

Database Programming with PL/SQL

6-3: Cursor FOR Loops Practice

Activities

Vocabulary

Identify the vocabulary word for each definition below:

Cursor FOR loop	Automates standard cursor-handling operations such as OPEN, FETCH, %NOTFOUND, and CLOSE so that they do not need to be coded explicitly
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Try It / Solve It

1. Describe two benefits of using a cursor FOR loop.

El FOR LOOP abre automáticamente el cursor, y además no es necesario poner una condición de paro, porque el ciclo automáticamente cierra cuando no detecta más líneas en el cursor.

2. Modify the following PL/SQL block so that it uses a cursor FOR loop. Keep the explicit cursor declaration in the DECLARE section. Test your changes.

```

DECLARE
  CURSOR countries_cur IS
    SELECT country_name, national_holiday_name, national_holiday_date
      FROM countries
      WHERE region_id = 5;
  countries_rec countries_cur%ROWTYPE;
BEGIN
  for countries_rec IN countries_cur LOOP
    DBMS_OUTPUT.PUT_LINE ('Country: ' || countries_rec.country_name || ' National holiday: ' || countries_rec.national_holiday_name || ', held on: ' || countries_rec.national_holiday_date);
  END LOOP;
END;

```

3. Modify your answer to question 2 to declare the cursor using a subquery in the FOR...LOOP statement, rather than in the declaration section. Test your changes again.

BEGIN

**for countries_rec IN (SELECT country_name, national_holiday_name,
national_holiday_date**

FROM countries

WHERE region_id = 5) LOOP

**DBMS_OUTPUT.PUT_LINE ('Country: ' || countries_rec.country_name || ' National holiday:
' || countries_rec.national_holiday_name || ', held on: ' ||
countries_rec.national_holiday_date);**

END LOOP;

END;

4. Using the COUNTRIES table, write a cursor that returns countries with a highest_elevation greater than 8,000 m. For each country, display the country_name, highest_elevation, and climate. Use a cursor FOR loop, declaring the cursor using a subquery in the FOR...LOOP statement.

BEGIN

for countries_rec IN (SELECT country_name, HIGHEST_ELEVATION, CLIMATE

FROM countries

WHERE HIGHEST_ELEVATION > 8000) LOOP

**DBMS_OUTPUT.PUT_LINE ('Country: ' || countries_rec.country_name || ' Highest
Elevation: ' || countries_rec.highest_elevation || ' Climate: ' || countries_rec.climate);**

END LOOP;

END;

5. This question uses a join of the SPOKEN_LANGUAGES and COUNTRIES tables with a GROUP BY and HAVING clause.

Write a PL/SQL block to fetch and display all the countries that have more than six spoken languages. For each such country, display country_name and the number of spoken languages. Use a cursor FOR loop, but declare the cursor explicitly in the DECLARE section. After all the rows have been fetched and displayed, display an extra row showing the total number of countries having more than six languages. (Hint: Declare a variable to hold the value of %ROWCOUNT.)

6. Why did your block in question 4 need to declare the cursor explicitly, instead of declaring it as a subquery in the FOR...LOOP statement?