Assignment #3 – Cursors, Procedures & Functions

Due Date: Midnight of March 11 (Friday)

Purpose: The purpose of this assignment is to help you:
- Become familiar with Cursors, Exceptions, Procedures and Functions

Instructions: Be sure to read the following general instructions carefully:
This assignment should be completed individually by all the students. Submit your solution **through the dropbox.** Your submission should include PL/SQL code and the screenshot of code execution result, the submission must be named according to the following rule: **studentID(yourlastname)_Assignment#number.doc**. e.g., 300123456(**smith)_Assignment#3**.doc
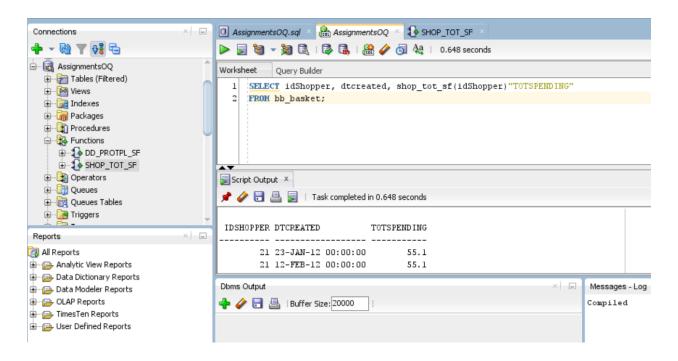
Questions [14 marks]

1. **[3 marks]** Create a function to calculate a shopper's total spending, excluding shipping and tax amount, with Brewbean's site in a particular year. Exception handling is needed.

   Use an anonymous block to call the function and output the result.

   ```
   CREATE OR REPLACE FUNCTION SHOP_TOT_SF(p_id IN NUMBER)
     RETURN NUMBER
     AS
     lv_tot_num NUMBER(8,2);
   BEGIN
     SELECT SUM(subtotal)
     INTO lv_tot_num
     FROM bb_basket
     WHERE idShopper = p_id;
     RETURN lv_tot_num;
   END SHOP_TOT_SF;
   ```
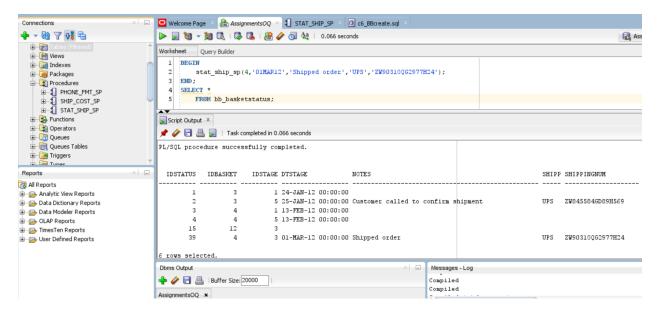
   ```
   SELECT idShopper, dtcreated, shop_tot_sf(idShopper)"TOTSPENDING"
   FROM bb_basket;
   ```

2. **[3 marks]** Create a procedure to allow an employee in the shipping department to update an order status to add **shipping information**. The BB_BASKETSTATUS table lists events for each order so that a shopper can see the **current status**, **date**, and **comments as each stage** of the order process are finished.

    Use an anonymous block to test your procedure.

    ```
    CREATE OR REPLACE PROCEDURE STAT_SHIP_SP
       (p_basketid IN bb_basketstatus.idbasket%TYPE,
       p_date IN DATE,
       p_note IN bb_basketstatus.notes%TYPE,
       p_shipper IN bb_basketstatus.shipper%TYPE,
       p_shipnum IN bb_basketstatus.shippingnum%TYPE)
    AS
    BEGIN
       INSERT INTO bb_basketstatus (idstatus, idbasket, idstage, dtstage, Notes,
       shipper, shippingnum)
       VALUES (bb_status_seq.NEXTVAL, p_basketid, 3, p_date, p_note, p_shipper,
       p_shipnum);
       COMMIT;
    END STAT_SHIP_SP;

    BEGIN
       stat_ship_sp(4,'01MAR12','Shipped order','UPS','ZW9031OQG2977H24');
    END;
    SELECT *
       FROM bb_basketstatus;
    ```

3. **[3 marks]** Create a function to insert a new product into an existing order, include the product id, unit price, quantity. The output of the function is the message to notify the calling program whether the update succeeded or not.

    Use an anonymous block to call the function and output the result.

4. **[3 marks]** Create a function to determine the total pledge amount for a project. Use the function in an SQL statement to list all projects, displaying project ID, project name, and project pledge total amount. Format the pledge total amount to show a dollar sign.

    Add at least two rows in dd_pledge for the project "Covid-19 relief fund" which you created in assignment#2.

```
CREATE OR REPLACE FUNCTION DD_PROTPL_SF(p_id IN dd_project.idproj
%TYPE)
RETURN NUMBER
AS
lv_amt_num NUMBER(9,2);
BEGIN
SELECT SUM(pledgeamt)
INTO lv_amt_num
FROM dd_pledge
WHERE idproj = p_id;
RETURN lv_amt_num;
END DD_PROTPL_SF;


INSERT INTO dd_pledge
   VALUES (113,301,'12-OCT-2012',31,600,20,NULL,0,738,'N');
INSERT INTO dd_pledge
   VALUES (114,302,'15-OCT-2012',20,600,10,NULL,24,749,'Y');
INSERT INTO dd_pledge
```
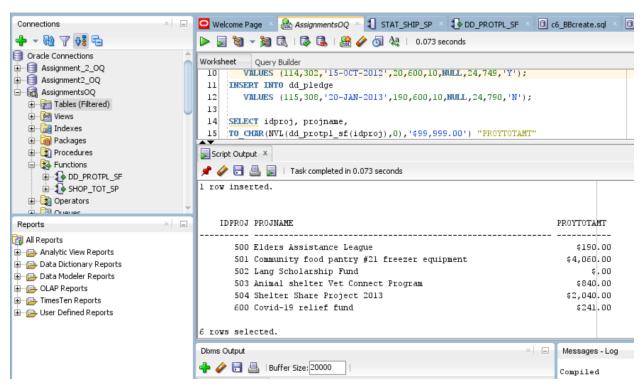
VALUES (115,308,'20-JAN-2013',190,600,10,NULL,24,790,'N');

SELECT idproj, projname,
TO_CHAR(NVL(dd_protpl_sf(idproj),0),'$99,999.00') "PROYTOTAMT"
FROM dd_project;

5. **[2 marks]** Create a procedure to allow company employee to add new product to the database. This procedure needs only IN parameters.

Use an anonymous block to test your procedure.

```
CREATE OR REPLACE PROCEDURE ADD_NPR_SP
(p_name IN bb_product.productname%TYPE,
p_descrip IN bb_product.description%TYPE,
p_image IN bb_product.productimage%TYPE,
p_price IN bb_product.price%TYPE,
p_active IN bb_product.active%TYPE,
p_type IN bb_product.type%TYPE,
P_iddep IN bb_product.iddepartment%TYPE)
AS
BEGIN
INSERT INTO bb_product (idproduct, productname, description,
productimage, price, active, type, iddepartment)
VALUES (bb_prodid_seq.NEXTVAL, p_name, p_descrip, p_image, p_price,
p_active, p_type, p_iddep);
COMMIT;
END ADD_NPR_SP;
```

BEGIN
add_npr_sp('Titanium Iron 50X','Innovative night energy saving device',
          'ironsuper.jpg',9.50,1,'C',2);
END;
SELECT *
FROM bb_product