Database Programming with PL/SQL

15-1: Using PL/SQL Initialization Parameters Practice Activities

Vocabulary

Identify the vocabulary word for each definition below:

USER_PLSQL_OBJECT_SETTINGS	is the data dictionary view to see how a PL/SQL program was compiled.
PLSQL_CODE_TYPE	can improve execution speed of compiled PL/SQL code.
PLSQL_OPTIMIZE_LEVEL	can be used to control what the PL/SQL Compiler does with useless code, as well as giving other performance benefits.
PLSQL INITIALIZATION PARAMETER	are used to change the way a user's database session interacts with the Oracle server.

Try It / Solve It

1. What are the two parameter values for PLSQL_CODE_TYPE and what do they do?

Interpretado: el código se analiza y cambia a código fuente, una línea a la vez. Solo aparece un error a la vez. Interpretado es flexible que el código compilado y permite características más dinámicas.
Compilado: cuando se compila un programa PL/SQL, todo el código se analiza y se verifica semánticamente a la vez.

2. What are the 4 modes for PLSQL_OPTIMIZE_LEVEL and what do they do?

Level=0 La compilación del código será más lenta, pero será compatible con versiones anteriores de Oracle.

Level=1 La compilación remueve código innecesario y excepciones del ejecutable.

Level=2 Este es el nivel establecido por defecto, además mueve el código a diferentes lugares si es que el código se ejecutara mejor.

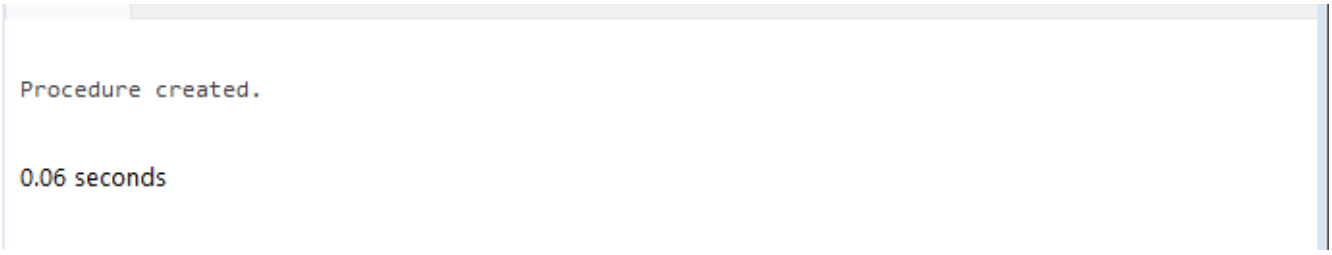
Level=3 Este nivel incluye los beneficios de los niveles 1 y 2.

3. Create the procedure testproc as listed below after setting the optimization level to 0 and compilation type to interpreted. Verify the code type mode and optimization level. Execute the procedure and note the runtime.

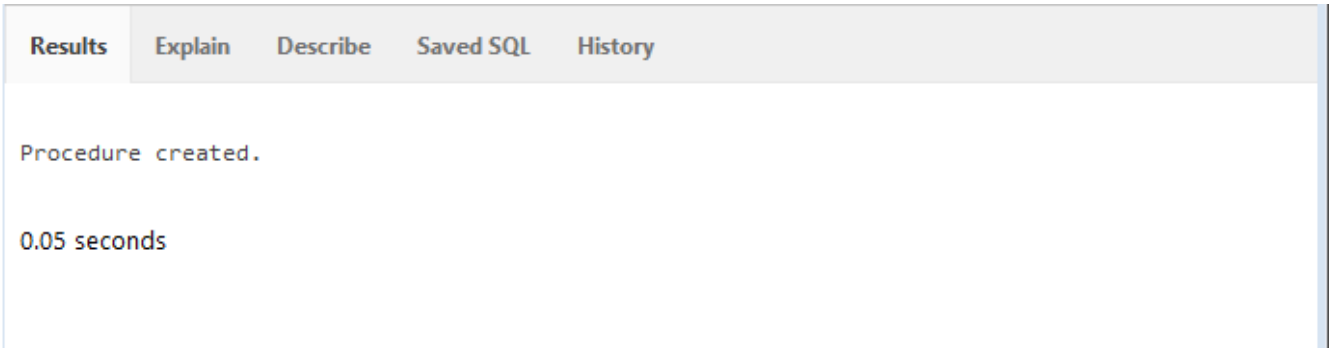
```
CREATE OR REPLACE PROCEDURE testproc IS
v_count         INTEGER := 1;
BEGIN
  IF v_count = 1 THEN
    DBMS_OUTPUT.PUT_LINE('The count is one.');
  ELSE
    DBMS_OUTPUT.PUT_LINE('The count is not one.');
END IF;
  FOR i IN 1..500000 LOOP
    SELECT COUNT(*) INTO v_count FROM employees;
  END LOOP;
END testproc;
```

ALTER SESSION SET PLSQL_OPTIMIZE_LEVEL=0;

ALTER SESSION SET PLSQL_CODE_TYPE=INTERPRETED;



4. Change the optimization level to the default value. Recompile the procedure testproc. Verify the code type mode and optimization level. Execute the procedure and note the runtime.



5. Finally, change the compilation type to native. Again, verify the code type mode and optimization level. Execute the procedure and note the runtime.