# DIVYASHREE K
# 1BM19CS054
# CSE-4A

Question:-

## 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.

## Program 8:

CREATE DATABASE COLLEGE;

USE COLLEGE;


CREATE TABLE student(

```sql
        regno VARCHAR(15),

        sname VARCHAR(20),

        major VARCHAR(20),

        bdate DATE,

        PRIMARY KEY (regno) );


CREATE TABLE course(

        courseno INT,

        cname VARCHAR(20),

        dept VARCHAR(20),

        PRIMARY KEY (courseno) );

        select * from course;
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) );
```

```sql
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) );



INSERT INTO student
(regno,sname,major,bdate) VALUES
    ('1pe11cs002','b','sr','19930924'),
```

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

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

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

 INSERT INTO student
(regno,sname,major,bdate) VALUES

    ('1pe11cs001','a','jr','19930922');


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');
```

```sql
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),
```

```sql
(113,3,10),

(114,5,905),

(113,5,902),

(115,3,906);


select * from student;

select * from course;

select * from enroll;

select * from book_adoption;

select * from text;


/*4. 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.*/

```sql
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;


/*5.    List any department that has all its adopted books published by a specific publisher.*/


SELECT DISTINCT c.dept
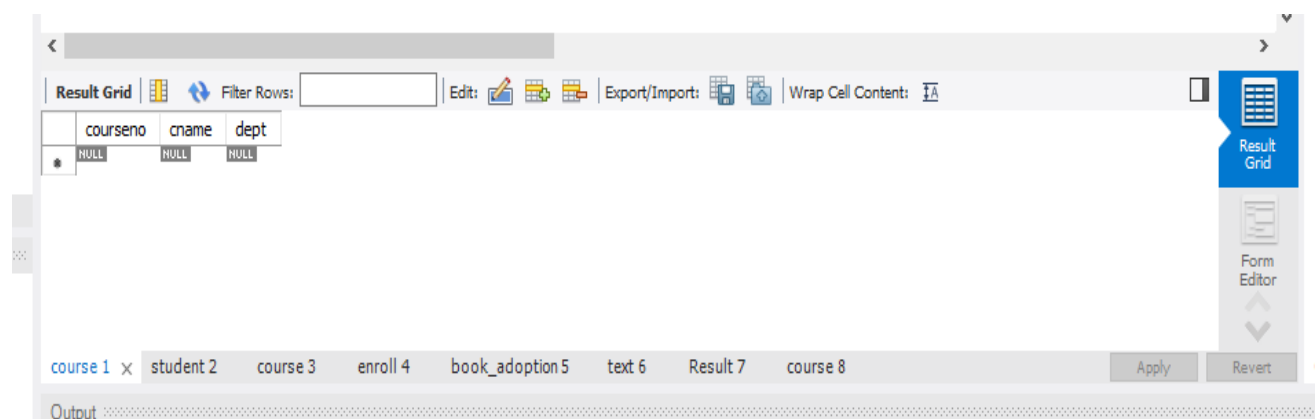
FROM course c

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='HALL INDIA')

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 != 'HALL INDIA');

Output:

## student 2

| regno | sname | major | bdate |
|---|---|---|---|
| 1pe11cs001 | a | jr | 1993-09-22 |
| 1pe11cs002 | b | sr | 1993-09-24 |
| 1pe11cs003 | c | sr | 1993-11-27 |
| 1pe11cs004 | d | sr | 1993-04-13 |
| 1pe11cs005 | e | jr | 1994-08-24 |
| NULL | NULL | NULL | NULL |

course 1 | student 2 × | course 3 | enroll 4 | book_adoption 5 | text 6 | Result 7 | course 8

Output

## course 3

| courseno | cname | dept |
|---|---|---|
| 111 | OS | CSE |
| 112 | EC | CSE |
| 113 | SS | ISE |
| 114 | DBMS | CSE |
| 115 | SIGNALS | ECE |
| NULL | NULL | NULL |

course 1 | student 2 | course 3 × | enroll 4 | book_adoption 5 | text 6 | Result 7 | course 8

Output

## enroll 4

| regno | courseno | sem | marks |
|---|---|---|---|
| 1pe11cs001 | 115 | 3 | 100 |
| 1pe11cs002 | 114 | 5 | 100 |
| 1pe11cs003 | 113 | 5 | 100 |
| 1pe11cs004 | 111 | 5 | 100 |
| 1pe11cs005 | 112 | 3 | 100 |
| NULL | NULL | NULL | NULL |

course 1 | student 2 | course 3 | enroll 4 × | book_adoption 5 | text 6 | Result 7 | course 8

Output

**book_adoption 5**

| courseno | sem | book_isbn |
|---|---|---|
| 111 | 5 | 900 |
| 111 | 5 | 903 |
| 111 | 5 | 904 |
| 112 | 3 | 901 |
| 113 | 3 | 10 |
| 113 | 5 | 902 |
| 114 | 5 | 905 |
| 115 | 3 | 906 |
| NULL | NULL | NULL |

course 1 | student 2 | course 3 | enroll 4 | book_adoption 5 × | text 6 | Result 7 | course 8 | Apply | Revert

Output

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**text 6**

| book_isbn | book_title | publisher | author |
|---|---|---|---|
| 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 |
| NULL | NULL | NULL | NULL |

course 1 | student 2 | course 3 | enroll 4 | book_adoption 5 | text 6 × | Result 7 | course 8 | Apply | Revert

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**Result 7**

| courseno | book_isbn | book_title |
|---|---|---|
| 111 | 904 | DATABASE SYSTEMS |
| 111 | 900 | OPERATING SYS |
| 111 | 903 | SCHEDULING |

course 1 | student 2 | course 3 | enroll 4 | book_adoption 5 | text 6 | Result 7 × | course 8 | Read Only

Output

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| | dept |
|---|---|
| ▶ | ECE |

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

Result Grid

Form Editor

course 1    student 2    course 3    enroll 4    book_adoption 5    text 6    Result 7    course 8 ✕            ⓘ Read Only