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

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MySQL returned an empty result set (i.e. zero rows). (Query took 0.0020 seconds.)
 use studentenrollment
[ Edit inline ] [ Edit ] [ Create PHP code ]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.5680 seconds.)
 CREATE TABLE student( regno VARCHAR(10) PRIMARY KEY, name VARCHAR(20), major VARCHAR(20), bdate DATE )
[ Edit inline ] [ Edit ] [ Create PHP code ]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.1630 seconds.)
 CREATE TABLE course( courseno INT , cname VARCHAR(20) UNIQUE, dept VARCHAR(20), PRIMARY KEY(courseno) )
[ Edit inline ] [ Edit ] [ Create PHP code ]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.2480 seconds.)
 CREATE TABLE enroll( regno VARCHAR(10), cname VARCHAR(20), sem INT, marks INT, FOREIGN KEY (regno) REFERENCES student(regno) on delete
 cascade on UPDATE CASCADE , FOREIGN KEY (cname) REFERENCES course(cname) on delete cascade on UPDATE CASCADE )
[Edit inline][Edit][Create PHP code]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.1600 seconds.)
 CREATE TABLE text book( book isbn INT(5) PRIMARY KEY, book title VARCHAR(20), publisher VARCHAR(20), author VARCHAR(20))
[Edit inline][Edit][Create PHP code]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.2080 seconds.)
 CREATE TABLE book_adoption( courseno INT, sem INT, book_isbn INT(5), FOREIGN KEY (courseno) REFERENCES course (courseno) on DELETE
 CASCADE on UPDATE CASCADE, FOREIGN KEY (book isbn) REFERENCES text book(book isbn) on DELETE CASCADE on UPDATE CASCADE)
[ Edit inline ] [ Edit ] [ Create PHP code ]
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	Table 🔺	Actio	on						Rows @	Туре	Collation	Size	Overhead
	book_adoption		Browse	M Structure	Search	3-€ Insert	Empty	Drop)	InnoDE	utf8mb4_general_ci	48.0 KiB	-
	course		Browse		→ Search	≩≟ Insert	Empty	Drop)	InnoDE	utf8mb4_general_ci	32.0 KiB	-
	enroll	*	Browse	Structure	Search	3-ċ Insert	Empty	Drop	,	InnoDE	utf8mb4_general_ci	48.0 KiB	- 2
	student	☆	Browse		♣ Search	∄ insert	Empty	Drop)	InnoDE	utf8mb4_general_ci	16.0 KiB	-
0	text_book	俞	Browse	Structure	Search	₃≟ Insert	Empty	Drop		nnoDE	utf8mb4_general_ci	16.0 KiB	-
	5 tables	Sum								InnoDE	3 utf8mb4_general_ci	160.0 KiB	0 B

