Table 2–1 Built-In Datatype Summary

Code[a]	Built-In Datatype	Description
1	VARCHAR2(*size*) [BYTE | CHAR]	Variable-length character string having maximum length *size* bytes or characters. Maximum *size* is 4000 bytes, and minimum is 1 byte or 1 character. You must specify *size* for VARCHAR2. BYTE indicates that the column will have byte length semantics; CHAR indicates that the column will have character semantics.
1	NVARCHAR2(*size*)	Variable-length character string having maximum length *size* characters. Maximum *size* is determined by the national character set definition, with an upper limit of 4000 bytes. You must specify *size* for NVARCHAR2.
2	NUMBER(*p*,*s*)	Number having precision *p* and scale *s*. The precision *p* can range from 1 to 38. The scale *s* can range from -84 to 127.
8	LONG	Character data of variable length up to 2 gigabytes, or 2^{31} -1 bytes.
12	DATE	Valid date range from January 1, 4712 BC to December 31, 9999 AD.
180	TIMESTAMP (*fractional_seconds_precision*)	Year, month, and day values of date, as well as hour, minute, and second values of time, where *fractional_seconds_precision* is the number of digits in the fractional part of the SECOND datetime field. Accepted values of *fractional_seconds_precision* are 0 to 9. The default is 6.
181	TIMESTAMP (*fractional_seconds_precision*) WITH TIME ZONE	All values of TIMESTAMP as well as time zone displacement value, where *fractional_seconds_precision* is the number of digits in the fractional part of the SECOND datetime field. Accepted values are 0 to 9. The default is 6.
231	TIMESTAMP (*fractional_seconds_precision*) WITH LOCAL TIME ZONE	All values of TIMESTAMP WITH TIME ZONE, with the following exceptions: ■ Data is normalized to the database time zone when it is stored in the database. ■ When the data is retrieved, users see the data in the session time zone.

[a] The codes listed for the datatypes are used internally by Oracle. The datatype code of a column or object attribute is returned by the DUMP function.

Table 2–1 (Cont.) Built-In Datatype Summary

Code[a]	Built-In Datatype	Description
182	INTERVAL YEAR (*year_precision*) TO MONTH	Stores a period of time in years and months, where *year_precision* is the number of digits in the YEAR datetime field. Accepted values are 0 to 9. The default is 2.
183	INTERVAL DAY (*day_precision*) TO SECOND (*fractional_seconds_precision*)	Stores a period of time in days, hours, minutes, and seconds, where ▪ *day_precision* is the maximum number of digits in the DAY datetime field. Accepted values are 0 to 9. The default is 2. ▪ *fractional_seconds_precision* is the number of digits in the fractional part of the SECOND field. Accepted values are 0 to 9. The default is 6.
23	RAW(*size*)	Raw binary data of length *size* bytes. Maximum *size* is 2000 bytes. You must specify *size* for a RAW value.
24	LONG RAW	Raw binary data of variable length up to 2 gigabytes.
69	ROWID	Base 64 string representing the unique address of a row in its table. This datatype is primarily for values returned by the ROWID pseudocolumn.
208	UROWID [(*size*)]	Base 64 string representing the logical address of a row of an index-organized table. The optional *size* is the size of a column of type UROWID. The maximum size and default is 4000 bytes.
96	CHAR(*size*)[BYTE | CHAR]	Fixed-length character data of length *size* bytes. Maximum *size* is 2000 bytes. Default and minimum *size* is 1 byte. BYTE and CHAR have the same semantics as for VARCHAR2.
96	NCHAR(*size*)	Fixed-length character data of length *size* characters. Maximum *size* is determined by the national character set definition, with an upper limit of 2000 bytes. Default and minimum *size* is 1 character.

[a] The codes listed for the datatypes are used internally by Oracle. The datatype code of a column or object attribute is returned by the DUMP function.

Table 2–1 (Cont.) Built-In Datatype Summary

Code[a]	Built-In Datatype	Description
112	CLOB	A character large object containing single-byte characters. Both fixed-width and variable-width character sets are supported, both using the CHAR database character set. Maximum size is 4 gigabytes.
112	NCLOB	A character large object containing Unicode characters. Both fixed-width and variable-width character sets are supported, both using the NCHAR database character set. Maximum size is 4 gigabytes. Stores national character set data.
113	BLOB	A binary large object. Maximum size is 4 gigabytes.
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.

[a] The codes listed for the datatypes are used internally by Oracle. The datatype code of a column or object attribute is returned by the DUMP function.

Character Datatypes

Character datatypes store character (alphanumeric) data, which are words and free-form text, in the database character set or national character set. They are less restrictive than other datatypes and consequently have fewer properties. For example, character columns can store all alphanumeric values, but NUMBER columns can store only numeric values.

Character data is stored in strings with byte values corresponding to one of the character sets, such as 7-bit ASCII or EBCDIC, specified when the database was created. Oracle supports both single-byte and multibyte character sets.

These datatypes are used for character data:

- CHAR Datatype
- NCHAR Datatype
- NVARCHAR2 Datatype
- VARCHAR2 Datatype