DDL (Data Definition Language) – define database structure schema.

DML (Data Manipulation Language) – manage database schema.

Sql into a programming language.

Procedural language extension to the structured query language (PL/SQL)

* Embedded language.
* Can execute in sql plus.

**// can declare variables.**

DECLARE – o

**BEGIN - m**

EXCEPTION - o

**END; - m**

**BLOCKS**

* **Procedural**
* **Function**
* **Anonymous**

Declare in declare

Assign new values in BEGIN

View results through output variables.

//review variables types.

//if [] optional

//review sql create tables.

//search about into

GUIDELINES

* One identifier per line.
* := assignment operator or the DEFAULT word
* Can have a same name provided they are in a different block.
* Adopt v\_ or c\_

Scalar data types

* **Char, varchar, number, date**, etc (base scalar datatype)

**%TYPE**

* Suffix

**Boolean variables – true, false, null**

* **//basta hndi 0 true siya.**
* **For character basta hndi siya null (TRUE)**

**//search how a character can be used in a Boolean. When it is true, false, or null. ANSWER: equal or not eaul**

**Composite varaibles –**

Reference variables – (Eg, %type %rowtype)

**Lexical units**

//identifeier – varaibles.

//literal values – “ ”

//delimeters

//Literals

//comments

// remote access indicator (@) – DBLink //research

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/\* \*/

Identifers

* Cannot contain hyphens(-), slashes, and spaces.
* Should not hace a same name of a database column name.

Literals

* Character and date ‘ ‘
* / - runs a pl/swl in a script file.

//day-month-year

//conversion functions

//qualify an identifier <<outer>>

//please capitalize

INTO – must retyrn only one row.

* specify where I would put it.

MERGE

CURSOR

* two types
  + IMPLICIT –
  + EXPLICIT - !!RESEARCH
* Do not include into
* OPEN – open cursor to ezecute query.
  + If no rows, no exception

FETCH

* Current row values into variables.
* Test to see whether the cursor contains row.

CLOSE

* Do not attempt to close data after close.

//research loop

//DBMS\_OUTPUT.PUT\_LINE

FOR loops

* Implicitly open, fetch, and close the cursor.

SQL CURSOR ATTRIBUTES //research

TRANSACTION CONTROL STATEMENTS

//EXCEPTION TYPES

//IMPLICIT VS EXPLICIT

SUBPROGRAMS

* Procedure and function (TYPES)

PROCEDURE – type of programs that performs an action

* Can be stored in the database

FORMAL PARAMETERS – aka parameters when creating a procedure

ACTUAL PARAMETERS – calling a procedure.

Viewing OUT parameters

* PRINT

METHODS OF PASSING PARAMETERES

* Positional
* Named
* ??

//research Exception handling

FUNCTIONS

* Used repeatedly
* Not anonymous (named)
* Is called as a part of an expression.
* Cannot direct print a returned value. Must store in a variable.
* IN THE SELECTM WHERE, HAVING, CONNECT BY, START WITH, ORDER BY, GROUP BY
* IN THE VALUES OF INSERT
* SET CLAUSE OF THE UPDATE
* no error handler

PROCEDURE VS FUNCTION

* function has a return close
* In clause parameter only and return.
* Function must return a single value.
* Procedure, in out , in, out, or none.
* Function must assign the variable; procedure is in the out parameters.

RESTRICTIONS

* Not anonymous
* In parameters
* Return and accepts only valid sql data types
* Cannot contain dml statements

PACKAGE

* Two parts”
  + Specification – declarations of global objects
  + Body - programs and subprograms, functions, and procedures.

//no body without specs

// can specs without body.

//research about users defined error

GUIDELINES FOR PACJAGES

* Used for multiple times that your will use it for different procedures.
* Spec first before the body.

ADVANTAGES OF PACKAGES

* Modularity //research
* Better performance
* Overloading

OVERLOADING

* //research

//research ETL (Extract transfer and load)

//SAP

//research tablespace, partition, kind of partition, values, grant

!//remember constraints

?//external table – use to access dot file.

* Can throw oracle error

?//access and fields

?// global temporary table (GTT) – session base

* session one cannot \_\_ session 2

?// materialized views

?// index

A editor

B public variable consistent

?//persistent state

?//parallelized (parallel\_enable)

?//hand shake