Oracle has a number of built-in data types illustrated in the following table:

Code	Data Type
1	VARCHAR2(size [BYTE | CHAR])
1	NVARCHAR2(size)
2	NUMBER[(precision [, scale]])
8	LONG
12	DATE
21	BINARY_FLOAT
22	BINARY_DOUBLE
23	RAW(size)
24	LONG RAW
69	ROWID
96	CHAR [(size [BYTE | CHAR])]
96	NCHAR[(size)]
112	CLOB
112	NCLOB
113	BLOB
114	BFILE
180	TIMESTAMP [(fractional_seconds)]
181	TIMESTAMP [(fractional_seconds)] WITH TIME ZONE
182	INTERVAL YEAR [(year_precision)] TO MONTH
183	INTERVAL DAY [(day_precision)] TO SECOND[(fractional_seconds)]
208	UROWID [(size)]
231	TIMESTAMP [(fractional_seconds)] WITH LOCAL TIMEZONE

Each data type has a code managed internally by Oracle. To find the data type code of a value in a column, you use the `DUMP()` function.

Character data types

Character data types consist of CHAR, NCHAR, VARCHAR2, NVARCHAR2, and VARCHAR.

The NCHAR and NVARCHAR2 data types are for storing Unicode character strings.

The fixed-length character data types are CHAR, NCHAR and the variable-length character data types are VARCHAR2, NVARCHAR2.

VARCHAR is the synonym of VARCHAR2. However, you should not use VARCHAR because Oracle may change its semantics in the future.

For character data types, you can specify their sizes either in bytes or characters.

Number data type

The NUMBERdata type has precision **p** and scale **s**. The precision ranges from 1 to 38 while the scale range from -84 to 127.

If you don't specify the precision, the column can store values including fixed-point and floating-point numbers. The default value for the scale is zero.

Datetime and Interval data types

Datetime data types are DATE, TIMESTAMP, TIMESTAMP WITH TIME ZONE, and TIMESTAMP WITH LOCAL TIME ZONE. The values of a datetime data type are datetimes.

The interval data types are INTERVAL YEAR TO MONTHand INTERVAL DAY TO SECOND. The values of interval data type are intervals.

RAW and LONG RAW data types

The RAW and LONG RAW data types are for storing binary data or byte strings e.g., the content of documents, sound files, and video files.

The RAW data type can store up to 2000 bytes while the LONG RAW data type can store up to 2GB.

BFILE Datatype

BFILE data type stores a locator to a large binary file which locates outside the database. The locator consists of the directory and file names.

BLOB Datatype

BLOB stands for binary large object. You use the BLOB data type to store binary objects with the maximum size of (4 gigabytes – 1) * (database block size).

CLOB Datatype

CLOB stands for character large object. You use CLOB to store single-byte or multibyte characters with the maximum size is (4 gigabytes – 1) * (database block size).

Note that CLOB supports both fixed-with and variable-with character sets.

NCLOB Datatype

NCLOB is similar to CLOB except that it can store the Unicode characters.

UROWID Datatype

The UROWID is primarily for values returned by the ROWID pseudo-column. Its values are base 64 strings that represent the unique address of rows in a table.

Data Types: Oracle and ANSI

When you use ANSI data types for the column definitions, Oracle will convert to their corresponding data types in Oracle based on the following mapping table:

ANSI SQL Datatype	**Oracle Data Type**
CHARACTER(n)	CHAR(n)
CHAR(n)	
CHARACTER VARYING(n)	VARCHAR2(n)
CHAR VARYING(n)	
NATIONAL CHARACTER(n)	NCHAR(n)
NATIONAL CHAR(n)	
NCHAR(n)	
NATIONAL CHARACTER VARYING(n)	NVARCHAR2(n)
NATIONAL CHAR VARYING(n)	
NCHAR VARYING(n)	
NUMERIC(p,s)	NUMBER(p,s)
DECIMAL(p,s) (a)	
INTEGER	NUMBER(38)
INT	

ANSI SQL Datatype	Oracle Data Type
SMALLINT	
FLOAT (b)	NUMBER
DOUBLE PRECISION (c)	
REAL (d)	

In this tutorial, you have learned about the overview of built-in Oracle data types including Character, number, datetime, interval, BLOB, CLOB, BFILE and ROWID.