PRACTICAL NO. 8

OBJECTIVE (AIM) OF THE EXPERIMENT

To study the various data language commands (DCL, TCL) and implements them on the database.

PROCEDURE

b) Procedure for doing the experiment:

Step no.	Details of the step
1	**DCL COMMAND** The DCL language is used for controlling the access to the table and hence securing the database. DCL is used to provide certain privileges to a particular user.
	Privileges are rights to be allocated.
2	The privilege commands are namely, Grant and Revoke
3	The various privileges that can be granted or revoked are, Select Insert Delete Update References Execute All
4	**GRANT COMMAND:** It is used to create users and grant access to the database. It requires database administrator (DBA) privilege, except that a user can change their password. A user can grant access to their database objects to other users.
5	**REVOKE COMMAND:** Using this command , the DBA can revoke the granted database privileges from the user. **TCL COMMAND** **COMMIT:** command is used to save the Records.
6	**ROLL BACK:** command is used to undo the Records. **SAVE POINT** command is used to undo the Records in a particular transaction.

c)SQL Commands DCL Commands GRANT COMMAND

Grant < database_priv [database_priv…..] > to <user_name> identified by <password> [,<password…..];

Grant <object_priv> | All on <object> to <user | public> [With Grant Option];

REVOKE COMMAND

Revoke <database_priv> from <user [, user] >;

Revoke <object_priv> on <object> from < user | public >;

<database_priv> -- Specifies the system level privileges to be granted to the users or roles. This includes create / alter / delete any object of the system.

<object_priv> -- Specifies the actions such as alter / delete / insert / references / execute / select / update for tables.

<all> -- Indicates all the priveleges.

[With Grant Option] – Allows the recipient user to give further grants on the objects.

The priveleges can be granted to different users by specifying their names or to all users by using the "Public" option.

TCL COMMANDS:
Syntax:
SAVEPOINT: SAVEPOINT <SAVE POINT NAME>;
ROLLBACK: ROLL BACK <SAVE POINT NAME>;
COMMIT: Commit;

Consider the following Tables:

EMPLOYEE(Emp_id, EMP_name,Job_name,Manager_id,Hire_date,Salary,Deptno)

DEPARTMENT(Deptno, Dname, MGRSSN)

PROJECT(Pname,Pno,Plocation,Deptno)

emp_id	emp_name	job_name	manager_id	hire_date	salary	E_Bonus	dep_no
68319	KAYLING	PRESIDENT		1991-11-18	6000.00	300.00	1001
66928	BLAZE	MANAGER	68319	1991-05-01	2750.00	200.00	3001
67832	CLARE	MANAGER	68319	1991-06-09	2550.00	200.00	1001
65646	JONAS	MANAGER	68319	1991-04-02	2957.00	200.00	2001
67858	SCARLET	ANALYST	65646	1997-04-19	3100.00	250.00	2001
69062	FRANK	ANALYST	65646	1991-12-03	3100.00	250.00	2001
63679	SANDRINE	CLERK	69062	1990-12-18	900.00	150.00	2001
64989	ADELYN	SALESMAN	66928	1991-02-20	1700.00	180.00	3001
65271	WADE	SALESMAN	66928	1991-02-22	1350.00	180.00	3001
66564	MADDEN	SALESMAN	66928	1991-09-28	1350.00	180.00	3001
68454	TUCKER	SALESMAN	66928	1991-09-08	1600.00	180.00	3001
68736	ADNRES	CLERK	67858	1997-05-23	1200.00	150.00	2001
69000	JULIUS	CLERK	66928	1991-12-03	1050.00	150.00	3001
69324	MARKER	CLERK	67832	1992-01-23	1400.00	150.00	1001

Department Table

deptno	dname	Citylocation	dCountry
1001	Accounting	New York	United States of America,
2001	Research	Dallas	United States
3001	Sales	Chicago	United States of America
4001	Marketing	Los Angeles	United States

Project Table

Pno	Pname	PCitylocation	PCountry
111	P_1	New York	United States of America,
112	P_2	Dallas	United States

113	P_3	Chicago	United States of America
114	P_4	Denmark	northern Europe
115	P_5	Paris	France
116	P_6	Chicago	United States of America

Write a query for the following:-

Q1: Develop a query to grant all privileges of employees table into departments table
Ans:
SQL> Grant all on employees to departments; Grant succeeded.

Q2: Develop a query to grant some privileges of employees table into departments table
Ans:
SQL> Grant select, update , insert on departments to departments with grant option; Grant succeeded.

Q3: Develop a query to revoke all privileges of employees table from departments table
Ans:
SQL> Revoke all on employees from departments; Revoke succeeded.

Q4: Develop a query to revoke some privileges of employees table from departments table
Ans:
SQL> Revoke select, update , insert on departments from departments; Revoke succeeded.

Q5: Write a query to implement the save point.

Example:

Example

The following example rolls back the values 102 and 103 that were entered after the savepoint, my_savepoint, was established. Only the values 101 and 104 are inserted at commit.

```
=> INSERT INTO product_key VALUES (101);
=> SAVEPOINT my_savepoint;
=> INSERT INTO product_key VALUES (102);
=> INSERT INTO product_key VALUES (103);
=> ROLLBACK TO SAVEPOINT my_savepoint;
=> INSERT INTO product_key VALUES (104);
=> COMMIT;
```

3 Gugan	ASP	1	15000
4 Karthik	Prof	2	30000
5 Akalya	AP	1	10000

Q6: Write a query to implement the rollback Ans:

    SQL> rollback s1;

    SQL> select * from emp;

EMPNO ENAME	JOB	DEPTNO	SAL
1 Mathi	AP	1	10000
2 Arjun	ASP	2	15000
3 Gugan	ASP	1	15000
4 Karthik	Prof	2	30000

Q7: Write a query to implement the commit Ans:

    SQL> COMMIT;

    Commit complete.

d)   Re

  sult

The DCL,TCL commands was performed successfully and executed.