

## Database Programming with PL/SQL

### 2-3: Recognizing Data Types

### Practice Activities

#### Vocabulary

Identify the vocabulary word for each definition below:

NCLOB	Store large blocks of single-byte or fixed width multi-byte NCHAR data in the database.
LOB	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.
BLOB	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 defines how data is physically stored,the constraints applied to it,and the range of the data
2. Identify the three data type categories covered in this course.  
LOB  
Scalar  
Composite
3. Identify three data types covered in the *Database Programming with SQL* course.  
Number Date 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?  
BFILE
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	LOB
VARCHAR2	Scalar
BLOB	LOB
NUMBER	Scalar
BFILE	LOB
TIMESTAMP	Scalar
NCLOB	LOB
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	Scalar	Varchar2								
100.20	Scalar	Number								
A picture	LOB	BLOB								
1053	Scalar	Number								
11-Jun-2016	Scalar	Date								
‘Computer science is the science of the 21 <sup>st</sup> 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	BFILE / BLOB								
FALSE	Scalar	BLOB								