EX: 1 DDL COMMANDS WITH CONSTRAINTS

DDL commands are:

CREATE

ALTER

DROP

RENAME

TRUNCATE

1. CREATE COMMAND

SQL> Create table employee ( empid varchar(10) primary key, empname varchar2(20), gender varchar2(7), age number(3) check (age>18), dept varchar(15, dob date, doj date);

Table created.

TABLE DESCRIPTION:

SQL>desc employee;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

SQL> create table salary ( empid varchar(10) references employee(empid), salary number(10),dept varchar(15),branch varchar2(20));

Table created.

2. ALTER COMMAND

It is used to modify an existing database object. Alter the structure of the database.

Type 1: Syntax to add a column into a table:

SQL> alter table employee add (designation varchar2 (15));

Table altered.

SQL>desc employee

Name Null? Type

---------------------- -------------- ------------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

SQL> alter table employee add email varchar2 (25);

Table altered.

SQL>desc employee

Name Null? Type

----------------------------------------- -------- - ---------------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

EMAIL VARCHAR2(25)

Type 2: Syntax to add a column with constraint

SQL> alter table employee add(phoneno number(10) unique);

Table altered.

SQL>desc employee;

Name Null? Type

----------------------------------------- -------- ------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

PHONENO NUMBER(10)

Type 3: Syntax to modify a column of a table

SQL>alter table employee modify (empname varchar2(5));

Table altered.

SQL>desc employee;

Name Null? Type

----------------------------------------- -------- ------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(5)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

PHONENO NUMBER(10)

NOTE: We cannot modify the size and data type of a column if it already contains any data.

Alter command to rename a column:

SQL>alter table employee RENAME COLUMN EMPNAME TO ENAME

Type 4: Syntax to remove a column from a table.

SQL> alter table employee drop column email;

Table altered.

SQL>desc employee

Name Null? Type

----------------------------------------- -------- ---------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

3.DROP COMMAND

SQL> create table temp (c1 char(10),c2 number(3));

Table created.

SQL>desc temp;

Name Null? Type

----------------------------------------- -------- ----------------------------

C1 CHAR(10)

C2 NUMBER(3)

SQL> drop table temp;

Table dropped.

SQL>desc temp;

ERROR:

ORA-04043: object temp does not exist

4.RENAME COMMAND

SQL> rename employee to empl;

Table renamed.

SQL>descempl;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMPID NOT NULL VARCHAR2(10)

EMPNAME VARCHAR2(20)

GENDER VARCHAR2(7)

AGE NUMBER(3)

DEPT VARCHAR2(15)

DOB DATE

DOJ DATE

DESIGNATION VARCHAR2(15)

5. TRUNCATE COMMAND

SQL> truncate table employee;

Table truncated.

EX: 2 DML COMMANDS WITH CONSTRAINTS

DDL commands are:

INSERT

SELECT

UPDATE

DELETE

Table creation:

Create table emp( empid varchar(10) primary key, empname varchar2(20), dob date, dept varchar(15), salary number(10,2) );

Table created.

DESC EMP;

Table

Column

Data Type

Length

Precision

Scale

Primary Key

Nullable

EMP

EMPID

Varchar2

10

-

-

1

-

EMPNAME

Varchar2

20

-

-

-

DOB

Date

7

-

-

-

DEPT

Varchar2

15

-

-

-

SALARY

Number

-

10

2

-

1.INSERT COMMAND

There are threeways to insert values into the table. They are single record insertion, multiple records insertionand insertingvalues for selected columns of single record.

Type 1: Inserting Single Record:

INSERT INTO EMP VALUES ('1','HARRIE','06-JUN-2002','IT', 45000);

1 row(s) inserted.

SELECT \* FROM EMP;

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

IT

45000

Type 2: Inserting Multiple Records:

INSERT INTO EMP VALUES(:EMPID,:EMPNAME,:DOB,:DEPT,:SALARY)

1row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

2.SELECT COMMAND:

The select statement is used to retrieve data from a table. The SELECT statement can be used in many ways. They are:

Selecting all columns:

SELECT \* FROM EMP;

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

IT

45000

2

AESWIN

28-FEB-00

MARKETING

38000

3

MISTICA

05-NOV-99

SALES

32000

4

LAWINSON

03-DEC-98

IT

25000

5

JONES

12-DEC-90

MARKETING

28000

6

HARINI

21-JAN-90

IT

31000

Selecting some of the columns:

To select specified number of columns from the table, the following command is used.

Syntax:

SELECT column\_name(s) FROM table\_name;

SELECT EMPID, EMPNAME, SALARY FROM EMP;

EMPID

EMPNAME

SALARY

1

HARRIE

45000

2

AESWIN

38000

3

MISTICA

32000

4

LAWINSON

25000

5

JONES

28000

6

HARINI

31000

SELECT \* FROM EMP WHERE SALARY>=30000;

OUTPUT:

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

ACCOUNTS

45500

2

AESWIN

28-FEB-00

MARKETING

38500

3

MISTICA

05-NOV-99

ACCOUNTS

33000

6

HARINI

21-JAN-90

IT

31500

SELECT \* FROM EMP WHERE EMPNAME LIKE 'H%'

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

ACCOUNTS

45500

6

HARINI

21-JAN-90

IT

31500

SELECT \* FROM EMP WHERE DEPT='IT' ORDER BY SALARY

EMPID

EMPNAME

DOB

DEPT

SALARY

4

LAWINSON

03-DEC-98

IT

25500

6

HARINI

21-JAN-90

IT

31500

SELECT \* FROM EMP ORDER BY SALARY DESC;

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

ACCOUNTS

45500

2

AESWIN

28-FEB-00

MARKETING

38500

3

MISTICA

05-NOV-99

ACCOUNTS

33000

6

HARINI

21-JAN-90

IT

31500

5

JONES

12-DEC-90

MARKETING

28500

4

LAWINSON

03-DEC-98

IT

25500

3. UPDATE COMMAND:

This allows the user to update one or more column values with or without the condition.

Syntax:

UPDATE <table\_name> SET <column1=value1, column2=value2),…> WHERE <condition>;

SQL> UPDATE EMP SET DEPT='ACCOUNTS' WHERE EMPID=1;

1 row(s) updated.

SELECT \* FROM EMP WHERE EMPID=1;

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

ACCOUNTS

45000

Updating all records of a column in a table:

SQL>UPDATE EMP SET SALARY=SALARY+500;

6 row(s) updated.

SELECT \* FROM EMP;

EMPID

EMPNAME

DOB

DEPT

SALARY

1

HARRIE

06-JUN-02

ACCOUNTS

45500

2

AESWIN

28-FEB-00

MARKETING

38500

3

MISTICA

05-NOV-99

SALES

32500

4

LAWINSON

03-DEC-98

IT

25500

5

JONES

12-DEC-90

MARKETING

28500

6

HARINI

21-JAN-90

IT

31500

Updating more than one column in a table

UPDATE EMP SET DEPT=’ACCOUNTS’, SALARY=33000 WHERE EMPID=3;

1 row(s) updated.

SELECT \* FROM EMP WHERE EMPID=3;

EMPID

EMPNAME

DOB

DEPT

SALARY

3

MISTICA

05-NOV-99

ACCOUNTS

33000

DELETE COMMAND:

Syntax:

Delete from <tablename> where <condition>;

DELETE FROM EMP WHERE EMPID=6;

1 row(s) deleted.

SELECT \* FROM EMP WHERE EMPID=6;

OUTPUT

no data found

To delete all records

DELETE FROM EMP;

5 row(s) deleted.

SELECT \* FROM EMP

OUTPUT

no data found