ii. Enter at least five tuples for each relation.



```
✓ 5 rows inserted. (Query took 0.0920 seconds.)

INSERT INTO course VALUES (101, 'OS', 'CSE'), (102, 'DS', 'CSE'), (103, 'JAVA', 'ISE'), (104, 'DBMS', 'CSE'), (105, 'EC', 'ECE')

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



←T→			▼	courseno	cname	dept
		3 - € Copy	Delete	101	OS	CSE
	Edit	≩-ċ Copy	Delete	102	DS	CSE
0	@ Edit	≩-ċ Copy	Delete	103	JAVA	ISE
	Edit	≩ċ Copy	Delete	104	DBMS	CSE
	Edit	3 сору	Delete	105	EC	ECE

↑ Check all With selected: Ø Edit 🞉 Copy 🙆 Delete 📃 Export

INSERT INTO enroll VALUES ('18M19CS002','JAVA',3,100), ('18M19CS019','DBMS',3,100), ('18M19CS120','JAVA',5,100),
('18M19CS147','OS',5,100), ('18M19CS147','DS',5,100), ('18M19CS182','OS',5,100)

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

+ Options

regno	cname	sem	marks	
1BM19CS002	JAVA	3	100	
1BM19CS019	DBMS	3	100	
1BM19CS120	JAVA	5	100	
1BM19CS147	OS	5	100	
1BM19CS147	DS	5	100	
1BM19CS182	OS	5	100	

8 rows inserted. (Query took 0.1230 seconds.) INSERT INTO text book VALUES (903, 'SCHEDULING', 'PEARSON', 'PATIL'), (900, 'OPERATING SYS', 'PEARSON', 'LELAND'), (901, 'CIRCUITS', 'HALL INDIA', 'BOB'), (902, 'JAVA', 'PETERSON', 'JACOB'), (904, 'DATABASE SYSTEMS', 'PEARSON', 'JACOB'), (905, 'DATABASE MANAGER', 'PEARSON', 'BOB'), (906, 'Basics of EC', 'HALL INDIA', 'SUMIT'), (910, 'DATABASE SYSTEMS', 'PEARSON', 'SCHIELD') [Edit inline] [Edit] [Create PHP code] 1 row inserted. (Query took 0.0750 seconds.) INSERT INTO 'text book' VALUES (999, 'DS Simplified', 'Pearson', 'Sharma') [Edit inline] [Edit] [Create PHP code] $\leftarrow T \rightarrow$ ▼ book isbn book title publisher author @ Edit 3-i Copy OPERATING SYS Delete 900 PEARSON LELAND @ Edit 3♣å Copy Delete 901 CIRCUITS HALL INDIA BOB JACOB @ Edit 902 JAVA PETERSON 3- Copy Delete @ Edit 3€ Copy 903 SCHEDULING PEARSON PATIL Delete @ Edit 904 JACOB 3-€ Copy DATABASE SYSTEMS PEARSON Delete @ Edit BOB 3+i Copy 905 DATABASE MANAGER PEARSON Delete @ Edit SUMIT 3€ Copy 906 BASICS OF EC HALL INDIA Delete @ Edit 3- Copy Delete 910 DATABASE SYSTEMS PEARSON SCHIELD @ Edit 3-i Copy Delete 999 DS Simplified Pearson Sharma Check all With selected: @ Edit 3-i Copy Export Delete

9 rows inserted. (Query took 0.0760 seconds.)

INSERT INTO book_adoption VALUES (101,5,900), (101,5,903), (104,5,904), (104,3,910), (103,3,902), (104,5,905), (103,5,902), (103,5,909)

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

+ Options

courseno	sem	book_isbn	
101	5	900	
101	5	903	
104	5	904	
104	3	910	
103	3	902	
104	5	905	
103	5	902	
105	3	906	
102	5	999	

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

```
# 1 row inserted. (Query took 0.0740 seconds.)

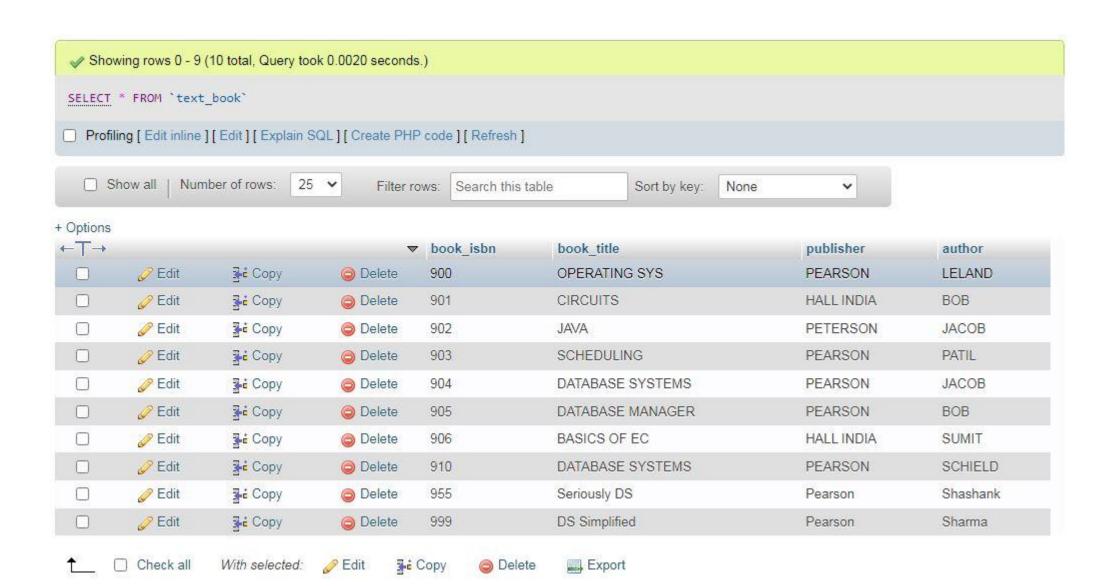
INSERT INTO `book_adoption` VALUES (102,3,955)

