



SNS COLLEGE OF ENGINEERING



Kurumbapalayam (Po), Coimbatore – 641 107

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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

**COURSE NAME : 19CS402 - DATABASE
MANAGEMENT SYSTEMS**

II YEAR / III SEMESTER

Unit – 2

DDL,DML,DCL,TCL



Data Definition Language



- It is used to create a table, alter the structure of a table and also drop the table.
- Create command
- Alter command
- Drop command
- Truncate command



Create Command

- It is used to create a table.

Syntax

Create table <table name>
(columnname1 datatype1,
columnname2 datatype2, etc...);

Example

```
SQL> create table emp  
(empno number(4),  
ename varchar2(30),  
salary number(10,2),  
deptno number(2));
```



Alter Command

- It is used to add a new column or modify existing column definitions.

Syntax

Alter table <table name>

Add (new columnname1 datatype1,
newcolumnname2 datatype2, etc...);

Alter table <table name>

Modify (oldcolumnname1 datatype1,
oldcolumnname2 datatype2, etc...);



Alter Command cont....

Example

```
SQL> alter table emp  
add(comm number(6,2));
```

```
SQL> alter table emp  
modify(empno number(5));
```



Drop Command

- This command is used to delete a table. [delete the contents (records and structure)].

Syntax

Drop table <table name>;

Example

```
SQL> drop table emp;
```



Truncate Command

- This command is used to delete the records but retain the structure.

Syntax

Truncate table <table name>;

Example

```
SQL> truncate table emp;
```



View the table structure

Syntax

Desc <table name>;

Example

```
SQL> desc emp;
```




Rename a table



Syntax

Rename <oldtablename> to <newtablename>;

Example

```
SQL> Rename emp to employee;
```



Data Manipulation Language

Insert, Update, Delete, Select



Insert Command

- It is used to insert a new record in the database.

Syntax

Insert into <table name> values <a list of data values>;

Example

```
SQL> insert into emp values ( 100, 'Raja'  
25000,10,500);
```



Insert Command cont...

Example

```
SQL> insert into emp (empno, salary) values (
    101, 40000);
```

```
SQL> insert into emp values ( &empno, '&name',
    &salary. &deptno, &comm);
```

```
SQL> \
```

```
SQL> save a. sql
```

```
SQL> get a. sql
```

```
SQL> run a. sql or start a.sql
```



update Command

- Changes can be made by using update command.

Syntax

Update <table name> set filename = values
where <Condition>;

Example

```
SQL> update emp set comm=500 where  
eno=100;
```



update Command cont...

Example

```
SQL>SQL> update emp set comm=1000;
```

```
SQL> update emp set comm=comm+500;
```

```
SQL> update emp set ename = 'Raj kumar' where  
ename = 'Raj';
```

```
SQL> update emp set comm=2000 where ename  
= 'Raja' and salary >= 30000; SQL> update emp set  
comm = 40 where comm is null;
```

```
SQL> update emp set salary = salary*0.1 where  
comm is notnull;
```

```
SQL> update emp set salary = 50000, comm=1500  
where eno=27;
```



Delete Command

- Rows can be deleted using delete command.

Syntax

Delete from <table name> where <Condition>;

Example

```
SQL> delete from emp where ename = 'abc';
```

```
SQL> select * from emp;
```



Delete Command cont...

Example

```
SQL> delete from emp where salary<30000;
```

```
SQL> delete from emp;
```




SELECT STATEMENTS

- The select command is used to retrieve data from an oracle database.

Syntax

Select <field names> from <table name> where
<condition>

Example

```
SQL> select * from emp;
```

Display all records.



SELECT STATEMENTS cont...

Example

```
SQL> select ename, salary, comm from emp;
```

Display selected field only.

```
SQL> select * from emp where dno=10;
```

```
SQL> select salary+500 from emp where dno=10;
```

```
SQL> select * from emp where dno=10 and salary>5000;
```



Transaction Control Language

Commit, Rollback, Savepoint



Transaction Control Language

- The TCL statements give you flexibility to undo transactions or write transactions to the disk.
- Transactions provide consistency in case of a system failure.

Commit

- Current transaction and writes all changes permanent to the disk.

Save point

- Marks a point in the current transaction.

Roll back [To savepoint n]

- Undoing all changes if a to savepoint.



TCL cont...

Example

```
SQL> insert into emp values ( &empno, '&name', &salary. &deptno,  
&comm);
```

```
SQL> /
```

Input some record

```
SQL> select * from emp;
```

```
SQL> commit;
```

```
SQL> delete from emp where comm> 2500;
```

```
SQL> select * from emp;
```

```
SQL> Rollback;
```

```
SQL> select * from emp;
```

```
SQL> delete from emp where eno=200;
```

```
SQL> save point x;
```

```
SQL> delete from emp where salary<30000;
```

```
SQL> rollback to x;
```



Data Control Language

Grant , Revoke



Data Control Language



Privileges

- Select, insert, update, delete, reference



Grant Command

- Give the permission to others user.

Syntax

Grant <privileges> on <table name> to <username>;

Example

```
SQL> Grant select on emp to user1;
```

```
SQL> Grant select, insert on emp to user2 ;
```

```
SQL> Grant update (comm) on emp to user3;
```

```
SQL> Grant update(salary , comm) on emp to user4;
```

```
SQL> Grant select(dno=10) on emp to user5;
```




Revoke Command

- Get back the permission to others user.

Syntax

Revoke <privileges> on <table name> **from** <username>;

Example

SQL> Revoke select on emp from user1;

SQL> Revoke select, insert on emp from user2 ;

SQL> Revoke update (comm) on emp from user3;

SQL> Revoke update(salary , comm) on emp from user4;

SQL> Revoke select(dno=10) on emp from user5;