

```
create table dept(dno varchar(20) primary key,dname varchar(20),mgrstartdate date);
```

Table created.

```
create table emp(fname varchar(10),mname varchar(10),lname varchar(10),ssn varchar(20) primary
key,bday date,address varchar(20),sex char(1),salary integer,superSSN references emp(ssn),dno
references dept(dno));
```

Table created.

```
alter table dept add mgrSSN references emp(ssn);
```

Table altered.

```
select * from tab;
```

TNAME	TABTYPE	CLUSTERID
DEPT	TABLE	
EMP	TABLE	

```
desc dept;
```

Name	Null?	Type
DNO	NOT NULL	VARCHAR2(20)
DNAME		VARCHAR2(20)
MGRSTARTDATE		DATE
MGRSSN		VARCHAR2(20)

```
desc emp;
```

Name	Null?	Type
FNAME		VARCHAR2(10)
MNAME		VARCHAR2(10)
LNAME		VARCHAR2(10)
SSN	NOT NULL	VARCHAR2(20)
BDAY		DATE
ADDRESS		VARCHAR2(20)
SEX		CHAR(1)
SALARY		NUMBER(38)
SUPERSSN		VARCHAR2(20)
DNO		VARCHAR2(20)

```
SQL> create table dependent(essn varchar(20) references emp(ssn),dependentname
varchar(20),gender varchar(20),dob date,relationship varchar(20));
```

Table created.

```
SQL> create table dlocation(dloc varchar(20),dno varchar(20) references dept(dno),primary
key(dno,dloc));
```

Table created.

```
SQL> create table project1(pname varchar(20),pno integer primary key,plocation varchar(20),dno
varchar(20) references dept(dno));
```

Table created.

```
SQL> create table works_on1(essn varchar(20) references emp(ssn),pno integer references
project1(pno),primary key(essn,pno),hours integer);
```

```
create table works_on(essn varchar(20) references emp(ssn),pno integer references
project(pno),primary key(essn,pno),hours integer);
```

Table created.

```
SQL> select * from tab;
```

TNAME	TABTYPE	CLUSTERID
DEPENDENT	TABLE	
DEPT	TABLE	
DLOCATION	TABLE	
EMP	TABLE	
PROJECT1	TABLE	
WORKS_ON 1	TABLE	

6 rows selected.

Inserting values into emp table:

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('john','b','smith','123456789',to_date('1965-02-09','yyyy-mm-dd'),'731fondren','m',30000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('franklin','t','wong','333445555',to_date('1955-12-08','yyyy-mm-dd'),'638voss','m',40000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('alicia','j','zelaya','999887777',to_date('1968-01-19','yyyy-mm-dd'),'3321castle','f',25000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('jennifer','s','wallance','987654321',to_date('1941-06-20','yyyy-mm-dd'),'291berry','f',43000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('ramesh','k','narayana','666884444',to_date('1962-09-15','yyyy-mm-dd'),'975fireoak','m',3800
0);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('joyce','a','english','453453453',to_date('1972-07-31','yyyy-mm-dd'),'5631rice','f',25000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('ahmad','v','jabbar','987987987',to_date('1692-03-22','yyyy-mm-dd'),'980dallas','m',25000);
```

1 row created.

```
SQL> insert into emp(fname,mname,lname,ssn,bday,address,sex,salary)
values('james','e','brog','888665555',to_date('1937-10-10','yyyy-mm-dd'),'450stone','m',55000);
```

1 row created.

Inserting values into dept table:

```
SQL> insert into dept values('5','research',to_date('1988-05-22','yyyy-mm-dd'),'333445555');
```

1 row created.

```
SQL> insert into dept values('4','administration',to_date('1995-01-21','yyyy-mm-dd'),'987654321');
```

1 row created.

```
SQL> insert into dept values('1','headquarters',to_date('1981-06-19','yyyy-mm-dd'),'888665555');
```

1 row created.

Inserting values into dependent table:

```
SQL> insert into
dependent(essn,dependentname,gender,dob,relationship)values('333445555','alice','f',to_date('198
6-04-05','yyyy-mm-dd'),'daughter');
```

1 row created.