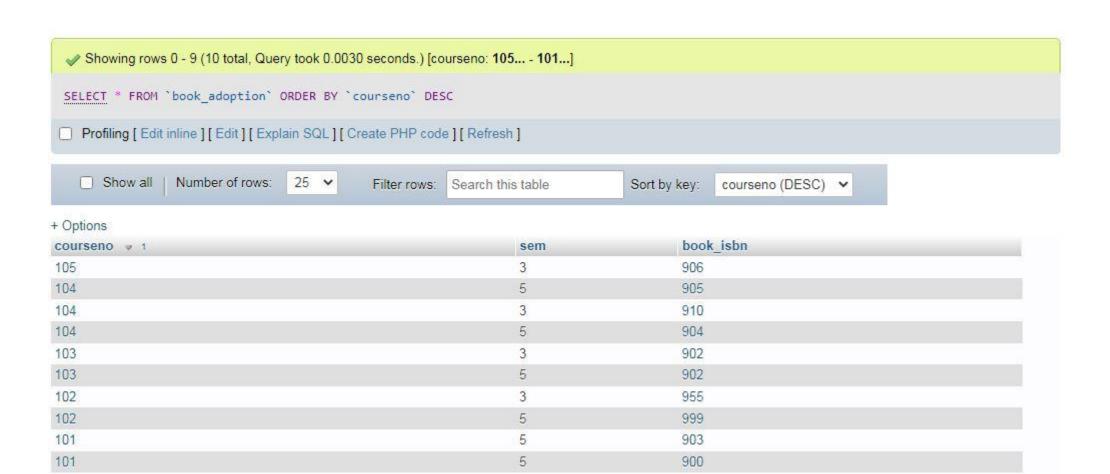
[Edit inline] [Edit] [Create PHP code]

# 1 row inserted. (Query took 0.0480 seconds.)

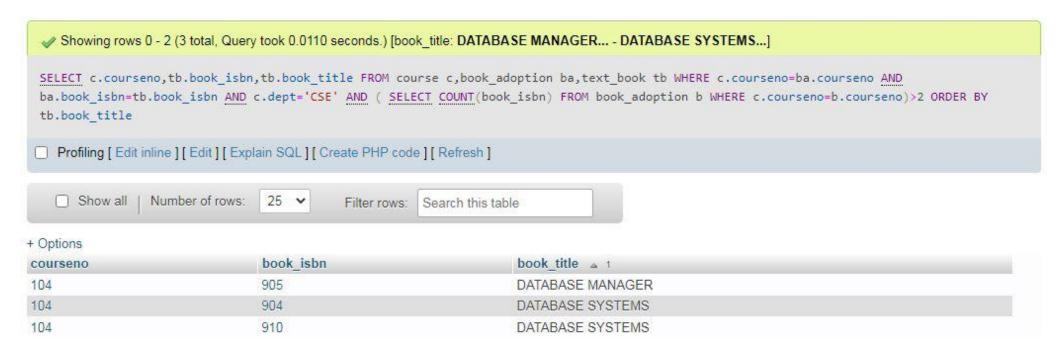
insert into text_book values(955, 'Seriously DS', 'Pearson', 'Shashank')

[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.



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

