

## Homework Week #6

### PL/SQL Virtual Training

#### 1. Function full\_name:

- A. Create a function called `full_name`. Pass two parameters to the function: an employee's last name and first name. The function should return the full name in the format: last name, comma and space, first name (for example: Smith, Joe). Save your code.
- B. Test your function from an anonymous block which uses a local variable to store and display the returned value.
- C. Modify your anonymous block from step b to remove the local variable declaration and call the function directly from within the `DBMS_OUTPUT.PUT_LINE` call. Test the block again.
- D. Now call the function from within a SQL `SELECT` statement. Execute a SQL statement (not a PL/SQL block) which displays the `first_name`, `last_name` and full name (using the function) of all employees in department 50. Your output should look like this:

FIRST_NAME	LAST_NAME	Full Name
Kevin	Mourgos	Mourgos, Kevin
Trenna	Rajs	Rajs, Trenna
Curtis	Davies	Davies, Curtis
Randall	Matos	Matos, Randall
Peter	Vargas	Vargas, Peter

#### 2. Function divide:

- A. Create a function called `divide` that accepts two numbers as input and returns the result of dividing the first number by the second number, rounded to two decimal places. Save your code.
- B. Test your function twice from an anonymous block using input values (50,2) and (25,3).
- C. Test your function a third time using input values (16,0). What happens?

D. Modify the function code to trap the ZERO\_DIVIDE exception. The exception handler should return a value of zero from the function if ZERO\_DIVIDE is raised.

E. Test your function again using input values (16,0) as before. Now what happens?

3. List four major differences between a procedure and a function.
4. Write a query to show all functions and procedures to which you have access. Include the owner of the object as well.
5. If you wanted user SUSAN to be able to execute SELECT and all DML statements on your wf\_countries table, what SQL statement would you execute to give her the required privileges?
6. Another user TOM creates a table called tomtab, and does not grant you any privileges on it.

A. If you try to execute the following statement, will it work?

```
INSERT INTO tom.tomtab (...) VALUES (...);
```

B. Examine the following code. Now the INSERT statement has been included in a procedure which you have created. Will it work now?

```
CREATE OR REPLACE PROCEDURE my_ins_proc
IS
BEGIN
    INSERT into tom.tomtab (...)
        VALUES (.....);
END;
```

C. TOM now executes the following statement:

```
GRANT INSERT ON tomtab TO <your user name>;
```

Will your my\_ins\_proc procedure work now? Why or why not?

- D. TOM now REVOKEs your INSERT privilege on tomtab. TOM then writes the following procedure. Which privilege must TOM grant to you to allow you to execute the procedure? With this privilege, will your INSERT work now?

```
CREATE OR REPLACE PROCEDURE tom_ins_proc
  IS
BEGIN
  INSERT into tom.tomtab (...)
    VALUES (.....);
END;
```