**PRIMARY KEY CONSTRAINT**

SQL> connect

Enter user-name: system

Enter password:

Connected.

SQL> create table s(sid number(10) primary key,sname varchar(10));

Table created.

SQL> desc s;

Name Null? Type

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

SID NOT NULL NUMBER(10)

SNAME VARCHAR2(10)

SQL> create table s1(sid number(10),sname varchar(10),constraint s1c primary key(sid));

Table created.

SQL> desc s1;

Name Null? Type

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

SID NOT NULL NUMBER(10)

SNAME VARCHAR2(10)

SQL> create table p(oid number(10),prono number(10),primary key(oid,prono));

Table created.

SQL> desc p;

Name Null? Type

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

OID NOT NULL NUMBER(10)

PRONO NOT NULL NUMBER(10)

SQL> create table p1(oid number(10),prono number(10),constraint p1c primary key(oid,prono));

Table created.

SQL> create table p2(oid number(10) primary key,prono number(10) primary key);

create table p2(oid number(10) primary key,prono number(10) primary key)

\*

ERROR at line 1:

ORA-02260: table can have only one primary key

SQL> desc p1;

Name Null? Type

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

OID NOT NULL NUMBER(10)

PRONO NOT NULL NUMBER(10)

SQL> create table vendor(vid number(10),vname varchar(10));

Table created.

SQL> alter table vendor add constraint vc primary key(vid);

Table altered.

SQL> desc vendor;

Name Null? Type

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

VID NOT NULL NUMBER(10)

VNAME VARCHAR2(10)

SQL> alter table vendor drop constraint vc;

Table altered.

SQL> desc vendor;

Name Null? Type

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

VID NUMBER(10)

VNAME VARCHAR2(10)

SQL> alter table p1 drop primary key;

Table altered.

SQL> desc p1;

Name Null? Type

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

OID NUMBER(10)

PRONO NUMBER(10)

SQL> alter table p disable primary key;

Table altered.

SQL> desc p;

Name Null? Type

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

OID NUMBER(10)

PRONO NUMBER(10)

SQL> alter table p enable primary key;

Table altered.

SQL> desc p;

Name Null? Type

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

OID NOT NULL NUMBER(10)

PRONO NOT NULL NUMBER(10)

SQL> alter table s1 disable constraint s1c;

Table altered.

SQL> desc s1;

Name Null? Type

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

SID NUMBER(10)

SNAME VARCHAR2(10)

SQL> alter table s1 enable constraint s1c;

Table altered.

SQL> desc s1;

Name Null? Type

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

SID NOT NULL NUMBER(10)

SNAME VARCHAR2(10)

**NOT NULL**

SQL> create table a(aid number(10) not null,aname varchar(10));

Table created.

SQL> desc a;

Name Null? Type

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

AID NOT NULL NUMBER(10)

ANAME VARCHAR2(10)

SQL> insert into a values(1,'aaa');

1 row created.

SQL> insert into a values(2,'bbb');

1 row created.

SQL> insert into a values(null,'ccc');

insert into a values(null,'ccc')

\*

ERROR at line 1:

ORA-01400: cannot insert NULL into ("SYSTEM"."A"."AID")

SQL> insert into a values(3,null);

1 row created.

SQL> desc a;

Name Null? Type

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

AID NOT NULL NUMBER(10)

ANAME VARCHAR2(10)

SQL> select \* from a;

AID ANAME

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

1 aaa

2 bbb

3

SQL> alter table a modify(aname not null);

alter table a modify(aname not null)

\*

ERROR at line 1:

ORA-02296: cannot enable (SYSTEM.) - null values found

SQL> update a set aname=ccc where aname is null;

update a set aname=ccc where aname is null

\*

ERROR at line 1:

ORA-00904: "CCC": invalid identifier

SQL> update a set aname='ccc' where aname is null;

1 row updated.

SQL> select \* from a;

AID ANAME

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

1 aaa

2 bbb

3 ccc

SQL> alter table a modify(aname not null);

Table altered.

SQL> insert into a values(4,null);

insert into a values(4,null)

\*

ERROR at line 1:

ORA-01400: cannot insert NULL into ("SYSTEM"."A"."ANAME")

SQL> alter table a modify(aname null);

Table altered.

SQL> insert into a values(4,null);

1 row created.

SQL> select \* from a;

AID ANAME

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

1 aaa

2 bbb

3 ccc

4

**UNIQUE**

SQL> create table client(cid number(10),email varchar(10) not null unique);

Table created.

SQL> desc client;

Name Null? Type

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

CID NUMBER(10)

EMAIL NOT NULL VARCHAR2(10)

SQL> insert into client values(1,'a@abc.com');

1 row created.

SQL> insert into client values(2,'b@abc.com');

1 row created.

