Database Programming with PL/SQL

2-3: Recognizing Data Types

Practice Activities

Scalar data types

-retin o sg valoare

-no internal component

--charachter

--number

--date

--boolean: disponibil in pl/sql, dar nu in sql; true, false, null!!!

Vocabulary

|  |  |
| --- | --- |
| 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 Data Types | Hold a single value with no internal components. |
| BLOB | Store large unstructured or structured binary objects. |
| Composite data types | 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.

Datele pe care le utilizam pot fi clasificate in tipuri de date, pentru a ne face mai usoara manipularea acestora. D.e. character, number, boolean, structuri: record and so on.

2. Identify the three data type categories covered in this course.

Scalar data type

Composite data type

LOB (large object) data type

3. Identify three data types covered in the Database Programming with SQL course.

String

Numeric

Data

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 | LOB | CLOB |
| 100.20 | scalar | number(p, s) |
| A picture | LOB | BLOB |
| 1053 | scalar | number |
| 11-Jun-2016 | scalar | date |
| ‘Computer science is the science of the 21st century’ | Scalar | varchar2 |
| |  |  | | --- | --- | | Index | Last name | | 1 | ‘Newman’ | | 2 | ‘Raman’ | | 3 | ‘Han’ | | Composite | Table |
| A movie | LOB | BLOB sau BFILE (depinde) |
| A sound byte | LOB | BLOB |
| FALSE | scalar | boolean |