

939 Progress Avenue, Scarborough, Ontario, Canada M1G 3T8

Final Exam (Hands on)   
COMP214

*Prof.Zoran Sarajlic*Summer 2023

This is an open-book test, and you can use any resources (e.g., lecture notes, examples, your assignments, etc.) that you feel may help. However you are not allowed to communicate with anyone during the test. Please keep in mind that you are responsible for securing your own code. You will be penalized if another person has your code, or similar with your code.

Instructions: **Be sure to read the following general instructions carefully**:

* This test must be completed individually by all students
* Submit your solution **through dropbox for Final Test Hans-on within class time**. You must name your submission according to the following rule: **studentID(yourlastname)\_FinalExam.doc**

**Questions [12 marks]**

1. **[5 marks]** Assignment : Calculating a Shopper’s Total Number of Orders Another commonly used statistic in reports is the total number of orders a shopper has placed. Follow these steps to create a function named NUM\_PURCH\_SF that accepts a shopper ID and returns a shopper’s total number of orders. Use the function in a SELECT statement to display the number of orders for shopper 23.

1. Develop and run a CREATE FUNCTION statement to create the NUM\_PURCH\_SF function. The function code needs to tally the number of orders (using an Oracle built-in function) by shopper. Keep in mind that the ORDERPLACED column contains a 1 if an order has been placed. 2. Create a SELECT query by using the NUM\_PURCH\_SF function on the IDSHOPPER column of the BB\_SHOPPER table. Be sure to select only shopper 23.

2. Maintaining an Audit Trail of Product Table Changes The accuracy of product table data is critical, and the Brewbean’s owner wants to have an audit file containing information on all DML activity on the BB\_PRODUCT table. This information should include the ID of the user performing the DML action, the date, the original values of the changed row, and the new values. This audit table needs to track specific columns of concern, including PRODUCTNAME, PRICE, SALESTART, SALEEND, and SALEPRICE. Create a table named BB\_PRODCHG\_AUDIT to hold the relevant data, and then create a trigger named BB\_AUDIT\_TRG that fires an update to this table whenever a specified column in the BB\_PRODUCT table changes.

TIP Multiple columns can be listed in a trigger’s OF clause by separating them with commas.

Be sure to issue the following command. If you created the SALES\_DATE\_TRG trigger in the chapter, it conflicts with this assignment.

ALTER TRIGGER sales\_date\_trg DISABLE;

Use the following UPDATE statement to test the trigger:

UPDATE bb\_product SET salestart = '05-MAY-2012', saleend = '12-MAY-2012' saleprice = 9 WHERE idProduct = 10;

When you’re finished, do a rollback and disable the trigger so that it doesn’t affect other assignments.

**3. [5 marks]** Use ***Mongo shell*** or Mongo Compass commands to answer following questions in restarurants.json from MongoDB Lab Exercise (Week 12):

* 1. List id and address of borough: Manhattan, cuisine: American and name : westside restaurant".
  2. List address and Grades for street Broadway borough Manhattan cousine America and Name Toast.

***Only correctly executed and giving correct result code will be awarded with full mark(s).***