```
SQL> insert into
dependent(essn,dependentname,gender,dob,relationship)values('333445555','theodore','m',to_date
('1983-10-25','yyyy-mm-dd'),'son');
```

1 row created.

```
SQL> insert into  
dependent(essn,dependentname,gender,dob,relationship)values('333445555','joy','f',to_date('1958-05-03','yyyy-mm-dd'),'spouse');
```

1 row created.

```
SQL> insert into  
dependent(essn,dependentname,gender,dob,relationship)values('987654321','abner','m',to_date('1942-02-28','yyyy-mm-dd'),'spouse');
```

1 row created.

```
SQL> insert into  
dependent(essn,dependentname,gender,dob,relationship)values('123456789','michael','m',to_date('1988-01-04','yyyy-mm-dd'),'son');
```

1 row created.

```
SQL> insert into  
dependent(essn,dependentname,gender,dob,relationship)values('123456789','elizabeth','f',to_date('1967-05-05','yyyy-mm-dd'),'spouse');
```

1 row created.

Inserting values into dlocation:

```
SQL> insert into dlocation(dloc,dno)values('houston','1');
```

1 row created.

```
SQL> insert into dlocation(dloc,dno)values('stafford','4');
```

1 row created.

```
SQL> insert into dlocation(dloc,dno)values('bellaire','5');
```

1 row created.

```
SQL> insert into dlocation(dloc,dno)values('sugarland','5');
```

1 row created.

```
SQL> insert into dlocation(dloc,dno)values('houston','5');
```

1 row created.

Inserting values into project1:

```
SQL> insert into project1(pname,pno,plocation,dno)values('product',1,'bellaire','5');
```

1 row created.

```
SQL> insert into project1(pname,pno,plocation,dno)values('producty',2,'sugarland','5');
```

1 row created.

```
SQL> insert into project1(pname,pno,plocation,dno)values('productz',3,'houstan','5');
```

1 row created.

```
SQL> insert into project1(pname,pno,plocation,dno)values('computerization',10,'stafford','4');
```

1 row created.

```
SQL> insert into project1(pname,pno,plocation,dno)values('reorganization',20,'houstan','1');
```

1 row created.

```
SQL> insert into project1(pname,pno,plocation,dno)values('newbenefits',30,'stafford','4');
```

1 row created.

Inserting values into works_on1:

```
SQL> insert into works_on1(essn,pno,hours)values('123456789',1,32);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('123456789',2,47);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('666884444',3,40);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('453453453',1,20);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('333445555',2,20);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('333445555',1,10);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('333445555',3,10);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('333445555',10,10);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('999887777',20,10);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('999887777',30,30);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('987987987',10,10);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('987987987',11,35);
```

```
insert into works_on1(essn,pno,hours)values('987987987',11,35)
```

*

ERROR at line 1:

ORA-02291: integrity constraint (MM.SYS_C007021) violated - parent key not found

```
SQL> insert into works_on1(essn,pno,hours)values('987987987',11,35);
```

```
insert into works_on1(essn,pno,hours)values('987987987',11,35)
```

*

ERROR at line 1:

ORA-02291: integrity constraint (MM.SYS_C007021) violated - parent key not found

```
SQL> insert into works_on1(essn,pno,hours)values('987654321',30,5);
```

1 row created.

```
SQL> insert into works_on1(essn,pno,hours)values('987654321',31,20);
```

```
insert into works_on1(essn,pno,hours)values('987654321',31,20)
```

*

ERROR at line 1:

ORA-02291: integrity constraint (MM.SYS_C007021) violated - parent key not found

