# **BTD210- Lab 10**

Please work in **groups** to complete this lab. This lab is worth 2% of the total course grade and will be evaluated through your written submission, as well as the lab demo. During the lab demo, group members are randomly selected to present the answers to each of the lab questions. Group members not present during the lab demo will lose the demo mark.

Please submit the following files through Blackboard. Only one person must submit for the team.

* Lab10.docx

1. Add this declaration on the top of your file.

We, Priya and Muskan), 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.**

1. Specify what each member has done towards the completion of this work:

|  |  |  |
| --- | --- | --- |
|  | Name | Task(s) |
| 1 | Priya | All answers, submission |
| 2 | Muskan | All answers |
| 3 |  |  |

Your goal in this lab is to understand the concept of transactions and see the difference in your employees table when using transactions, “commit”, “rollback” etc.

* To start a transaction type “begin work;”  
  You could also type “begin” or “start transaction”.  
  Any one of the three will work.

> begin work;

Query OK, 0 rows affected (0.00 sec)

* Then run any insert, update or delete command which changes data but does not change structure.

> update employees set Job\_id = 'HR';

> select \* from employees;

* Make a decision now to “commit” or “rollback”  
  If you “rollback” then any change to data will be reversed.

> rollback;

* Rollback will reverse the change in data.

> select \* from employees;

* What happens when you change structure??
  + When I did rollback it reverts everything in job\_id back to the way it was previously

> desc employees;

* Start another transaction

> begin work;

> alter table employees modify column department\_id decimal(7,2);

> rollback;

* Rollback will not reverse a change in structure. You are stuck with it!!

> desc employees;

* “Rollback” will reverse a change in data. “Commit” will accept and save the changes in data that you have made during the transaction.

> begin work;

> update employees set salary = (salary)\*(1.1) where department\_id = 50;

> select \* from employees;

> rollback;

> select \* from employees;

> begin work;

> update employees set salary = (salary)\*(1.1) where department\_id = 50;

> select \* from employees;

> commit;

> select \* from employees;

To be submitted:

1. Using the HR database
2. Start a transaction.
   * Delete all the data from the employees table where the department\_id is 50 or 60.

DELETE FROM employees WHERE department\_id ='50' OR department\_id = '60';

* + Show that the data is gone by running a select query.

SELECT \* FROM EMPLOYEES;

* + Rollback the transaction.

ROLLBACK;

* + Show that the data is returned by running a select query.

SELECT \* FROM EMPLOYEES;

employee\_id first\_name last\_name email phone\_decimal hire\_date job\_id salary commission\_pct manager\_id department\_id

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100 Steven King SKING 515.123.4567 1987-06-17 AD\_PRES 24000.00 NULL NULL 90

101 Neena Kochhar NKOCHHAR 515.123.4568 1989-09-21 AD\_VP 17000.00 NULL 100 90

102 Lex De Haan LDEHAAN 515.123.4569 1993-01-13 AD\_VP 17000.00 NULL 100 90

103 Alexander Hunold AHUNOLD 590.423.4567 1990-01-03 IT\_PROG 9000.00 NULL 102 60

104 Bruce Ernst BERNST 590.423.4568 1991-05-21 IT\_PROG 6000.00 NULL 103 60

107 Diana Lorentz DLORENTZ 590.423.5567 1999-02-07 IT\_PROG 4200.00 NULL 103 60

124 Kevin Mourgos KMOURGOS 650.123.5234 1999-11-16 ST\_MAN 6380.00 NULL 100 50

141 Trenna Rajs TRAJS 650.121.8009 1995-10-17 ST\_CLERK 3850.00 NULL 124 50

142 Curtis Davies CDAVIES 650.121.2994 1997-01-29 ST\_CLERK 3410.00 NULL 124 50

143 Randall Matos RMATOS 650.121.2874 1998-03-15 ST\_CLERK 2860.00 NULL 124 50

144 Peter Vargas PVARGAS 650.121.2004 1998-07-09 ST\_CLERK 2750.00 NULL 124 50

149 Eleni Zlotkey EZLOTKEY 011.44.1344.429018 2000-01-29 SA\_MAN 10500.00 0.20 100 80

174 Ellen Abel EABEL 011.44.1644.429267 1996-05-11 SA\_REP 11000.00 0.30 149 80

176 Jonathon Taylor JTAYLOR 011.44.1644.429265 1998-03-24 SA\_REP 8600.00 0.20 149 80

178 Kimberely Grant KGRANT 011.44.1644.429263 1999-05-24 SA\_REP 7000.00 0.15 149 NULL

200 Jennifer Whalen JWHALEN 515.123.4444 1987-09-17 AD\_ASST 4400.00 NULL 101 10

201 Michael Hartstein MHARTSTE 515.123.5555 1996-02-17 MK\_MAN 13000.00 NULL 100 20

202 Pat Fay PFAY 603.123.6666 1997-08-17 MK\_REP 6000.00 NULL 201 20

205 Shelley Higgins SHIGGINS 515.123.8080 1994-06-07 AC\_MGR 12000.00 NULL 101 110

206 William Gietz WGIETZ 515.123.8181 1994-06-07 AC\_ACCOUNT 8300.00 NULL 205 110

(20 rows affected)

5. Start a transaction.

* Delete all the data from the employees table where the department\_id is 50 or 60.

DELETE FROM employees WHERE department\_id ='50' OR department\_id = '60';

* Commit to this transaction

COMMIT;

* Show that the data is gone by running a select query.

SELECT \* FROM EMPLOYEES;

employee\_id first\_name last\_name email phone\_decimal hire\_date job\_id salary commission\_pct manager\_id department\_id

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(12 rows affected)

1. Start a transaction and modify the structure of the table employees. Try to “Rollback” this transaction and show that this is not possible.
2. When I did the rollback command then it came back to the original table before making this command change.

ALTER TABLE EMPLOYEES DROP COLUMN JOB\_ID;

1. Submit the code for transaction on BlackBoard under lab 10.

employee\_id first\_name last\_name email phone\_decimal hire\_date salary commission\_pct manager\_id department\_id

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(12 rows affected)