Consider the following database of student enrollment in courses and books adopted for each course.
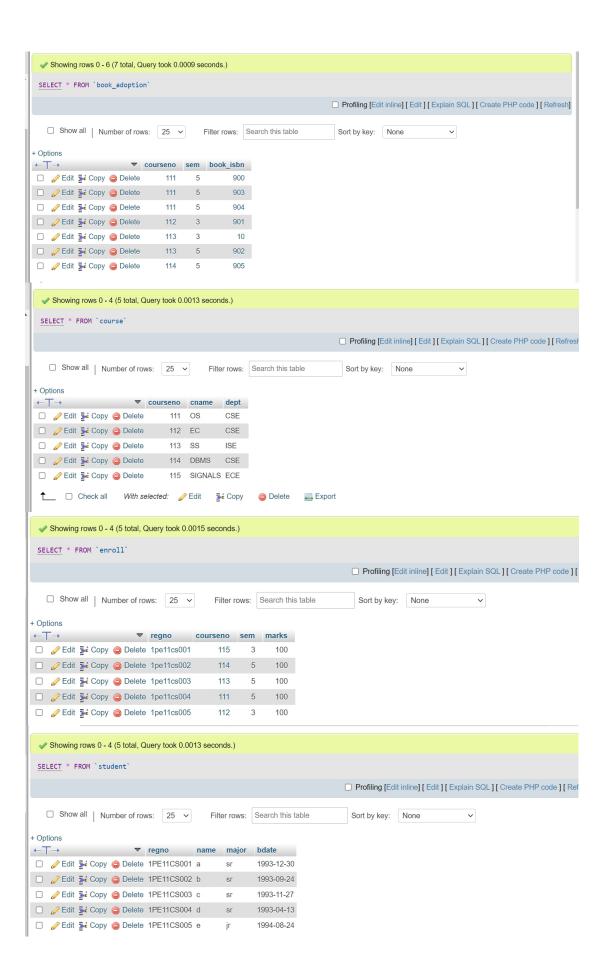
STUDENT (regno: String, name: String, major: String, bdate: date)
COURSE (course #: int, cname: String, dept: String)
ENROLL (regno: String, cname: String, sem: int, marks: int)
BOOK_ADOPTION (course #: int, sem: int, book-ISBN: int)
TEXT(book-ISBN:int, book-title:String, publisher: String, author: String)

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

ii.

CREATE DATABASE student_enrollment;

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));

iii. 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');

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);

Showing rows 0 - 6 (7 total, Query took 0.0009 seconds.)

`SELECT * FROM `book_adoption``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	courseno	sem	book_isbn
Edit Copy Delete	111	5	900
Edit Copy Delete	111	5	903
Edit Copy Delete	111	5	904
Edit Copy Delete	112	3	901
Edit Copy Delete	113	3	10
Edit Copy Delete	113	5	902
Edit Copy Delete	114	5	905

Showing rows 0 - 4 (5 total, Query took 0.0013 seconds.)

`SELECT * FROM `course``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	courseno	cname	dept
Edit Copy Delete	111	OS	CSE
Edit Copy Delete	112	EC	CSE
Edit Copy Delete	113	SS	ISE
Edit Copy Delete	114	DBMS	CSE
Edit Copy Delete	115	SIGNALS	ECE

Check all   With selected: Edit Copy Delete Export

Showing rows 0 - 4 (5 total, Query took 0.0015 seconds.)

`SELECT * FROM `enroll``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	regno	courseno	sem	marks
Edit Copy Delete	1pe11cs001	115	3	100
Edit Copy Delete	1pe11cs002	114	5	100
Edit Copy Delete	1pe11cs003	113	5	100
Edit Copy Delete	1pe11cs004	111	5	100
Edit Copy Delete	1pe11cs005	112	3	100

Showing rows 0 - 4 (5 total, Query took 0.0013 seconds.)

`SELECT * FROM `student``

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Ref

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

	regno	name	major	bdate
Edit Copy Delete	1PE11CS001	a	sr	1993-12-30
Edit Copy Delete	1PE11CS002	b	sr	1993-09-24
Edit Copy Delete	1PE11CS003	c	sr	1993-11-27
Edit Copy Delete	1PE11CS004	d	sr	1993-04-13
Edit Copy Delete	1PE11CS005	e	jr	1994-08-24

```
SELECT * FROM `text`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ▾   Filter rows: Search this table   Sort by key: None ▾

+ Options

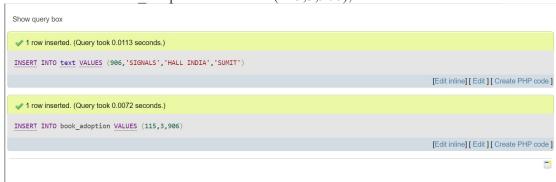|	book_isbn	book_title	publisher	author
☐ 🖉 Edit 📋 Copy ⊖ Delete	10	DATABASE SYSTEMS	PEARSON	SCHIELD
☐ 🖉 Edit 📋 Copy ⊖ Delete	900	OPERATING SYS	PEARSON	LELAND
☐ 🖉 Edit 📋 Copy ⊖ Delete	901	CIRCUITS	HALL INDIA	BOB
☐ 🖉 Edit 📋 Copy ⊖ Delete	902	SYSTEM SOFTWARE	PETERSON	JACOB
☐ 🖉 Edit 📋 Copy ⊖ Delete	903	SCHEDULING	PEARSON	PATIL
☐ 🖉 Edit 📋 Copy ⊖ Delete	904	DATABASE SYSTEMS	PEARSON	JACOB
☐ 🖉 Edit 📋 Copy ⊖ Delete	905	DATABASE MANAGER	PEARSON	BOB

iv. Demonstrate how you add a new text book to the database and make this book be adopted by some department.
v.
INSERT INTO text VALUES (906,'SIGNALS','HALL INDIA','SUMIT');
INSERT INTO book_adoption VALUES (115,3,906);

Show query box

✔ 1 row inserted. (Query took 0.0113 seconds.)

```
INSERT INTO text VALUES (906,'SIGNALS','HALL INDIA','SUMIT')
```

[Edit inline] [Edit] [Create PHP code]

✔ 1 row inserted. (Query took 0.0072 seconds.)

```
INSERT INTO book_adoption VALUES (115,3,906)
```

[Edit inline] [Edit] [Create PHP code]

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;

```
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
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 ▾   Filter rows: Search this table

+ Options

courseno	book_isbn	book_title ▲ 1
111	904	DATABASE SYSTEMS
111	900	OPERATING SYS
111	903	SCHEDULING

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');

Showing rows 0 - 1 (2 total, Query took 0.0100 seconds.)

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')

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refres

☐ Show all | Number of rows: 25 ∨   Filter rows: Search this table   Sort by key: None ∨

+ Options

	dept
☐ 🖉 Edit ⋮ Copy ⊘ Delete	CSE
☐ 🖉 Edit ⋮ Copy ⊘ Delete	ISE