Ex.No.1 08.01.2025	**DATA DEFINITION LANGUAGE, COMMANDS AND INTEGRITY CONSTRAINTS**

AIM

To execute Data Defination Language commands and Integrity Constraints.

CREATING TABLE

SQL> create table emp(id number(5) , name varchar(20) , age number(2), city varchar(8));

Table created.

INSERTING VALUES

SQL> insert into emp values(68 , 'jayashangav' , 18 , 'perundurai');

1 row created.

SQL> insert into emp values(63, 'iyyappan' , 19 , 'erode');

1 row created.

SQL> insert into emp values(119 , 'praveen kumar' , 20 , 'covai');

1 row created.

DISPLAY TABLE

SQL> select * from emp;

```
        ID      NAME          AGE      CITY
---------- ----------    ---------- --------
        68    jayashangav      18  perundurai
        63    iyyappan         19  erode
       119 praveen kumar   20  covai
```

MODIFYING THE STRUCTURE OF TABLES

a) Add new columns

SQL> alter table emp add(empsalary number(5) default 5000);

Table altered.

SQL> select * from emp;

ID	NAME	AGE	CITY	EMPSALARY
68	jayashangav	18	erode	7500
63	iyyappan	19	erode	8000
119	praveen kumar	20	covai	7000

b) Dropping a column from a table

SQL> alter table emp drop column age;

Table altered.

SQL> select * from emp;

ID	NAME	CITY	EMPSALARY
68	jayashangav	erode	7500
63	iyyappan	erode	8000
119	praveen kumar	covai	7000

MODIFYING EXISITING COLUMNS

SQL> alter table emp modify(city varchar(15));

Table altered.

SQL> select * from emp;

ID	NAME	CITY	EMPSALARY
68	jayashangav	erode	7500
63	iyyappan	erode	8000
119	praveen kumar	covai	7000

RENAMING THE TABLES

SQL> rename emp to employee;

Table renamed.

SQL> select * from employee;

ID	NAME	CITY	EMPSALARY
68	jayashangav	erode	7500
63	iyyappan	erode	8000
119	praveen kumar	covai	7000

TRUNCATING THE TABLES

SQL> truncate table employee;

Table truncated.

SQL> select * from employee;

no rows selected

DESTROYING TABLES

SQL> drop table employee;

Table dropped.

SQL> select * from employee;

select * from employee;

ERROR at line 1:

ORA-00942: table or view does not exist

CONSTRAINTS

NOT NULL CONSTRAINT

```
SQL> CREATE TABLE CUSTOM (
  2  ID INT NOT NULL,
  3  NAME VARCHAR(10) NOT NULL,
  4  AGE INT NOT NULL,
  5  ADDRESS VARCHAR(10) NOT NULL,
  6  SALARY INT NOT NULL);

Table created.
SQL> INSERT INTO CUSTOM (ID, NAME, AGE, ADDRESS, SALARY)  VALUES (68, 'shangav', 18, 'erode', 9000);
1 row created.

SQL> INSERT INTO CUSTOM (ID, NAME, AGE, ADDRESS, SALARY)  VALUES (80, 'karthik', 19, 'erode', 6000);
1 row created.

SQL> INSERT INTO CUSTOM (ID, NAME, AGE, ADDRESS, SALARY)  VALUES (82, 'kavin', 19, 'thingalur', 7500);
1 row created.

SQL> SELECT * FROM CUSTOM;
```

ID	NAME	AGE	ADDRESS	SALARY
68	shangav	18	erode	9000
80	karthik	19	erode	6000
82	kavin	19	thingalur	7500

DEFAULT CONSTAINT

```
SQL> CREATE TABLE CUSTOMER (
  2  ID INT NOT NULL,
  3  NAME VARCHAR(10) NOT NULL,
  4  ADDRESS VARCHAR(10) DEFAULT 'perundurai',
  5  SALARY INT DEFAULT 8000);
Table created.
```

SQL> INSERT INTO CUSTOMER (ID, NAME) VALUES (68, 'jayashangav');

1 row created.

SQL> INSERT INTO CUSTOMER (ID, NAME) VALUES (119, 'praveen');

1 row created.

SQL> INSERT INTO CUSTOMER (ID, NAME) VALUES (93, 'mani');

1 row created.

SQL> SELECT * FROM CUSTOMER;

ID	NAME	ADDRESS	SALARY
68	jayashangav	perundurai	8000
119	praveen	perundurai	8000
93	mani	perundurai	8000

UNIQUE CONSTRAINT

```
SQL> CREATE TABLE CUST (
  2  ID INT NOT NULL UNIQUE,
  3  NAME VARCHAR(15) NOT NULL,
  4  ADDRESS VARCHAR(10) DEFAULT 'perundurai',
  5  PHONENO INT NOT NULL UNIQUE,
  6  SALARY INT DEFAULT 4000);
```

Table created.

SQL> INSERT INTO CUST (ID, NAME, PHONENO) VALUES (68, 'jayashangav', 1234567890);

1 row created.

SQL> INSERT INTO CUST (ID, NAME, PHONENO) VALUES (61, 'jayashangav', 0987654321);

1 row created.

```
SQL> INSERT INTO CUST (ID, NAME, PHONENO)  VALUES (63, 'jayashangav', 1029384756);
1 row created.

SQL> SELECT * FROM CUST;

        ID NAME            ADDRESS    PHONENO    SALARY
---------- --------------- ---------- ---------- ----------
        68 jayashangav     perundurai 1234567890 4000
        61 jayashangav     perundurai 0987654321 4000
        63 jayashangav     perundurai 1029384756 4000
```

PRIMARY KEY CONSTRAINT

```
SQL> CREATE TABLE EMPLOYEE(
  2  ID INT NOT NULL,
  3  NAME VARCHAR(10) NOT NULL,
  4  ADDRESS VARCHAR(10) DEFAULT 'perundurai',
  5  SALARY INT DEFAULT 7000,
  6  PRIMARY KEY(ID));

Table created.

SQL> INSERT INTO EMPLOYEE (ID, NAME)  VALUES (68, 'jayashangav');
1 row created.

SQL> INSERT INTO EMPLOYEE (ID, NAME)  VALUES (63, 'jayashangav');
1 row created.

SQL> SELECT * FROM EMPLOYEE;
        ID NAME       ADDRESS    SALARY
---------- ---------- ---------- ----------
        68 jayashangav perundurai    7000
        63 jayashangav perundurai    7000
```

FOREIGN KEY

SQL> create table customers(id int not null, name varchar(20) not null , age int not null ,primary key(id));

Table created.

SQL> create table orders (

2 id int not null,

3 customer_id int references customers(id),

4 amount int not null,

5 primary key (id));

Table created.

CHECK CONSTRAINT

SQL> create table empl(

2 NAME VARCHAR(15) NOT NULL,

3 ID NUMBER(2) NOT NULL,

4 AGE NUMBER(2) NOT NULL CHECK(AGE >=18),

5 PRIMARY KEY(ID)

6);

SQL> insert into empl values('jayashangav' ,68, 17)

*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.SYS_C004041) violated

SQL> insert into empl values('jayashangav' ,68, 18);

1 row created.

DROPPING CONSTRAINT

ALTER TABLE EMPL DROP PRIMARY KEY;

Table altered.

CONTENTS	MARKS ALLOTTED	MARKS OBTAINED
Aim, Algorithm, SQL, PL/SQL	**30**	
Execution and Result	**20**	
Viva	**10**	
Total	**60**	

RESULT

Thus Data Defination Language commands and Integrity Constraints were executed.