Conditional Control: Case Statements

Terminology

Directions: Identify the vocabulary word for each definition below:

1. _____ An expression that selects a result and returns it into a variable.

2. _____ Shows the results of all possible combinations of two conditions.

3. _____ A block of code that performs actions based on conditional tests.

Try It/Solve It

1. Write a PL/SQL block:

A. To find the number of airports from the wf_countries table for a supplied country_name. Based on this number, display a customized message as follows:

# Airports	Message
0–100	There are 100 or fewer airports.
101–1,000	There are between 101 and 1,000 airports.
1001–1,0000	There are between 1,001 and 10,000 airports.
> 10,000	There are more than 10,000 airports.
No value in database	The number of airports is not available for this country.

Use a CASE statement. You can use the following code to get started:

```
DECLARE
  v_country_name wf_countries.country_name%TYPE :=
                  '<country_name>';
  v_airports    wf_countries.airports%TYPE;
BEGIN
  SELECT airports INTO v_airports
    FROM wf_countries
    WHERE country_name = v_country_name;

  CASE
    WHEN ...
  END CASE;

END;
```

B. Test your code against the following data:

	No value	0–100	101–1,000	1,001–10,000	> 10,000
Canada				X	
Malaysia			X		
United States of America					X
Romania		X			
Japan			X		
Mongolia		X			
Navassa Island	X				

2. Write a PL/SQL block:

A. To find the amount of coastline for a supplied country name. Use the wf_countries table. Based on the amount of coastline for the country, display a customized message as follows:

Length of Coastline	Message
0	no coastline
<1000	a small coastline
<10000	a mid-range coastline
All other values	a large coastline

Use a CASE expression. Use the following code to get started:

```
DECLARE
  v_country_name        wf_countries.country_name%TYPE :=
                '<country name>';
  v_coastline          wf_countries.coastline %TYPE;
  v_coastline_description  VARCHAR2(50);

BEGIN
  SELECT coastline INTO v_coastline
    FROM wf_countries
    WHERE country_name = v_country_name;

  v_coastline_description :=
    CASE ...
    END;

  DBMS_OUTPUT.PUT_LINE('Country ' || v_country_name ||
  ' has ' || v_coastline_description);
END;
```

B. Test your code against the following data:

	No coastline	Small coastline	Mid-range coastline	Large coastline
Canada				X
Jamaica			X	
Mongolia	X			
Ukraine			X	
Japan				X
Grenada		X		

3. Use a CASE statement:

A. Write a PL/SQL block to select the number of countries using a supplied currency name. If the number of countries is greater than 20, display "More than 20 ccountries". If the number of countries is between 10 and 20, display "Between 10 and 20 countries". If the number of countries is less than 10, display "Fewer than 10 countries".   Use a CASE statement.

B. Test your code using the following data:

	Fewer than 10 countries	Between 10 and 20 countries	More than 20 countries
US Dollar		X	
Swiss franc	X		
Euro			X

4. Examine the following code.

A. What do you think the output will be? Test your theory by running the code in Application Express.

```
DECLARE
  x BOOLEAN := FALSE;
  y BOOLEAN;
  v_color VARCHAR(20) := 'Red';
BEGIN
  IF (x OR y)
       THEN v_color := 'White';
  ELSE
       v_color := 'Black';
  END IF;
  DBMS_OUTPUT.PUT_LINE(v_color);
END;
```

B. Change the declarations to x and y as follows. What do you think the output will be? Test your theory by running the code again.

```
x BOOLEAN ;
y BOOLEAN ;
```

C. Change the declarations to x and y as follows. What do you think the output will be? Test your theory by running the code again.

```
x BOOLEAN := TRUE;
y BOOLEAN := TRUE;
```

D. Experiment with changing the OR condition to AND.