**EXPERIMENT 10**

**AIM:** To develop procedures and function for various operations.

**FACILITIES REQUIRED**

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| --- | --- | --- |
| **Serial No.** | **Facilities required** | **Quantity** |
| 1 | System | 1 |
| 2 | Operating System | Windows |
| 3 | Front End |  |
| 4 | Backend | Oracle Apex |

**PROCEDURE**

|  |  |
| --- | --- |
| **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. |
| 6 | **TCL COMMAND**  **COMMIT:** command is used to save the Records.  **ROLL BACK:** command is used to undo the Records.  **SAVE POINT** command is used to undo the Records in a particular transaction. |

**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 priveleges 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:** SAVE POINT<SAVE POINT NAME>;

**ROLLBACK:** ROLLBACK <SAVE POINT NAME>;

**COMMIT:** Commit;

**Queries:**

**Tables Used:**

**Consider the following tables namely “DEPARTMENT” and “EMPLOYEE” Their schemas are as follows ,**

Departments ( dept \_no , dept\_ name ,dept\_location); Employees ( emp\_id , emp\_name , emp\_salary );

**Q1: Develop a query to grant all privileges of employees table into departments table**

**Ans: SQL>** Grant all on employee to department;

**Q2: Develop a query to grant some privileges of employees table into departments table**

**Ans: SQL>** Grant select, update , insert on employee to department with grant option;

**Q3: Develop a query to revoke all privileges of employees table from departments table**

**Ans: SQL>** Revoke all on employee from department;

**Q4: Develop a query to revoke some privileges of employees table from departments table**

**Ans: SQL>** Revoke select, update , insert on employee from department;

**Q5: Write a query to implement the save point**

**Ans: SQL>** BEGIN

SAVEPOINT S1;

END

**SQL>** SELECT \* FROM EMP\_DISHA\_171

**SQL>**INSERT INTO EMP\_DISHA\_171 VALUES(6,'Akalya','AP',1,10000);

**SQL>** select \* from emp\_disha\_171;

**Q6: Write a query to implement the rollback**

**Ans: SQL>** BEGIN

SAVEPOINT S1;

INSERT INTO EMP\_DISHA\_171 VALUES(6, 'Akalya', 'AP', 1, 10000);

ROLLBACK TO S1;

END;

**SQL>** select \* from emp\_disha\_171;

**Q7: Write a query to implement the commit**

**Ans: SQL>** begin commit;

end

**Result**

The DCL,TCL commands was performed successfully and executed.