```
SQL> insert into works_on1(essn,pno,hours)values('888665555',20,15);
```

1 row created.

SQL> update emp set superssn='333445555',dno='5' where mname='b';

1 row updated.

SQL> update emp set superssn='888665555',dno='5' where mname='t';

1 row updated.

SQL> update emp set superssn='987654321',dno='4' where mname='j';

1 row updated.

SQL> update emp set superssn='888665555',dno='4' where mname='s';

1 row updated.

SQL> update emp set superssn='333445555',dno='5' where mname='k';

1 row updated.

SQL> update emp set superssn='333445555',dno='5' where mname='a';

1 row updated.

SQL> update emp set superssn='987987987',dno='4' where mname='v';

1 row updated.

SQL> update emp set superssn='',dno='1' where mname='e';

1 row updated.

b)

To create view give dba priviledges to user

SQL> connect

Enter user-name: system

Enter password:

Connected.

SQL> grant dba to sarala;

Grant succeeded.

SQL> connect

Enter user-name: sarala

Enter password:

Connected.

```
SQL> create view resultb as(select fname,mname,lname,dname from emp,dept where emp.dno=dept.dno);
```

View created.

```
SQL> select * from resultb;
```

FNAME	MNAME	LNAME	DNAME
john	b	smith	research
franklin	t	wong	research
alicia	j	zelaya	administration
jennifer	s	wallance	administration
ramesh	k	narayana	research
joyce	a	english	research
ahmad	v	jabbar	administration
james	e	brog	headquarters

8 rows selected.

c)

```
SQL> create view resultc as(select fname,mname,lname,dependentname from emp,dependent where dependent.essn=emp.ssn);
```

View created.

```
SQL> select * from resultc;
```

FNAME	MNAME	LNAME	DEPENDENTNAME
john	b	smith	elizabeth
john	b	smith	michael
franklin	t	wong	joy
franklin	t	wong	theodore
franklin	t	wong	alice
jennifer	s	wallance	abner

6 rows selected.

d)

```
SQL> create view resultd as(select fname,mname,lname,address from emp,dept where emp.dno=dept.dno and dname='research');
```

View created.

```
SQL> select * from resultd;
```

FNAME	MNAME	LNAME	ADDRESS
-------	-------	-------	---------

```

-----
john    b      smith    731fondren
franklin t      wong      638voss
ramesh  k      narayana 975fireoak
joyce   a      english  5631rice

```

e)

```
SQL> create view resulte as(select fname,mname,lname from emp where(select count(*) from
dependent where ssn=essn)>=2);
```

View created.

```
SQL> select * from resulte;
```

```

FNAME    MNAME    LNAME
-----
john     b        smith
franklin t      wong

```

f)

```
SQL> create view resultf as(select fname,mname,lname from emp where not exists(select * from
dependent where ssn=essn));
```

View created.

```
SQL> select * from resultf;
```

```

FNAME    MNAME    LNAME
-----
ahmad    v        jabbar
alicia   j        zelaya
james    e        brog
joyce    a        english
ramesh   k        narayana

```

g)

```
SQL> create view resultg as(select fname,mname,lname from emp where exists(select * from
dependent where ssn=essn) and exists(select * from dept where ssn=mgrssn));
```

View created.

```
SQL> select * from resultg;
```

```

FNAME    MNAME    LNAME
-----
franklin t      wong
jennifer s      wallance

```

h)

```
SQL> create view resulth as(select e1.fname,e1.mname,e1.lname,e2.fname as supervisor from emp
e1,emp e2 where e2.ssn=e1.superssn);
```

View created.

```
SQL> select * from resulth;
```

FNAME	MNAME	LNAME	SUPERVISOR
joyce	a	english	franklin
ramesh	k	narayana	franklin
john	b	smith	franklin
alicia	j	zelaya	jennifer
ahmad	v	jabbar	ahmad
jennifer	s	wallance	james
franklin	t	wong	james

7 rows selected.

i)

```
SQL> create view resulti as(select dname,fname from emp e,dept d where e.ssn=d.mgrssn);
```

View created.

```
SQL> select * from resulti;
```

DNAME	FNAME
research	franklin
administration	jennifer
headquarters	james

j)

```
SQL> create view resultj as (select e.fname,e.mname,e.lname from emp e where e.ssn in (select essn
from emp,dependent where fname=dependentname and emp.sex=dependent.gender));
```

View created.

```
SQL> select * from resultj;
```

no rows selected