Homework Week #4
PL/SQL Virtual Training

1. Write and test a PL/SQL block to read and display all the rows in the wf_countries table for all countries in region 5 (South America region). For each selected country, display the country_name, national_holiday_date, and national_holiday_name. Display only those countries having a national holiday date that is not null.

2. For this exercise, you use the employees and departments table. Create a PL/SQL block that fetches and displays the names of the five departments with the most employees (Hint: use a join condition). For each of these departments, display the department name and the number of employees. Order your output so that the department with the most employees is displayed first. Use %ROWTYPE and the explicit cursor attribute %ROWCOUNT.

3. Look again at the block you created in question 2. What if you wanted to display 10 departments instead of 5? There are only 7 rows in the departments table. What do you think would happen?

4. In real life we would not know how many rows the table contained. Modify your block from question 2 so that it will exit from the loop when either 10 rows have been fetched and displayed, or when there are no more rows to fetch. Test the block again.

5. 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_currencies_cur IS
    SELECT  currency_code, currency_name
      FROM  wf_currencies
      ORDER BY currency_name;
  v_curr_code   wf_currencies.currency_code%TYPE;
  v_curr_name   wf_currencies.currency_name%TYPE;
BEGIN
  OPEN wf_currencies_cur;
  LOOP
    FETCH wf_currencies_cur
      INTO v_curr_code, v_curr_name;
    EXIT WHEN wf_currencies_cur%NOTFOUND;
    DBMS_OUTPUT.PUT_LINE(v_curr_code || ' ' || v_curr_name);
  END LOOP;
  CLOSE wf_currencies_cur;
END;
```

6. Write a PL/SQL block to display the country_name and area of all countries in a chosen region. The region_id should be passed to the cursor as a parameter. Test your block using two region_ids: 5 (South America) and 30 (Eastern Asia). Do not use a cursor FOR loop.

7. Write and run a PL/SQL block which produces a listing of departments and their employees. Use the departments and employees tables. In a cursor FOR loop, retrieve and display the department_id and department_name for each department, and display a second line containing '----------' as a separator. In a nested cursor FOR loop, retrieve and display the first_name, last_name and salary of each employee in that department, followed by a blank line at the end of each department.   Order the departments by department_id, and the employees in each department by last_name.

You will need to declare two cursors, one to fetch and display the departments, the second to fetch and display the employees in that department, passing the department_id as a parameter.

Your output should look something like this (only the first few departments are shown):

10 Administration

Jennifer Whalen 4400

20 Marketing

Pat Fay 6000
Michael Hartstein 13000

50 Shipping

Curtis Davies 3400
Randall Matos 2600
Kevin Mourgos 5800
Trenna Rajs 3500
Peter Vargas 2500