**Program 8:**

Consider the following database of student enrollment in courses & books adopted for each course.

STUDENT (regno: string, name: string, major: string, bdate:date)

COURSE (course #:int, cname:string, dept:string)

ENROLL ( regno:string, course#:int, sem:int, marks:int)

BOOK \_ ADOPTION (course# :int, sem:int, book-ISBN:int)

TEXT (book-ISBN:int, book-title:string, publisher:string, author:string)

**i. Create the above tables by properly specifying the primary keys and the foreign keys.**

create database Lab8;

use Lab8;

create table student(

regno varchar(15),

name varchar(20),

major varchar(20),

bdate date,

primary key (regno)

);

desc student;



create table course(

courseno int,

cname varchar(20),

dept varchar(20),

primary key (courseno)

);

desc course;



create table enroll(

regno varchar(15),

courseno int,

sem int,

marks int,

primary key (regno,courseno),

foreign key (regno) references student (regno),

foreign key (courseno) references course (courseno)

);

desc enroll;



create table text(

book\_isbn int,

book\_title varchar(20),

publisher varchar(20),

author varchar(20),

primary key (book\_isbn)

);

desc text;



create table book\_adoption(

courseno int,

sem int,

book\_isbn int,

primary key (courseno,book\_isbn),

foreign key (courseno) references course (courseno),

foreign key (book\_isbn) references text(book\_isbn)

);

desc book\_adoption;



**ii. Enter at least five tuples for each relation.**

insert into student (regno,name,major,bdate) values

('1pe11cs002','b','sr','19930924'),

('1pe11cs003','c','sr','19931127'),

('1pe11cs004','d','sr','19930413'),

('1pe11cs005','e','jr','19940824');

select \* from student;



insert into course values (111,'os','cse'),

(112,'ec','cse'),

(113,'ss','ise'),

(114,'dbms','cse'),

(115,'signals','ece');

select \* from course;



insert into text values (book\_isbn,book\_title,publisher,author),

(10,'database systems','pearson','schield'),

(900,'operating sys','pearson','leland'),

(901,'circuits','hall india','bob'),

(902,'system software','peterson','jacob'),

(903,'scheduling','pearson','patil'),

(904,'database systems','pearson','jacob'),

(905,'database manager','pearson','bob'),

(906,'signals','hall india','sumit');

select \* from text;



insert into enroll (regno,courseno,sem,marks) values

('1pe11cs002',114,5,100),

('1pe11cs003',113,5,100),

('1pe11cs004',111,5,100),

('1pe11cs005',112,3,100);

select \* from enroll;



insert into book\_adoption (courseno,sem,book\_isbn) values

(111,5,900),

(111,5,903),

(111,5,904),

(112,3,901),

(113,3,10),

(114,5,905),

(113,5,902),

(115,3,906);

select \* from book\_adoption;



**iii. Demonstrate how you add a new text book to the database and make this book be adopted by some department.**

insert into text values (907,'ai','hall india','sumit');

insert into book\_adoption values(115, 2, 907);

select \* from text;

select \* from book\_adoption;





**iv. Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses offered by the ‘CS’ department that use more than two books.**

select b.book\_isbn, b.courseno, t.book\_title from book\_adoption b, text t where t.book\_isbn = b.book\_isbn and b.courseno in(

select courseno from course where dept = 'cse' and courseno in (select courseno from book\_adoption group by courseno having count(\*)>2));



**v. List any department that has all its adopted books published by a specific publisher.**

select distinct c.dept

from course c

where c.dept in

( select c.dept

from course c,book\_adoption b,text t

where c.courseno=b.courseno

and t.book\_isbn=b.book\_isbn

and t.publisher='hall india')

and c.dept not in

(select c.dept

from course c,book\_adoption b,text t

where c.courseno=b.courseno

and t.book\_isbn=b.book\_isbn

and t.publisher != 'hall india');

