Provided for backward compatibility.
2	FLOAT [( <i>p</i> )]	A subtype of the NUMBER data type having precision <i>p</i> . A FLOAT value is represented internally as NUMBER. The precision <i>p</i> can range from 1 to 126 binary digits. A FLOAT value requires from 1 to 22 bytes.
12	DATE	Valid date ranges from January 1, 4712 BC, to December 31, 9999 AD. The default format is determined explicitly by the NLS_DATE_FORMAT parameter or implicitly by the NLS_TERRITORY parameter. The size is fixed at 7 bytes. This data type contains the datetime fields YEAR, MONTH, DAY, HOUR, MINUTE, and SECOND. It does not have fractional seconds or a time zone.
23	RAW ( <i>size</i> )	Raw binary data of length <i>size</i> bytes. You must specify <i>size</i> for a RAW value. Maximum <i>size</i> is: <ul style="list-style-type: none"> <li>• 32767 bytes if MAX_STRING_SIZE = EXTENDED</li> <li>• 2000 bytes if MAX_STRING_SIZE = STANDARD</li> </ul>
96	CHAR [( <i>size</i> [BYTE/CHAR])]	Fixed-length character data of length <i>size</i> bytes or characters. Maximum <i>size</i> is 2000 bytes or characters. Default and minimum <i>size</i> are 1 byte.  BYTE and CHAR have the same semantics as for VARCHAR2.

96	NCHAR[( <i>size</i> )]	Fixed-length character data of length <i>size</i> characters. The number of bytes can be up to two times <i>size</i> for AL16UTF16 encoding and three times <i>size</i> for UTF8 encoding. Maximum <i>size</i> is determined by the national character set definition, with an upper limit of 2000 bytes. Default and minimum <i>size</i> are 1 character.
113	BLOB	A binary large object. Maximum size is (4 gigabytes - 1) * (database block size).
114	BFILE	Contains a locator to a large binary file stored outside the database. Enables byte stream I/O access to external LOBs residing on the database server. Maximum size is 4 gigabytes.
119	JSON	Maximum size is 32 MB
252	BOOLEAN	The BOOLEAN data types compare the distant truth value. True & false. unless prohibited by not null constraint the Booleans data type also support the truth value known as the null value.