

# Cursor FOR Loops

## Terminology

Directions: Identify the vocabulary word for each definition below:

1. \_\_\_\_\_ Automates standard cursor-handling operations such as OPEN, FETCH, %NOTFOUND and CLOSE, so that they do not need to be coded explicitly

## Try It/Solve It

1. Describe two benefits of using a cursor FOR loop
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 wf_countries_cur IS
    SELECT country_name, national_holiday_name,
           national_holiday_date
    FROM wf_countries
    WHERE region_id = 5;
  wf_countries_rec wf_countries_cur%ROWTYPE;
BEGIN
  OPEN wf_countries_cur;
  LOOP
    FETCH wf_countries_cur INTO wf_countries_rec;
    EXIT WHEN wf_countries_cur%NOTFOUND;
    DBMS_OUTPUT.PUT_LINE ('Country: ' ||
                          wf_countries_rec.country_name
                          || ' National holiday: ' ||
                          wf_countries_rec.national_holiday_name
                          || ', held on: ' ||
                          wf_countries_rec.national_holiday_date);
  END LOOP;

  CLOSE wf_countries_cur;
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.
4. Using the wf\_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.

5. This question uses a join of the wf\_spoken\_languages and wf\_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?