

Database Programming with PL/SQL

2-3: Recognizing Data Types

Practice Activities

Vocabulary

Identify the vocabulary word for each definition below:

BLOB	Store large blocks of single-byte or fixed width multi-byte NCHAR data in the database.
Large Object	Hold values, called locators, that specify the location of large objects (such as graphic images) that are stored out of line.
Scalar	Hold a single value with no internal components.
LOB(Large Object)	Store large unstructured or structured binary objects.
Composite	Contain internal elements that are either scalar (record) or composite (record and table)
BFILE	Store large binary files outside of the database.
Reference	Hold values, called pointers, that point to a storage location.
Object	A schema object with a name, attributes, and methods.
CLOB	Store large blocks of character data in the database.

Try It / Solve It

1. In your own words, describe what a data type is and explain why it is important.
A data type specifies a storage format, constraints, and a valid range of values.
2. Identify the three data type categories covered in this course.
Scalar, Composite, Large Object, Reference, Object (there were more than three)
3. Identify three data types covered in the *Database Programming with SQL* course.
INTEGER, PLS_INTEGER, VARCHAR2
4. What data type can be used in PL/SQL, but can't be used to define a table column?
BOOLEAN
5. Which data type indicates a large data object that is stored outside of the database?
BLOB
6. Identify the data type category (LOB, Scalar, or Composite) for each data type. Each category may be used more than once.

Data Type	Data Type Category
CLOB	Large Object
VARCHAR2	SCALAR
BLOB	Large Object
NUMBER	Scalar
BFILE	Large Object
TIMESTAMP	Scalar
NCLOB	Large Object
RECORD	Composite
PLS_INTEGER	Scalar
LONG	Scalar
TABLE	COMPOSITE
BOOLEAN	Scalar

7. Enter the data type category and the data type for each value. The first one has been done for you.

Value	Data Type Category	Data Type								
‘Switzerland’	Scalar	VARCHAR2								
Text of a resume	LOB	CLOB								
100.20	Scalar	Number								
A picture	LOB	BLOB								
1053	Scalar	Integer								
11-Jun-2016	Scalar	Date								
‘Computer science is the science of the 21 st century.’	Scalar	varchar2?								
<table><tr><td>Index</td><td>Last_name</td></tr><tr><td>1</td><td>'Newman'</td></tr><tr><td>2</td><td>'Raman'</td></tr><tr><td>3</td><td>'Han'</td></tr></table>	Index	Last_name	1	'Newman'	2	'Raman'	3	'Han'	Composite	Table
Index	Last_name									
1	'Newman'									
2	'Raman'									
3	'Han'									
A movie	LOB	BFILE								
A sound byte	LOB	BLOB								
FALSE	Scalar	BOOLEAN								