INSTITUTE : UIE
DEPARTMENT : APEX INSTITUTE OF TECHNOLOGY(CSE) -AIML

Bachelor of Engineering (Computer Science & Engineering)

Advanced Database Management System

Er. Vishwa Deepak (E12867)

Transaction Control

Course Objectives

CO Number	Course Objective	Level
CO1	Develop understanding the advancement in SQL	Apply

Course Outcome

CO Number	Course Outcome	Level
CO1	Describe and execute advanced level SQL queries	Apply

LECTURE OUTCOMES

❖Student will learn about the Transaction Control Language

1. Transaction processing

2. Transaction control language

3. Transaction control command : Commmit

4. Summary

REVISION…

- Transaction control language (TCL) manages the transactions within a database. Transactions group a set of related tasks into a single, executable task.

- These are used to manage the changes made by DML-statements.

- All the tasks must succeed in order for the transaction to work.

  TCL commands:

❖**COMMIT:** Carries out a transaction

❖**ROLLBACK:** Restores a transaction if any tasks fail to execute

❖**SAVEPOINT:** Sets a point in a transaction to save

TRANSACTION CONTROL LANGUAGE

- **Rollback:** ROLLBACK command restores database to original since the last COMMIT.

- It is used to restores the database to last committed state.

- It is used to undo transactions that have not already been saved to the database.

- Syntax:

- ROLLBACK;

- This command can only be used to undo transactions since the last COMMIT or ROLLBACK command was issued.

-

EXAMPLE:

DELETE FROM CUSTOMERS

WHERE AGE = 25;

ROLLBACK;

- It is also used with savepoint command to jump to a savepoint in a transaction.

- ROLLBACK TO SAVEPOINT <savepoint_name>;

SAVEPOINT

- SAVEPOINT Command: A SAVEPOINT is a point in a transaction when you can roll the transaction back to a certain point without rolling back the entire transaction.

- The syntax for a SAVEPOINT command is as shown below.

SAVEPOINT SAVEPOINT_NAME;

This command serves only in the creation of a SAVEPOINT among all the transactional statements

SQL> SAVEPOINT SP1;

Savepoint created.

SQL> DELETE FROM CUSTOMERS WHERE ID=1;

1 row deleted.

SQL> SAVEPOINT SP2;

Savepoint created.

SQL> DELETE FROM CUSTOMERS WHERE ID=2;

1 row deleted.

SQL> SAVEPOINT SP3;

Savepoint created.

SQL> DELETE FROM CUSTOMERS WHERE ID=3;

1 row deleted.

SQL> ROLLBACK TO SP2;

Rollback complete

SUMMARY

- Explained the transactional control language command Rollback.

- Explained the transactional control language command Savepoint.

HOME WORK

- What is rollback command?

- How does Savepoint command work?

REFERENCES

- **Reference book:** Database Systems concepts, Korth

- **Web References:**

- ORACLE
  https://docs.oracle.com/cd/E11882_01/server.112/e40540/transact.htm#CNCPT11 15

- https://www.tutorialspoint.com/sql/sql-transactions.htm

- https://www.geeksforgeeks.org/sql-ddl-dml-tcl-dcl/

THANK YOU

Mail at: Vishwa.e12867@cumail.in