ASSIGNMENT-7

Name:- SUBHAJIT MONDAL.
Enrollment No:- 2020CSB107.
Subject:- DBMS LAB.

A. creation of table:

creation of depts table:

```
create table depts(
deptcode char(3) primary key,
deptname char(30) not null);

insert into depts values
(100,'Mechanical'),
(200,'Computer'),
(300,'Electrical');

select * from depts;
```

	deptcode	deptname
1	100	Mechanical
2	200	Computer
3	300	Electrical

creation of students table:

```
create table students(
rollno int primary key,
name char(30),
bdate date check(bdate < '01-JAN-97'),
deptcode char(3) references depts(deptcode)
on delete cascade,
hostel int check(hostel<10),
parent_inc int);

insert into students values
(10,'jay','12-JAN-95',100,2,20000),
(13,'ravi','23-JUN-95',100,5,30000),
(45,'hrishi','25-MARCH-93',200,8,15000),
(74,'dev','11-FEB-93',200,1,40000),
(12,'raj','12-APRIL-93',300,3,50000),
(34,'sanket','2-DEC-95',300,1,25000);

select * from students;
```

	rollno	name	bdate	deptcode	hostel	parent_inc
1	10	jay	1995-01-12	100	2	20000
2	12	raj	1993-04-12	300	3	50000
3	13	ravi	1995-06-23	100	5	30000
4	34	sanket	1995-12-02	300	1	25000
5	45	hrishi	1993-03-25	200	8	15000
6	74	dev	1993-02-11	200	1	40000

creation of faculty table:

```
create table faculty(
fac_code char(8) primary key,
fac_name char(30) not null,
fac_dept char(3) references depts(deptcode));

insert into faculty values
('ME01','prince',100),
('ME03','milan',100),
('CS01','anand',200),
('CS02','rafik',200),
('EE04','idris',300),
('EE07','jayesh',300);

select * from faculty;
```

	fac_code	fac_name	fac_dept
1	CS01	anand	200
2	CS02	rafik	200
3	EE04	idris	300
4	EE07	jayesh	300
5	ME01	prince	100
6	ME03	milan	100

creation of crs_offrd table:

```
create table crs_offrd(
crs_code char(5) primary key,
crs_name char(35) not null,
crs_credits int,
crs_fac_cd char(8) references faculty(fac_code));

insert into crs_offrd values
('ME101','Thermo',4,'ME01'),
('ME103','Fluid',3,'ME03'),
('CS201','Algo',4,'CS01'),
('CS202','Network',3,'CS02'),
('EE304','Analog',3,'EE04'),
('EE307','Chip',3,'EE07');

select * from crs_offrd;
```

	crs_code	crs_name	crs_credits	crs_fac_cd
1	CS201	Algo	4	CS01
2	CS202	Network	3	CS02
3	EE304	Analog	3	EE04
4	EE307	Chip	3	EE07
5	ME101	Thermo	4	ME01
6	ME103	Fluid	3	ME03

creation of crs_regd table:

```
create table crs_regd(
crs_rollno int references students(rollno),
crs_cd char(5) references crs_offrd(crs_code),
marks int,
primary key(crs_rollno,crs_cd));

insert into crs_regd values
(10,'ME101',100),
(13,'ME103',100),
(45,'CS201',100),
(74,'CS202',100),
(12,'EE304',100),
(34,'EE307',100);

select * from crs_regd;
```

	crs_rollno	crs_cd	marks
1	10	ME101	100
2	12	EE304	100
3	13	ME103	100
4	34	EE307	100
5	45	CS201	100
6	74	CS202	100

Task-1:

1. **Create a view of all students in dept CSE.**

Query:

```
create view CS_Std as (select
rollno,name,bdate,D.deptcode,hostel,parent_inc,D.deptname,CR.crs_cd,
CR.marks,CO.crs_name,CO.crs_credits,F.fac_code,F.fac_name
from students S
join depts D on(S.deptcode=D.deptcode)
join crs_regd CR on(S.rollno=CR.crs_rollno)
join crs_offrd CO on(CR.crs_cd=CO.crs_code)
join faculty F on (F.fac_code=CO.crs_fac_cd)
where D.deptname='Computer');

select * from CS_Std;
```

output:

	rollno	name	bdate	deptcode	hostel	parent_inc	deptname	crs_cd	marks	crs_name	crs_credits	fac_code	fac_name
1	45	hrishi	1993-03-25	200	8	15000	Computer	CS201	100	Algo	4	CS01	anand
2	74	dev	1993-02-11	200	1	40000	Computer	CS202	100	Network	3	CS02	rafik

