**James Bailey CSD 310 Module 7 Discussion 7.1 SQL(Due: June 30, 2022)**

In this module's discussion board assignment, research “SQL” and respond to one of the following topics: Describe TCL. Provide at least two examples of TCL commands and explain when they might be used.

TCL stands for Transaction Control Language. These commands are for managing transactions within a database. There are three commands listed within our reading material, Commit, Rollback, Savepoint and Set Transaction.

**Commit** is used to **permanently** save any transactions into a database.

COMMIT;

**Rollback** is used to restore a database to the last committed state. Also used to the Savepoint command to jump to a specific savepoint in any ongoing transaction.

ROLLBACK TO savepoint\_name;

**Savepoint** is used to **temporarily** save a transaction so that the database can rollback to that specific point any time.

SAVEPOINT savepoint\_name;

INSERT INTO class VALUES(5, 'Rahul');

COMMIT;

UPDATE class SET name = 'Abhijit' WHERE id = '5';

SAVEPOINT A;

INSERT INTO class VALUES(6, 'Chris');

SAVEPOINT B;

INSERT INTO class VALUES(7, 'Bravo');

SAVEPOINT C;

SELECT \* FROM class;

Here it is seen that the user has created a few entries into the database, then calls for a savepoint after each inserted class.

\*the provided example omitted #3, but I did not. This is the difference between my graph, and the one in the cited page.

|  |  |
| --- | --- |
| **ID** |  |
| 1 | ABHI |
| 2 | ADAM |
| 3 | ALEX |
| 5 | ABHIJIT |
| 6 | CHRIS |
| 7 | BRAVO |

Rollback can be called now, to roll the state of data back to any of the savepoints.

I am including only one of the provided examples.

ROLLBACK TO B;

SELECT \* FROM class;

The document (‘Emp’-Employees for this example) is now absent of the seventh name addition.

|  |  |
| --- | --- |
| **ID** |  |
| 1 | ABHI |
| 2 | ADAM |
| 3 | ALEX |
| 5 | ABHIJIT |
| 6 | CHRIS |

;

SET TRANSACTION [ READ WRITE | READ ONLY ];

BEGIN TRANSACTION transaction\_name;

Used to start the transaction recording process.

SET TRANSACTION transaction\_name;

Used to save the recorded transactions as a name you can identify later.

**Works Cited:**

<https://www.geeksforgeeks.org/sql-transactions/>

https://www.studytonight.com/dbms/tcl-command.php

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