**CS3431-A18: Project Description**

**Building a Database Application**

**Phase 2: Views, Triggers, and Procedures**

**Due Date:** Sa 9/29 at 5pm. No late submissions.

**Teams:** The project is to be done in teams of two

**Submission:** Make sure to include both of your names on the project submission. Only one student is to submit the assignment so be certain to determine who that will be in advance. The SQL code should be in a file named p2.sql and NOT include the SQL commands from p2start.sql.

**Description:**

Run the p2start.sql file to create and populate the tables for this project phase.

1. Create a view named ClassTypeStats that displays for each class/type of wine, the number of submitted forms, rejected forms, and approved forms. Name the fields of the view: ClassType, Submitted, Rejected, Approved. Create another view named RemainingCForms that uses ClassTypeStats to list the class/type of wines that begin with the letter C and the number of remaining forms to be completed (name the field Remaining). Order the results by class/type. Create a query that runs the view RemainingCForms.
2. Create a procedure named “FormsByAgent” that takes an agent’s name as an input and displays the number of wine forms that the agent has worked on. The output should look like the following example:  
   Agent Mary Young: 4  
     
   Research how to handle a NO\_DATA\_FOUND exception so if a non-existent agent is entered the number of forms worked on is 0. For example,  
   Agent Nobody Smith: 0

Create your procedure in parts so it is easier to debug! Make sure to test your procedure on various inputs. If you use the command line on the server, run the following so you can see the output:   
**sql> set serveroutput on;**

Create the following triggers:

1. Create a trigger named InsertErrorDates that displays the following errors if they apply to the new records to be inserted
   1. Rejection date is before submission date
   2. Approval date is before submission date
   3. There is both a rejection date and an approval date
2. Create a trigger named ExistingErrorDates that displays the same errors in problem 3 if they apply to existing records before inserts are done
3. Display an error message after an insert or update if there are government agents who are the current reviewer for more than 5 wine forms. Hint: if you get a mutating table error, try using a statement level trigger.
4. Create a trigger named ChangeStatus to change the status to ‘Rejected’ if a new or existing record has a rejection date or to ‘Approved’ if a new or existing record has an approval date.

Insert records to test the triggers above.