***Oracle PL-SQL Course***

***Lesson 01***

**The Need Of PL-SQL:** **We need PL-SQL for run complex query and many conditions with sample way and that’s can run easy with programmer language like PL-SQL**

* **Example: If some one ask from us to update table salary but with many conditions like if the employee in department 1 increases the salary by 20%, if employee in department 2 increases the salary by 10%.... etc. Here is the problem in SQL we don’t have something like loop or if statement and that can be in programming language like JAVA, KOTLIN and PL-SQL.**

**PL-SQL Block Structure:**

* **DECLARE(Optional):** Here we can define the variables, cursors and user-defined exceptions
* **BEGIN(Mandatory):** Here we start write or SQL Statements and PL-SQL Statements.
* **EXCEPTION(Optional):** Here is the action to perform when there is an errors.
* **END(Mandatory):** Here we close and end our Block.

**Example** SET SERVEROUTPUT ON; -- We use this to print on the screen on oracle developer.

-- Lets start and make the first program like any programmer language.

BEGIN -- Here starts the Block.

dbms\_output.put\_line('Hello, World'); -- Here we tell the Serever to print this words.

END; -- Here close or ends the Block.

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**Example2:** DECLARE

n1 NUMBER; n2 NUMBER;

RESULTS NUMBER;

BEGIN

N1 := &Enter\_number1;

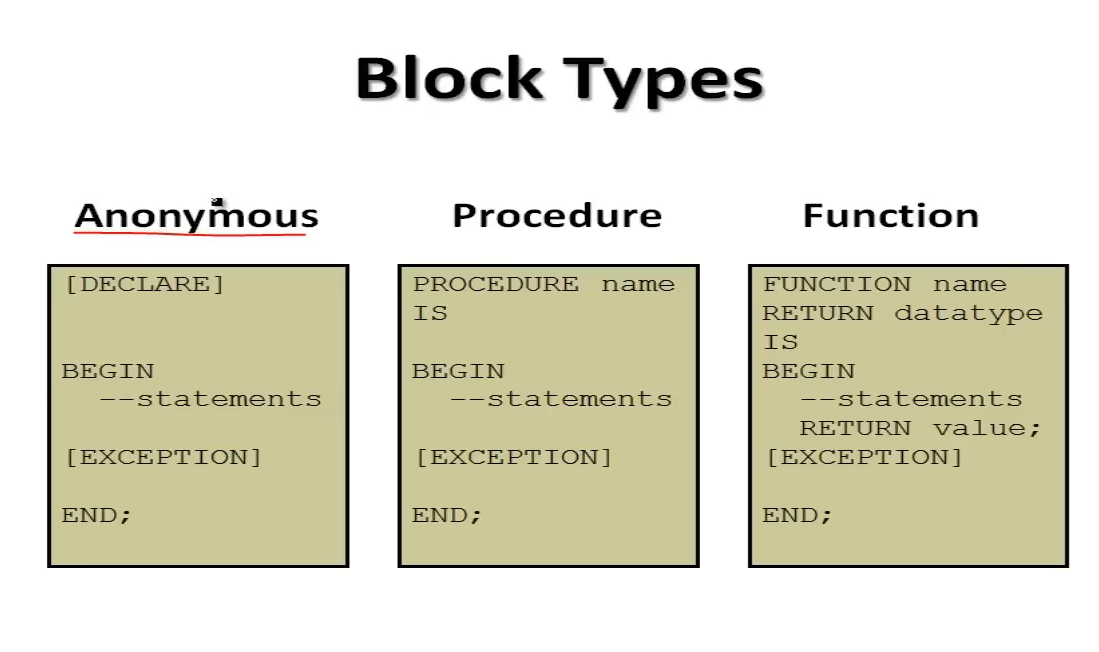
N2 := &Enter\_number12;

RESULTS := N1 + N2;

dbms\_output.put\_line( 'The Result is: '||RESULTS);

END;

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***Lesson 2 Variables P1***

**Variable:**

* Must start with letter.
* can include letter or number.
* can include spac char.
* must contain no more than 30 char.
* must not include reserved words in oracle.
  + Example: “” SET serveroutput on;

DECLARE

v\_first varchar2(30) := 'Ask Gad';

v\_number number;

v\_date date default sysdate;

v\_bool boolean:= true;

v\_const CONSTANT number := 29; -- we cant change this after with made it.

