

Database Systems Lab

Lab#13 – TCL

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TCL(Transaction Control Language) :

TCL commands deals with the transaction within the database.

Examples of TCL commands:

- **COMMIT**– commits a Transaction.
- **ROLLBACK**– rollbacks a transaction in case of any error occurs.
- **SAVEPOINT**–sets a savepoint within a transaction.

COMMIT command

COMMIT command is used to permanently save any transaction into the database.

When we use any DML command like **INSERT**, **UPDATE** or **DELETE**, the changes made by these commands are not permanent, until the current session is closed, the changes made by these commands can be rolled back.

To avoid that, we use the **COMMIT** command to mark the changes as permanent.

```
COMMIT;
```

ROLLBACK command

This command restores the database to last committed state. It is also used with **SAVEPOINT** command to jump to a savepoint in an ongoing transaction.

If we have used the **UPDATE** command to make some changes into the database, and realise that those changes were not required, then we can use the **ROLLBACK** command to rollback those changes, if they were not committed using the **COMMIT** command.

Following is rollback command's syntax,

```
ROLLBACK TO savepoint_name;
```

SAVEPOINT command

SAVEPOINT command is used to temporarily save a transaction so that you can rollback to that point whenever required.

Following is savepoint command's syntax,

```
SAVEPOINT savepoint_name;
```

In short, using this command we can **name** the different states of our data in any table and then rollback to that state using the **ROLLBACK** command whenever required.