**PROGRAM 8. STUDENT ENROLLMENT DATABASE**  
Consider the following database of student enrollment in courses and books adopted for each course.  
STUDENT (regno: String, name: String, major: String, bdate: date)  
COURSE (course #: int, cname: String, dept: String)  
ENROLL (regno: String, cname: String, 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 TABLE student(

regno VARCHAR(15),

name VARCHAR(20),

major VARCHAR(20),

bdate DATE,

PRIMARY KEY (regno) );

CREATE TABLE course(

courseno INT,

cname VARCHAR(20),

dept VARCHAR(20),

PRIMARY KEY (courseno) );

CREATE TABLE enroll(

regno VARCHAR(15),

courseno INT,

sem INT(3),

marks INT(4),

PRIMARY KEY (regno,courseno),

FOREIGN KEY (regno) REFERENCES student (regno),

FOREIGN KEY (courseno) REFERENCES course (courseno) );

CREATE TABLE text(

book\_isbn INT(5),

book\_title VARCHAR(20),

publisher VARCHAR(20),

author VARCHAR(20),

PRIMARY KEY (book\_isbn) );

CREATE TABLE book\_adoption(

courseno INT,

sem INT(3),

book\_isbn INT(5),

PRIMARY KEY (courseno,book\_isbn),

FOREIGN KEY (courseno) REFERENCES course (courseno),

FOREIGN KEY (book\_isbn) REFERENCES text(book\_isbn) );

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

INSERT INTO student (regno,name,major,bdate) VALUES ('1pe11cs001','a','sr',19931230),

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

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

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

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

INSERT INTO course VALUES

(111,'OS','CSE'),

(112,'EC','CSE'),

(113,'SS','ISE'),

(114,'DBMS','CSE'),

(115,'SIGNALS','ECE');

INSERT INTO text VALUES

(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');

INSERT INTO enroll (regno,courseno,sem,marks) VALUES

('1pe11cs001',115,3,100),

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

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

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

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

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);

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 (906,'SIGNALS','HALL INDIA','SUMIT');

INSERT INTO book\_adoption VALUES (115,3,906);

**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**.

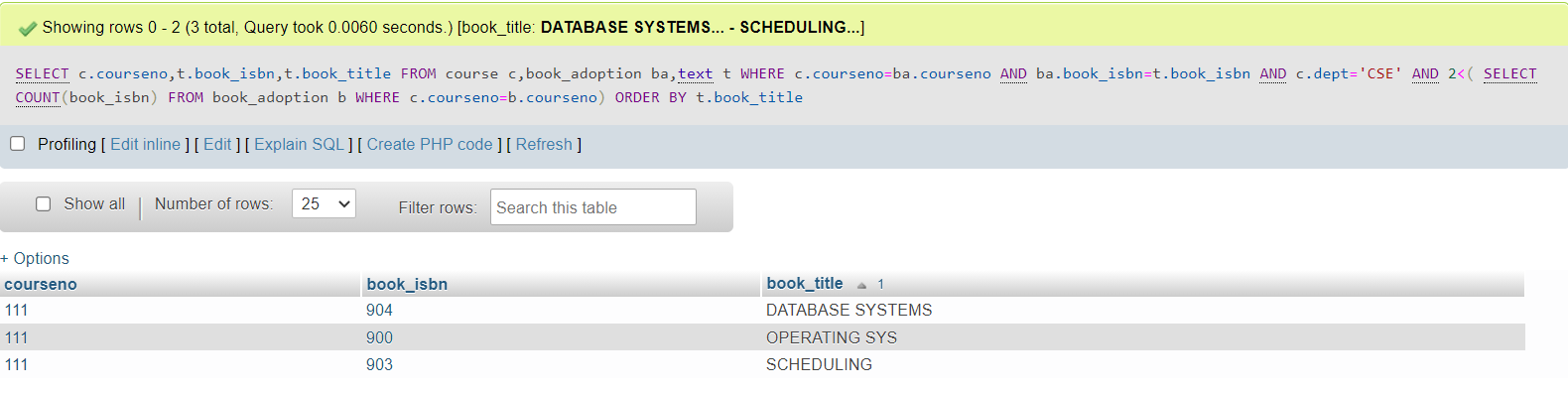
SELECT c.courseno,t.book\_isbn,t.book\_title

FROM course c,book\_adoption ba,text t

WHERE c.courseno=ba.courseno AND ba.book\_isbn=t.book\_isbn AND

c.dept='CSE' AND 2<( SELECT COUNT(book\_isbn)

FROM book\_adoption b WHERE c.courseno=b.courseno) ORDER BY t.book\_title;



**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='PEARSON');

