

## 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.

ii. Enter at least five tuples for each relation.

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

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.

## BOOK ADOPTION

Showing rows 0 - 7 (8 total, Query took 0.0011 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
<input type="checkbox"/>	Edit	Copy	Delete	111	5	900
<input type="checkbox"/>	Edit	Copy	Delete	111	5	903
<input type="checkbox"/>	Edit	Copy	Delete	111	5	904
<input type="checkbox"/>	Edit	Copy	Delete	112	3	901
<input type="checkbox"/>	Edit	Copy	Delete	113	3	10
<input type="checkbox"/>	Edit	Copy	Delete	113	5	902
<input type="checkbox"/>	Edit	Copy	Delete	114	5	905
<input type="checkbox"/>	Edit	Copy	Delete	115	3	906

☐ Check all | With selected: Edit Copy Delete Export

# COURSRE

Showing rows 0 - 4 (5 total, Query took 0.0014 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
<input type="checkbox"/>	Edit	Copy	Delete	111	os	cse
<input type="checkbox"/>	Edit	Copy	Delete	112	ec	cse
<input type="checkbox"/>	Edit	Copy	Delete	113	ss	ise
<input type="checkbox"/>	Edit	Copy	Delete	114	dbms	cse
<input type="checkbox"/>	Edit	Copy	Delete	115	signals	ece

☐ Check all | With selected: Edit Copy Delete Export

# ENROLL

Showing rows 0 - 4 (5 total, Query took 0.0012 seconds.)

SELECT \* FROM `enroll`

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

				regno	courseno	sem	marks
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs001	115	3	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs002	114	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs003	113	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs004	111	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs005	112	3	100

☐ Check all | With selected: Edit Copy Delete Export

# STUDENT

Showing rows 0 - 4 (5 total, Query took 0.0009 seconds.)

SELECT \* FROM `student`

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

				regno	name	major	bdate
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs001	a	sr	1993-12-30
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs002	b	sr	1993-09-24
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs003	c	sr	1993-11-27
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs004	d	sr	1993-04-13
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs005	e	jr	1993-08-24

☐ Check all | With selected: Edit Copy Delete Export

# TEXT

✓ Showing rows 0 - 7 (8 total, Query took 0.0007 seconds.)

```
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
<input type="checkbox"/>	Edit	Copy	Delete	10	DATABASE SYSTEM	PEARSON	SCHIELD
<input type="checkbox"/>	Edit	Copy	Delete	900	OPERATING SYS	PEARSON	LELAND
<input type="checkbox"/>	Edit	Copy	Delete	901	CIRCUITS	PEARSON	BOB
<input type="checkbox"/>	Edit	Copy	Delete	902	SYSTEM SOFTWARE	PETERSON	JACOB
<input type="checkbox"/>	Edit	Copy	Delete	903	SCHEDULING	PEARSON	PATIL
<input type="checkbox"/>	Edit	Copy	Delete	904	DATABASE SYSTEMS	PEARSON	JACOB
<input type="checkbox"/>	Edit	Copy	Delete	905	DATABASE MANAGER	PEARSON	BOB
<input type="checkbox"/>	Edit	Copy	Delete	906	SIGNAL	HALL INDIA	SUMT

3)

Server: 127.0.0.1 » Database: student enrollment » Table: text

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Show query box

✓ 1 row inserted. (Query took 0.0439 seconds.)

```
insert into text values(907,'SCHEMA DIAGRAMS','HALL INDIA','RICHARD')
```

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

✓ 1 row inserted. (Query took 0.0300 seconds.)

```
insert into book_adoption values(114,4,907)
```

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

4)

✓ Showing rows 0 - 2 (3 total, Query took 0.0148 seconds.) [book\_title: DATABASE SYSTEMS... - SCHEDULING...]

```
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
111	904	DATABASE SYSTEMS
111	900	OPERATING SYS
111	903	SCHEDULING

5)

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0924 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') 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 != 'PEARSON')
```

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

dept