

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

Final Exam (Hands on)   
COMP214

*Prof.Zoran Sarajlic*Winter 2022

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]** ***BrewBean*** wants to know the total sold amount for a specific product within a particular year. Create a function to meet the requirement. Include exception handler.

***Write a SQL statement to test your function.***

1. **[5 marks]** At times, Brewbean’s has changed the ID numbers for existing products. In the past, developers had to add a new product row with the new ID to the BB\_PRODUCT table, modify all the corresponding BB\_BASKETITEM and BB\_PRODUCTOPTION table rows, and then delete the original product row.

Can a trigger be developed to avoid all these steps and handle the update of the BB\_BASKETITEM and BB\_PRODUCTOPTION table rows automatically for a change in product ID? If so, create the trigger and test it by issuing an UPDATE statement that changes the IDPRODUCT 7 to 22. Do a rollback to return the data to its original state, and disable the new trigger after you have finished this assignment.

***You also need to write SQL statement or/and PL/SQL code to demonstrate that implemented trigger accomplishes the business logic***

1. **[2 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 name only, and sort by zip restaurants in 7 Avenue and having Irish cousin.

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