2. **Create a view named as cse_stud for 'CSE' dept students having attributes rollno, name, Hostel.**

Query:

```
create view cse_stud as
(select rollno,name,hostel from students
where deptcode=(select deptcode from depts where
deptname='Computer'));

select * from cse_stud;
```

output:

	rollno	name	hostel
1	45	hrishi	8
2	74	dev	1

3. **Insert a new student of CSE. Analyse the result.**

Query:

```
insert into students values
(64,'viraj','11-FEB-94',200,7,30000);
insert into crs_regd values
(64,'CS202',100);
```

Analysis:

```
select * from CS_Std;
```

	rollno	name	bdate	deptcode	hostel	parent_inc	deptname	crs_cd	marks	crs_name	crs_credits	fac_code	fac_name
1	45	hrishi	1993-03-25	200	8	15000	Computer	CS201	100	Algo	4	CS01	anand
2	64	viraj	1994-02-11	200	7	30000	Computer	CS202	100	Network	3	CS02	rafik
3	74	dev	1993-02-11	200	1	40000	Computer	CS202	100	Network	3	CS02	rafik

```
select * from cse_stud;
```

	rollno	name	hostel
1	45	hrishi	8
2	64	viraj	7
3	74	dev	1

4. **Increment parental income by Rs. 5000 (HRA).**

Query:

```
update students set parent_inc=parent_inc+5000;
```

Analysis:

```
select * from CS_Std;
```

	rollno	name	bdate	deptcode	hostel	parent_inc	deptname	crs_cd	marks	crs_name	crs_credits	fac_code	fac_name
1	45	hrishi	1993-03-25	200	8	20000	Computer	CS201	100	Algo	4	CS01	anand
2	64	viraj	1994-02-11	200	7	35000	Computer	CS202	100	Network	3	CS02	rafik
3	74	dev	1993-02-11	200	1	45000	Computer	CS202	100	Network	3	CS02	rafik

```
select * from cse_stud;
```

	rollno	name	hostel
1	45	hrishi	8
2	64	viraj	7
3	74	dev	1

5. Delete the view.

Query:

```
drop view CS_Std;
drop view cse_stud;
```

Task-2:

1. Create another view of all students in dept Mechanical Engineering (department Name). The view will contain attributes namely Roll-No, Name, Department Name, Age.

Query:

```
create view MECH_Std as
(select rollno,name,datediff(YYYY,bdate,getdate()) "Age",D.deptname
from students S
join depts D on(S.deptcode=D.deptcode)
where D.deptname='Mechanical');

select * from MECH_Std;
```

output:

	rollno	name	Age	deptname
1	10	jay	27	Mechanical
2	13	ravi	27	Mechanical

2. Insert a new student of Mechanical Engineering Department.

Query:

```
insert into students values
(84,'niraj','22-FEB-91',100,7,20000);

insert into crs_regd values
(84,'ME01',100);
```

Analysis:

```
select * from MECH_Std;
```

	rollno	name	Age	deptname
1	10	jay	27	Mechanical
2	13	ravi	27	Mechanical
3	84	niraj	31	Mechanical

3. Delete a student (for a given Name) of the same department

Query:

```
delete from crs_regd
where crs_rollno=(select rollno from students where name='jay');

delete from students
where name='jay';
```

Analysis:

```
select * from MECH_Std;
```

	rollno	name	Age	deptname
1	13	ravi	27	Mechanical
2	84	niraj	31	Mechanical

4. Shift a student (for a given Name) from Mechanical to Computer Science.

Query:

```
update crs_regd set crs_cd='CS201'
where crs_rollno=(select rollno from students where name='ravi');

update students set deptcode=(select deptcode from depts where
deptname='Computer');
```

Analysis:

```
select * from MECH_Std;
```

rollno	name	Age	deptname