Unit 11 Problem Set Submission Form

# Overview

|  |  |
| --- | --- |
| Your Name | Rayanna Harduarsingh |
| Your SU Email | rharduar@syr.edu |

# Instructions

Put your name and SU email at the top. Answer these questions all from the lab. When asked to include screenshots, please follow the screen shot guidelines from the first lab.

Remember as you complete the problem sets it is not only about getting it right / correct. We will discuss the answers in class so it’s important to articulate anything you would like to contribute to the discussion in your answer:

* If you feel the question is vague, include any assumptions you've made.
* If you feel the answer requires interpretation or justification provide it.
* If you do not know the answer to the question, articulate what you tried and how you are stuck.

This how you receive credit for answering questions which might not be correct.

# Questions

Answer these questions using the problem set submission template. You will need to consult the logical model in the overview section for details. For any screenshots provided, please follow the guidelines for submitting a screenshot.

Write the following as SQL programs. For each, include the SQL as a screenshot with the output of the SQL Code.

1. Provide a screenshot of your code execution from the walkthrough were you modified **p\_upsert\_major** in the **TinyU** database to be transaction-safe.Graphical user interface, text, application

   Description automatically generated
2. Table

   Description automatically generatedTable

   Description automatically generatedProvide a screenshot of examples of executing the **p\_upsert\_major** procedure to demonstrate it is transaction safe.
3. Re-write the **p\_place\_bid** stored procedure from the **vBay** database so that it is transaction safe. Provide a screenshot of the code and its execution.Graphical user interface, text, application, email

   Description automatically generatedText

   Description automatically generated
4. Execute your stored procedure in step 3 to demonstrate the procedure works. Make user 2, Bid $105 on item 36 and show the bid was placed with a SELECT.

Table

Description automatically generated

Table

Description automatically generated

1. Re-write the **p\_rate\_user** stored procedure from the **VBay** database so that it is transaction safe. Provide a screenshot of the code and its execution.Graphical user interface, text, application

   Description automatically generatedA picture containing graphical user interface

   Description automatically generated
2. Execute the stored procedure in step 5 to demonstrate the rollback works. You should give a 6 star rating and then execute again where someone attempts to rate themselves. Produce as screen shot as evidence the rollback worked.Table

   Description automatically generated

Graphical user interface, text, application, email

Description automatically generatedGraphical user interface, text, application

Description automatically generated

1. There is a conceptual data requirement which says that no **TinyU** major can have more than 15 students in it. (I know, this seems silly but think of the bigger problem – how to we enforce a specific minimum or maximum cardinality instead of just 1 or “many”?) Write data logic using an instead of trigger to do this.Graphical user interface, text, application, email

   Description automatically generatedA picture containing background pattern

   Description automatically generated
2. Test step 7 by trying to add or update a student and change their major to ADS. The ADS major has 15 students already. Your code should drop/create the trigger and also test the success and failure of the trigger.t

Graphical user interface, text, application, email

Description automatically generated

# Reflection

Use this section to reflect on your learning. To achieve the highest grade on the assignment you must be as descriptive and personal as possible with your reflection.

1. What are the key things you learned through the process of completing this assignment?  
   I learned the need for transactions. We use database transactions to perform updates or retrieve data and we need it because it helps maintain transaction safety or data integrity. It helps us perform multiple operations as a single unit of work. I also learned the purpose of triggers and how it helps maintain data integrity and sometimes a check, unique, or foreign key is not enough. I also liked rollback as we can quickly undo an error such as if a constraint is violated.
2. What were the challenges or roadblocks (if any) you encountered on the way to completing it?  
   Transactions and triggers were a little bit difficult to write in terms of syntax and sometimes knowing which operations to use. It also took me a while to understand my test executions after writing a transaction as I was trying to see the bad, rather than the good as in what the error is, but all in all a transaction helps prevent that and make the stored procedure safe.
3. Were you prepared for this assignment? What can you do to be better prepared?  
   I was prepared for this assignment but watching the lecture and reviewing the slides. I also took the extra step and watched youtube videos to see more examples as I’ve been doing previously just to further understand concepts and see how the statements we learned are applied in different scenarios.
4. Now that you have completed the assignment rate your comfort level with this week’s material. This should be an honest assessment: (choose one)  
     
   4 ==> I understand this material and can explain it to others.  
   **3 ==> I understand this material.**  
   2 ==> I somewhat understand the material but sometimes need guidance from others.  
   1 ==> I understand very little of this material and need extra help.