

PROGRAM 08: 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.

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CREATE DATABASE STUDENTENROLL;
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```
USE STUDENTENROLL;
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```
CREATE TABLE STUDENT(
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```
    REGNO VARCHAR(20),
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```
    NAME VARCHAR2(20),
```

```
    MAJOR VARCHAR2(5),
```

```
    BDATE DATE,
```

PRIMARY KEY(REGNO)

);

CREATE TABLE COURSE(

COURSE_ID INT,

CNAME VARCHAR(20),

DEPT VARCHAR(4),

PRIMARY KEY(COURSE_ID)

);

CREATE TABLE TEXT(

ISBN INT,

BOOK_TITLE VARCHAR(50),

PUBLISHER VARCHAR(20),

AUTHOR VARCHAR(20),

PRIMARY KEY(ISBN)

);

CREATE TABLE ADOPTION(

COURSE_ID INT,

SEM INT,

ISBN INT,

PRIMARY KEY(COURSE_ID, ISBN),

FOREIGN KEY(COURSE_ID) REFERENCES COURSE(COURSE_ID),

FOREIGN KEY(ISBN) REFERENCES TEXT(ISBN)

);

CREATE TABLE ENROLL(

REGNO VARCHAR(20),

```

COURSE_ID INT,
SEM INT,
MARKS INT,
PRIMARY KEY(REGNO, COURSE_ID),
FOREIGN KEY(REGNO) REFERENCES STUDENT(REGNO),
FOREIGN KEY(COURSE_ID) REFERENCES COURSE(COURSE_ID)
);

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```

INSERT INTO STUDENT VALUES('REGNO', 'NAME', 'MAJOR', 'DATE');
INSERT INTO COURSE VALUES(COURSE_ID, 'CNAME', 'DEPT');
INSERT INTO TEXT VALUES(ISBN, 'BOOK_TITLE', 'PUBLISHER', 'AUTHOR');
INSERT INTO ADOPTION VALUES(COURSE_ID, SEM, ISBN);
INSERT INTO ENROLL VALUES('REGNO', COURSE_ID, SEM, MARKS);

```

```
















SELECT * FROM STUDENT;
SELECT * FROM COURSE;
SELECT * FROM TEXT;
SELECT * FROM ADOPTION;
SELECT * FROM ENROLL;

```

```

















INSERT INTO STUDENT (REGNO, NAME, MAJOR, DATE) VALUES
('1PE11CS002','SAM','SR','19930924'),
('1PE11CS003','CAMERON','SR','19931127'),
('1PE11CS004','DANNY','SR','19930413'),
('1PE11CS005','ETHER','JR','19940824');

```

	REGNO	NAME	MAJOR	BDATE
<input type="checkbox"/>  Edit  Copy  Delete	®NO	&NAME	&MAJO	0000-00-00
<input type="checkbox"/>  Edit  Copy  Delete	1PE11CS002	SAM	SR	1993-09-24
<input type="checkbox"/>  Edit  Copy  Delete	1PE11CS003	CAMERON	SR	1993-11-27
<input type="checkbox"/>  Edit  Copy  Delete	1PE11CS004	DANNY	SR	1993-04-13
<input type="checkbox"/>  Edit  Copy  Delete	1PE11CS005	ETHER	JR	1994-08-24

























INSERT INTO COURSE (COURSE_ID, CNAME, DEPT) VALUES

(111,'OS','CSE'), (112,'EC','CSE'), (113,'SS','ISE'),
(114,'DBMS','CSE'), (115,'SIGNALS','ECE');

			COURSE_ID	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

INSERT INTO TEXT (ISBN, BOOK_TITLE, PUBLISHER, AUTHOR) 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');

			ISBN	BOOK_TITLE	PUBLISHER	AUTHOR
<input type="checkbox"/>		Edit		Copy		Delete
			10	DATABASE SYSTEMS	PEARSON	SCHIELD
<input type="checkbox"/>		Edit		Copy		Delete
			900	OPERATING SYS	PEARSON	LELAND
<input type="checkbox"/>		Edit		Copy		Delete
			901	CIRCUITS	HALL INDIA	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	SIGNALS	HALL INDIA	SUMIT

INSERT INTO ENROLL (REGNO, COURSE_ID, SEM, MARKS) VALUES

('1PE11CS002',114,5,100), ('1PE11CS003',113,5,100),


























('1PE11CS004',111,5,100), ('1PE11CS005',112,3,100);

		REGNO	COURSE_ID	SEM	MARKS
<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

INSERT INTO ADOPTION (COURSE_ID, SEM, 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);

		COURSE_ID	SEM	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

INSERT INTO TEXT VALUES('4242', 'PYTHON PROG', 'PHI', 'DAVE R');

INSERT INTO ADOPTION VALUES(40, 4, 4242); #1

		ISBN	BOOK_TITLE	PUBLISHER	AUTHOR
<input type="checkbox"/>	 Edit  Copy  Delete	10	DATABASE SYSTEMS	PEARSON	SCHIELD
<input type="checkbox"/>	 Edit  Copy  Delete	900	OPERATING SYS	PEARSON	LELAND
<input type="checkbox"/>	 Edit  Copy  Delete	901	CIRCUITS	HALL INDIA	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	SIGNALS	HALL INDIA	SUMIT
<input type="checkbox"/>	 Edit  Copy  Delete	4242	PYTHON PROG	PHI	DAVE R

```

SELECT C.CNAME, T.ISBN, T.BOOK_TITLE
FROM COURSE C, TEXT T
ORDER BY C.CNAME; #2

























```

CNAME ▲ 1	ISBN	BOOK_TITLE
DBMS	901	CIRCUITS
DBMS	906	SIGNALS
DBMS	903	SCHEDULING
DBMS	900	OPERATING SYS
DBMS	905	DATABASE MANAGER
DBMS	902	SYSTEM SOFTWARE
DBMS	10	DATABASE SYSTEMS
DBMS	4242	PYTHON PROG
DBMS	904	DATABASE SYSTEMS
EC	903	SCHEDULING
EC	900	OPERATING SYS
EC	905	DATABASE MANAGER
EC	902	SYSTEM SOFTWARE
EC	10	DATABASE SYSTEMS
EC	4242	PYTHON PROG
EC	904	DATABASE SYSTEMS
EC	901	CIRCUITS
EC	906	SIGNALS
OS	900	OPERATING SYS
OS	905	DATABASE MANAGER
OS	902	SYSTEM SOFTWARE
OS	4242	PYTHON PROG
OS	10	DATABASE SYSTEMS
OS	904	DATABASE SYSTEMS

```

SELECT C.CNAME
FROM COURSE C, ADOPTION A, TEXT T
WHERE T.ISBN = A.ISBN AND C.COURSE_ID = A.COURSE_ID ; #3

```

←T→				CNAME
<input type="checkbox"/>	 Edit	 Copy	 Delete	OS
<input type="checkbox"/>	 Edit	 Copy	 Delete	OS
<input type="checkbox"/>	 Edit	 Copy	 Delete	OS
<input type="checkbox"/>	 Edit	 Copy	 Delete	EC
<input type="checkbox"/>	 Edit	 Copy	 Delete	SS
<input type="checkbox"/>	 Edit	 Copy	 Delete	SS
<input type="checkbox"/>	 Edit	 Copy	 Delete	DBMS
<input type="checkbox"/>	 Edit	 Copy	 Delete	SIGNALS