SQL> insert into client values(3,'b@abc.com');

insert into client values(3,'b@abc.com')

\*

ERROR at line 1:

ORA-00001: unique constraint (SYSTEM.SYS\_C004067) violated

SQL> create table client1(cid number(10),email varchar(10) not null);

Table created.

SQL> alter table client1 add constraint cc unique(email);

Table altered.

SQL> insert into client1 values(1,'a@abc.com');

1 row created.

SQL> insert into client1 values(2,'b@abc.com');

1 row created.

SQL> insert into client1 values(3,'b@abc.com');

insert into client1 values(3,'b@abc.com')

\*

ERROR at line 1:

ORA-00001: unique constraint (SYSTEM.CC) violated

SQL> alter table client1 disable constraint cc;

Table altered.

SQL> alter table client1 enable constraint cc;

Table altered.

SQL> alter table client1 drop constraint cc;

Table altered.

**FOREIGN KEY**

SQL> connect

Enter user-name: system

Enter password:

Connected.

SQL> create table dept(did number(10),dname varchar(10));

Table created.

SQL> insert into dept values(10,'cse');

1 row created.

SQL> insert into dept values(20,'ece');

1 row created.

SQL> insert into dept values(30,'e3e');

1 row created.

SQL> select \* from dept;

DID DNAME

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

10 cse

20 ece

30 e3e

SQL> create table stu1(id number(10),name varchar(10),did number(10));

Table created.

SQL> insert into stu1 values(100,'aaa',10);

1 row created.

SQL> insert into stu1 values(101,'bbb',10);

1 row created.

SQL> insert into stu1 values(102,'cc',40);

1 row created.

SQL> select \* from stu1;

ID NAME DID

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

100 aaa 10

101 bbb 10

102 cc 40

SQL> drop table stu1;

Table dropped.

SQL> alter table dept add constraint pk primary key(did);

Table altered.

SQL> desc dept;

Name Null? Type

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

DID NOT NULL NUMBER(10)

DNAME VARCHAR2(10)

SQL> create table stu1(id number(10),name varchar(10),did number(10) references dept(did));

Table created.

SQL> insert into stu1 values(100,'aaa',10);

1 row created.

SQL> insert into stu1 values(101,'bbb',10);

1 row created.

SQL> insert into stu1 values(102,'cc',40);

insert into stu1 values(102,'cc',40)

\*

ERROR at line 1:

ORA-02291: integrity constraint (SYSTEM.SYS\_C004082) violated - parent key not

found

SQL> insert into dept values(40,'mech');

1 row created.

SQL> insert into stu1 values(102,'cc',40);

1 row created.

**CHECK Constraint**

SQL> create table fa(id number(10) not null,name varchar(10),age number(10) check(age>=18));

Table created.

SQL> insert into fa values(10,'aaa',19);

1 row created.

SQL> insert into fa values(10,'aaa',11);

insert into fa values(10,'aaa',11)

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.SYS\_C004092) violated

SQL> create table per(id number(10) not null,name varchar(10),age number(10),city varchar(10),constraint fa1c check(age>=18 and city='chennai'));

Table created.

SQL> insert into per values(10,'aaa',19,'chennai');

1 row created.

SQL> insert into per values(20,'bbb',19,'chennai');

1 row created.

SQL> insert into per values(30,'ccc',14,'chennai');

insert into per values(30,'ccc',14,'chennai')

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.FA1C) violated

SQL> insert into per values(30,'ccc',18,'delhi');

insert into per values(30,'ccc',18,'delhi')

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.FA1C) violated

SQL> insert into per values(30,'ccc',14,'delhi');

insert into per values(30,'ccc',14,'delhi')

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.FA1C) violated

SQL> create table per1(id number(10) not null,name varchar(10),age number(10),city varchar(10));

Table created.

SQL> alter table per1 add check(age>=18);

Table altered.

SQL> insert into fa values(10,'aaa',19);

1 row created.

SQL> insert into fa values(10,'aaa',11);

insert into fa values(10,'aaa',11)

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.SYS\_C004092) violated

SQL> alter table per1 add constraint per1c check(age>=18 and city='chennai');

Table altered.

SQL> insert into per values(30,'ccc',14,'delhi');

insert into per values(30,'ccc',14,'delhi')

\*

ERROR at line 1:

ORA-02290: check constraint (SYSTEM.FA1C) violated

SQL> insert into per values(30,'ccc',18,'chennai');

1 row created.

SQL> alter table per1 drop constraint per1c;

Table altered.

**DEFAULT**

SQL> create table pers(id number(10),name varchar(10),city varchar(10) default 'Chennai');

Table created.

SQL> insert into pers(id,name) values (1,'aaa');

1 row created.

SQL> select \* from pers;

ID NAME CITY

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

1 aaa Chennai

SQL> insert into pers(id,name,city) values (1,'aaa','delhi');

1 row created.

SQL> select \* from pers;

ID NAME CITY

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

1 aaa Chennai

1 aaa delhi