

Data Types

Character Datatypes

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
char(size)	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Where size is the number of characters to store. Fixed-length strings. Space padded.
nchar(size)	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Where size is the number of characters to store. Fixed-length NLS string Space padded.
nvarchar2(size)	Maximum size of 4000 bytes.	Maximum size of 4000 bytes.	Maximum size of 4000 bytes.	Where size is the number of characters to store. Variable-length NLS string.
varchar2(size)	Maximum size of 4000 bytes. Maximum size of 32KB in PLSQL.	Maximum size of 4000 bytes. Maximum size of 32KB in PLSQL.	Maximum size of 4000 bytes. Maximum size of 32KB in PLSQL.	Where size is the number of characters to store. Variable-length string.
long	Maximum size of 2GB.	Maximum size of 2GB.	Maximum size of 2GB.	Variable-length strings. (backward compatible)
raw	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Maximum size of 2000 bytes.	Variable-length binary strings
long raw	Maximum size of 2GB.	Maximum size of 2GB.	Maximum size of 2GB.	Variable-length binary strings. (backward compatible)

Numeric Datatypes

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
number(p,s)	Precision can range from 1 to 38. Scale can range from -84 to 127.	Precision can range from 1 to 38. Scale can range from -84 to 127.	Precision can range from 1 to 38. Scale can range from -84 to 127.	Where p is the precision and s is the scale. For example, number(7,2) is a number that has 5 digits before the decimal and 2 digits after the decimal.
numeric(p,s)	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Where p is the precision and s is the scale. For example, numeric(7,2) is a number that has 5 digits before the decimal and 2 digits after the decimal.
float				
dec(p,s)	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Where p is the precision and s is the scale. For example, dec(3,1) is a number that has 2 digits before the decimal and 1 digit after the decimal.

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
decimal(p,s)	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Precision can range from 1 to 38.	Where p is the precision and s is the scale. For example, decimal(3,1) is a number that has 2 digits before the decimal and 1 digit after the decimal.
integer				
int				
smallint				
real				
double precision				

Date/Time Datatypes

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
date	A date between Jan 1, 4712 BC and Dec 31, 9999 AD.	A date between Jan 1, 4712 BC and Dec 31, 9999 AD.	A date between Jan 1, 4712 BC and Dec 31, 9999 AD.	
timestamp (fractional seconds precision)	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	Includes year, month, day, hour, minute, and seconds. For example: timestamp(6)
timestamp (fractional seconds precision) with time zone	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	Includes year, month, day, hour, minute, and seconds; with a time zone displacement value. For example: timestamp(5) with time zone
timestamp (fractional seconds precision) with local time zone	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	fractional seconds precision must be a number between 0 and 9. (default is 6)	Includes year, month, day, hour, minute, and seconds; with a time zone expressed as the session time zone. For example: timestamp(4) with local time zone
interval year (year precision) to month	year precision is the number of digits in the year. (default is 2)	year precision is the number of digits in the year. (default is 2)	year precision is the number of digits in the year. (default is 2)	Time period stored in years and months. For example: interval year(4) to month

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
interval day (<i>day precision</i>) to second (<i>fractional seconds precision</i>)	day precision must be a number between 0 and 9. (default is 2) fractional seconds precision must be a number between 0 and 9. (default is 6)	day precision must be a number between 0 and 9. (default is 2) fractional seconds precision must be a number between 0 and 9. (default is 6)	day precision must be a number between 0 and 9. (default is 2) fractional seconds precision must be a number between 0 and 9. (default is 6)	Time period stored in days, hours, minutes, and seconds. For example: interval day(2) t

Large Object (LOB) Datatypes

The following are the **LOB Datatypes** in Oracle/PLSQL:

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation	
bfile	Maximum file size of 4GB.	Maximum file size of 232-1 bytes.	Maximum file size of 264-1 bytes.	File locators that point to a binary file on the server file system (outside the database).	
blob	Store up to 4GB of binary data.	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage).	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage).	Stores unstructured binary large objects.	
clob	Store up to 4GB of character data.	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage) of character data.	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage) of character data.	Stores single-byte and multi-byte character data.	
nclob	Store up to 4GB of character text data.	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage) of character text data.	Store up to (4 gigabytes -1) * (the value of the CHUNK parameter of LOB storage) of character text data.	Stores <u>Unicode</u> data.	

Rowid Datatypes

The following are the **Rowid Datatypes** in Oracle/PLSQL:

Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
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Data Type Syntax	Oracle 9i	Oracle 10g	Oracle 11g	Explanation
rowid	The format of the rowid is: BBBBBBB.RRRR.FFFFF Where BBBBBBB is the block in the database file; RRRR is the row in the block; FFFFF is the database file.	The format of the rowid is: BBBBBBB.RRRR.FFFFF Where BBBBBBB is the block in the database file; RRRR is the row in the block; FFFFF is the database file.	The format of the rowid is: BBBBBBB.RRRR.FFFFF Where BBBBBBB is the block in the database file; RRRR is the row in the block; FFFFF is the database file.	Fixed-length binary data. Every record in the database has a physical address or rowid .
urowid(size)				Universal rowid. Where size is optional.