W03 Study: Materials

Overview

Your assigned reading will be as follows:

* Chapter 4 (pgs. 112–151)

Instructions

Reading Notes

**Make sure you go over the following topics.**

**Figure 4-1 PL/Delimiters** (pgs. 112–117)

|  |  |
| --- | --- |
| Assignment | |
| **:=** | Colon Symbol. The only assignment operator in the language. |
| Association | |
| : | Colon Symbol without the equals sign is a bind variable. |
| & | Dissociation type used to do a substitution. |
| % | Association object only used when applying attributes. |
| => | Name Dissociation Operator. What we want goes in the left-hand side and what we provide goes on the right-hand side. |
| @ | Used to run remote programs. |
| . | Glues references together |
| Association | |
| || | Glues strings. |
| Comparison | |
| = | Equality operations. |
| - | Not equal to. |
| <> != ^= > < >= >= <= | Comparison operators |
| Anytime we use the word “IS” we are using a reference operator. It looks at what is in the variable and evaluates the content before comparison **(IS NULL, IS EMPTY, and IS SET.)** | |
| Delimiter | |
| ‘' () , << >> -- /\*\*/ “" | Delimiter |
| “ “ | Double quotation **won’t be used in the class**. Avoid using it in any case. |
| Math | |
| + / \* - : | Math |
| \*\* | Exponent use the Oracle Math library in an inefficient way and could produce errors. **You should use the built-in function POWER()** instead of (\*\*). |
| Statement | |
| ; | Statement terminator. \*You must close any statement or block unit in PL/SQL with a statement terminator. |

**Identifiers** (pg.118)

Reserved Words, Keywords, Predefined identifiers, Quoted identifiers, User-Defined Variables, Subroutines, and User-Defined Data Types.

**Literals** (pg. 119)

String literals, numeric literals, Boolean literals, date literals.

Date literals are strings. Oracle calls them literals, but they are only literals when they meet their date formatting mask.

**Figure 4-2 Variables and Data Types** (pg. 124)

Implicit Casting: In all cases where there is an x in the table, the data type will be automatically cast for you. If there is not an x, you will need to convert the data for any comparison or assignment.

**The PL/SQL Buffer and Outputting to the Console**. (p. 125)

You must enable the SQL\*PLUS SERVEROUTPUT environment variable to print content to the console. The limit size used to be one million, but it was overwritten in version 10. We will use “SET SERVEROUTPUT ON SIZE UNLIMITED.”

**Figure 4-3 Scalar Types** (pg. 127)

**Four basic classes of variables.**

**Number Data Types.**

* **BINARY\_INTEGER and IEEE - 754:** Special Data Object types in Oracle. They deal with scientific calculations.
* **Number:** Standard numbers.
* **PLS\_INTEGER:** Used for navigation in loops.

**Character Data Types**

* **Char:** CHARACTER is an alias for CHAR.
* **LONG and LONG RAW:** Datatypes use by Oracle to host the bodies of triggers and views.
* **NCHAR and NVARCHAR2:** String alias that points to VARCHAR2
* **ROWID and UROWID:**

**Date, Time & Interval Data Types**

* **Interval Data Types:** They have a great degree of precision.

**Large Object Data Types**

* **BFILE and BLOB:** Binary types that generally require a different programming language to render them.
* **CLOB:** Large read-write character data type.
* **BLOB and CLOB:** They can host up to 32 terabytes of data in a single column.

**Composite Data Types** (pg. 144)

* **Records and Objects Data Types**
* A brief introduction to Records and Objects. This is an overview, we will come back to them in Chapter 6.
* **ADT**: Attribute Data Type.
* **UDT:** User Defined Type.