BEGIN

v\_first:= 'Nader';

v\_number:= 20;

if v\_bool

then

dbms\_output.put\_line('My name is: '|| v\_first||' Today is: '||v\_date||' Iam '||v\_number||' years old.');

v\_bool:= false; end if;

if v\_bool

then

dbms\_output.put\_line('My name is: '|| v\_first||' Today is: '||v\_date||' Iam '||v\_number||' years old.');

else

dbms\_output.put\_line('The v\_bool is false');

end if;

END;

/ ””

***Lesson 3 Variables P2***

**Here we learn how to select from the data base and put it into the variables.**

* Example:

“” DECLARE

v\_salary NUMBER(10,2);

v\_first\_name employees.first\_name%type;

v\_last\_name v\_first\_name%type;

BEGIN

SELECT salary, first\_name, last\_name into v\_salary, v\_first\_name, v\_last\_name FROMemployees WHERE employee\_id = 100;

dbms\_output.put\_line(v\_first\_name||' '||v\_last\_name||' his salary is: '||v\_salary);

END;

/ ””

**Pinned Variables:** **we can make a variable that we can called from anywhere in or out the block.**

* **Example:** “” VARIABLE v\_salary number

BEGIN

SELECT salary into :v\_salary FROM employees WHERE employee\_id = 100;

END;

/

print v\_salary “”

***Lesson 4 If Statement***

**If Statement: We use the if statement in comparison to find the result to choose the appropriate answer.**

* **Example:** SET serveroutput on;

DECLARE

number1 number:=&EnterYourNumber;

BEGIN

if mod(number1,2) = 0 then dbms\_output.put\_line('The number is '||number1||' is odd'); else dbms\_output.put\_line('The number is '||number1||' is even');

end if;

***Lesson 5 CASE***

**CASE: Oracle prefer that we use case when we have many options and search.**

* **CASE Statement:**
  + **Example:** “” SET serveroutput ON;

DECLARE

v\_grade CHAR(1) := upper('&enter\_letter');

BEGIN

CASE v\_grade

WHEN 'A' THEN

dbms\_output.put\_line('Exelent');

WHEN 'B' THEN

dbms\_output.put\_line('V.Good');

WHEN 'C' THEN

dbms\_output.put\_line('Good');

ELSE

dbms\_output.put\_line('Poor');

END CASE;

END;

/ “”

* **Search with CASE Statement:**
  + **Example:** SET serveroutput ON;

DECLARE

v\_grade CHAR(1) := upper('&enter\_letter');

BEGIN

CASE

WHEN v\_grade = 'A' THEN

dbms\_output.put\_line('Exelent');

WHEN v\_grade in('B','C') THEN

dbms\_output.put\_line('V.Good');

WHEN v\_grade > 'C' THEN

dbms\_output.put\_line('Good');

ELSE

dbms\_output.put\_line('Not found');

END CASE;

END;

/

* **CASE Expression:**
  + **Example:** SET serveroutput ON;

DECLARE

v\_grade CHAR(1) := upper('&enter\_letter');

appraisal VARCHAR2(30);

BEGIN

appraisal:=

CASE v\_grade

WHEN 'A' THEN

'Exelent'

WHEN 'B' THEN

'V.Good'

WHEN 'C' THEN

'Good'

ELSE

'Not found'

END;

dbms\_output.put\_line('The appraisal for grade '||v\_grade||' is: '||appraisal);

END;

/

* **Search with CASE Expression:**
  + **Example:** SET serveroutput ON;

DECLARE

v\_grade CHAR(1) := upper('&enter\_letter');

appraisal VARCHAR2(30);

BEGIN

appraisal:=

CASE

WHEN v\_grade = 'A' THEN

'Exelent'

WHEN v\_grade IN('B','C') THEN

'V.Good'

WHEN v\_grade > 'C' THEN

'Good'

ELSE

'Not found'

END;

dbms\_output.put\_line('The appraisal for grade '||v\_grade||' is: '||appraisal);

END;

/