

1)

```
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));
```

2)

```
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'),  
(906,'SIGNALS','HALL INDIA','SUMIT');
```

```
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),  
(115,3,906);
```

3)

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

```
Insert into book_adoption values(114,4,907);
```

4)

```
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)

```
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');
```

MariaDB [SE]

MariaDB [SE]> select \* from student;

regno	name	major	bdate
1pe11cs001	a	sr	1993-12-30
1pe11cs002	b	sr	1993-09-24
1pe11cs003	c	sr	1993-11-27
1pe11cs004	d	sr	1993-04-13
1pe11cs005	e	jr	1994-08-24

5 rows in set (0.176 sec)

MariaDB [SE]> select \* from enroll;

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

5 rows in set (0.013 sec)

MariaDB [SE]> select \* from course;

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

5 rows in set (0.010 sec)

```
MariaDB [SE]> select * from text;
```

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

```
8 rows in set (0.010 sec)
```

```
MariaDB [SE]> select * from book_adoption;
```

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

```
8 rows in set (0.001 sec)
```

```
MariaDB [SE]> insert into text values(907,'SCHEMA DIAGRAMS','HALL INDIA','RICHARD');
```

```
Query OK, 1 row affected (0.114 sec)
```

```
MariaDB [SE]> insert into book_adoption values(114,4,907);
```

```
Query OK, 1 row affected (0.010 sec)
```

```
MariaDB [SE]> select * from text;
```

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
907	SCHEMA DIAGRAMS	HALL INDIA	RICHARD

```
9 rows in set (0.002 sec)
```

```
MariaDB [SE]> select * from book_adoption;
```

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
114	4	907
115	3	906

```
9 rows in set (0.002 sec)
```

```
MariaDB [SE]> 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;
```

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

```
3 rows in set (0.105 sec)
```

```
MariaDB [SE]>
```

```
MariaDB [SE]> 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');
```

```
Empty set (0.034 sec)
```