Workshop 5

Updating data

Learning objectives

Upon successful completion of this workshop, you will have demonstrated the abilities to:

1. Create a table given a table schema with default and check constraints.
2. Test default and check constraints to ensure data correctness.
3. Update data in table for one or multiple rows when data about entity instance(s) have changed.
4. Delete rows from a table when an entity instance is no longer available.
5. Use rollback to reverse changes made to a table.

Required readings

Refer to M4\_SQL\_partII.ppt to answer the questions in this workshop.

Student declaration form

Add this declaration on the top of your Workshop5.docx file.

1. We, ------------(mention your names), declare that the attached assignment is our own work in accordance with the Seneca Academic Policy. No part of this assignment has been copied manually or electronically from any other source (including web sites) **or distributed to other students.**
2. Specify what each member has done towards the completion of this work:

|  |  |  |
| --- | --- | --- |
|  | Name | Task(s) |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Instructions [33pts]

Using TinyCollege database, write the sql queries to answer each of the following questions. Your answer should consist of the SQL query and also the result of the query in a table form.

1. [4pts] Given the following table schema, write a SQL query to create the DEPARTMENT table. Define the pk constraint on a separate line after defining the columns. Define a check constraint in line with DEPT\_EXT column definition. (refer to slide 7)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table Name** | **Attribute** | **Type** | **Required** | **PK or FK** | **Constraint** |
| DEPARTMENT | DEPT\_CODE | varchar(10) | Y | PK |  |
|  | DEPT\_NAME | varchar(30) | Y |  |  |
|  | DEPT\_EXT | numeric(4) | Y |  | >0 |

1. [4pts] Use an alter command to add the column STU\_GPA with type float(8) to the STUDENT table with a default value equal 0 and a constraint to check for positive values when entered.
2. [4pts]

[2pts] Write an update command to change STU\_GPA to -1 to all students.

[2pts] What message did you get from the system? Explain why did the sql query not go through.

1. [4pts]

[3pts] Write an update command to change the STU\_INIT to B for student 321452 and student 324258.

[1pt] Then show the data in the student table after the changes in a tabular format.

1. [3pts] Write an update command to change the STU\_INIT to S and date of birth to 1984-11-30 for student whose STU\_NUM is 324299.
2. [3pts]

[2pts] Student 324257 would like to drop class 10021. Write the sql query to delete the corresponding enrollment record from the ENROLL table.

[1pt] Show the data in the ENROLL table after the changes in a tabular format.

1. [5pts]
   1. [1pt] Write a sql query to drop the STUDENT table. (refer to slide 29)
   2. [2pts] What error message did you get?

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* 1. [2pts] Which table(s) references the STU\_NUM in the student table? \_\_\_\_\_\_\_

Which rows in the child table caused dropping student table query to run into errors?

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1. [3pts] Commit a change: Write a sql query to change the ENROLL\_GRADE for student number 321452 for the class code 10021 to A+. Enclose your query with begin transaction statement as follows:

select \* from ENROLL;

BEGIN TRANSACTION t

[your SQL query]

go

select \* from ENROLL;

1. [3pts] Revert a change: our goal here is to revert the change post the update command using rollback. This is not possible if COMMIT was used in place of GO in the previous question. To rollback the last update on the ENROLL table, we need to specify the sql query that was used for the updates.

select \* from ENROLL;

BEGIN TRANSACTION t

[your SQL query]

Rollback;

select \* from ENROLL;

Additional References:

**Commit and rollback:** [**https://www.journaldev.com/23932/sql-commit-sql-rollback#syntax-for-sql-commit**](https://www.journaldev.com/23932/sql-commit-sql-rollback#syntax-for-sql-commit)

SUBMISSION

Submit the following two files on BB:

* A word document, named “w05\_groupX.doc” with your group number replaces X in the file name. You should include the question in text, the SQL query and the result set/screenshot when applicable as requested for each question.