

# **WEEK-5 DBMS LAB**

**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.**

# OUTPUT:

- i. Create the above tables by properly specifying the primary keys and the foreign keys.
- ii. Enter at least five tuples for each relation.

The screenshot shows a database management tool interface with a query editor and a result grid. The query editor contains the following SQL code:

```
73 /*iii.Demonstrate how you add a new text book to the database and make this book be
74    adopted by some department.*/
75
76 -- INSERT INTO TEXT
77
78 • INSERT INTO TEXT VALUES(8,'AUTOMATA THEORY','TMH','Peter Lynch');
79 • INSERT INTO BOOK_ADOPTION VALUES(22,4,8);
80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
```

The result grid displays the output of the query, showing a table with three columns: course\_no, sem, and book\_isbn. The table contains 10 rows of data, including a row with NULL values.

	course_no	sem	book_isbn
▶	11	4	1
	11	4	2
	22	6	6
	22	4	8
	44	6	3
	44	6	4
	44	2	5
	55	2	7
*	NULL	NULL	NULL

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

Limit to 1000 rows

```

74 adopted by some department.*/
75
76 -- INSERT INTO TEXT
77
78 • INSERT INTO TEXT VALUES(8,'AUTOMATA THEORY','TMH','Peter Lynch');
79 • INSERT INTO BOOK_ADOPTION VALUES(22,4,8);
80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
82 • SELECT*FROM ENROLL;

```

Result Grid

	course_no	c_name	dept
▶	11	DS	CS
	22	USP	IS
	33	SNS	EC
	44	DBMS	CS
	55	EC	TC
*	NULL	NULL	NULL

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

Limit to 1000 rows

```

80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
82 • SELECT*FROM ENROLL;
83 • SELECT*FROM STUDENT;
84 • SELECT*FROM TEXT;
85
86 /*iv.Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses of
87
88 • SELECT C.COURSE NO,BA.BOOK ISBN, TB.BOOK TITLE FROM COURSE C, BOOK ADOPTION BA,TEXT TB

```

Result Grid

	regno	course_no	sem	marks
▶	CS01	11	4	85
	CS03	44	6	75
	EC03	33	2	80
	IS02	22	6	80
	TC05	55	2	8
*	NULL	NULL	NULL	NULL

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

Limit to 1000 rows

```

80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
82 • SELECT*FROM ENROLL;
83 • SELECT*FROM STUDENT;
84 • SELECT*FROM TEXT;
85
86 /*iv.Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alph
87
88 • SELECT C.COURSE NO,BA.BOOK ISBN, TB.BOOK TITLE FROM COURSE C, BOOK ADOPTION BA,TEXT TB

```

Result Grid

regno	s_name	major	bdate
CS01	RAM	DS	12-MAR-86
CS03	SNEHA	DBMS	01-JAN-87
EC03	AHMED	SNS	17-APR-85
IS02	SMITH	USP	23-DEC-87
TC05	AKHILA	EC	06-OCT-86
NULL	NULL	NULL	NULL

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

Limit to 1000 rows

```

80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
82 • SELECT*FROM ENROLL;
83 • SELECT*FROM STUDENT;
84 • SELECT*FROM TEXT;
85
86 /*iv.Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for cou
87
88 • SELECT C.COURSE NO,BA.BOOK ISBN, TB.BOOK TITLE FROM COURSE C, BOOK ADOPTION BA,TEXT TB

```

Result Grid

book_isbn	book_title	publisher	author
1	DS and C	Princeton	Padma Reddy
2	Fundamentals of DS	Princeton	Godse
3	Fundamentals of DBMS	TMH	Navathe
4	SQL	Princeton	Foley
5	Electronic circuits	TMH	Elmasri
6	Adv unix prog	TMH	Stevens
8	AUTOMATA THEORY	TMH	PETER LYNCH
NULL	NULL	NULL	NULL

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

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

Limit to 1000 rows

```
77
78 • INSERT INTO TEXT VALUES(8, 'AUTOMATA THEORY', 'TMH', 'Peter Lynch');
79 • INSERT INTO BOOK_ADOPTION VALUES(22,4,8);
80 • SELECT*FROM BOOK_ADOPTION;
81 • SELECT*FROM COURSE;
82 • SELECT*FROM ENROLL;
83 • SELECT*FROM STUDENT;
84 • SELECT*FROM TEXT;
85
```

Result Grid

Filter Rows:

Edit: Export/Import: Wrap Cell Content:

	book_isbn	book_title	publisher	author
▶	1	DS and C	Princeton	Padma Reddy
	2	Fundamentals of DS	Princeton	Godse
	3	Fundamentals of DBMS	TMH	Navathe
	4	SQL	Princeton	Foley
	5	Electronic circuits	TMH	Elmasri
	6	Adv unix prog	TMH	Stevens
	8	AUTOMATA THEORY	TMH	PETER LYNCH
*	NULL	NULL	NULL	NULL

**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.**

Query 1 Insurance\_DB ORDERS\_DB bank\_db student\_db\*

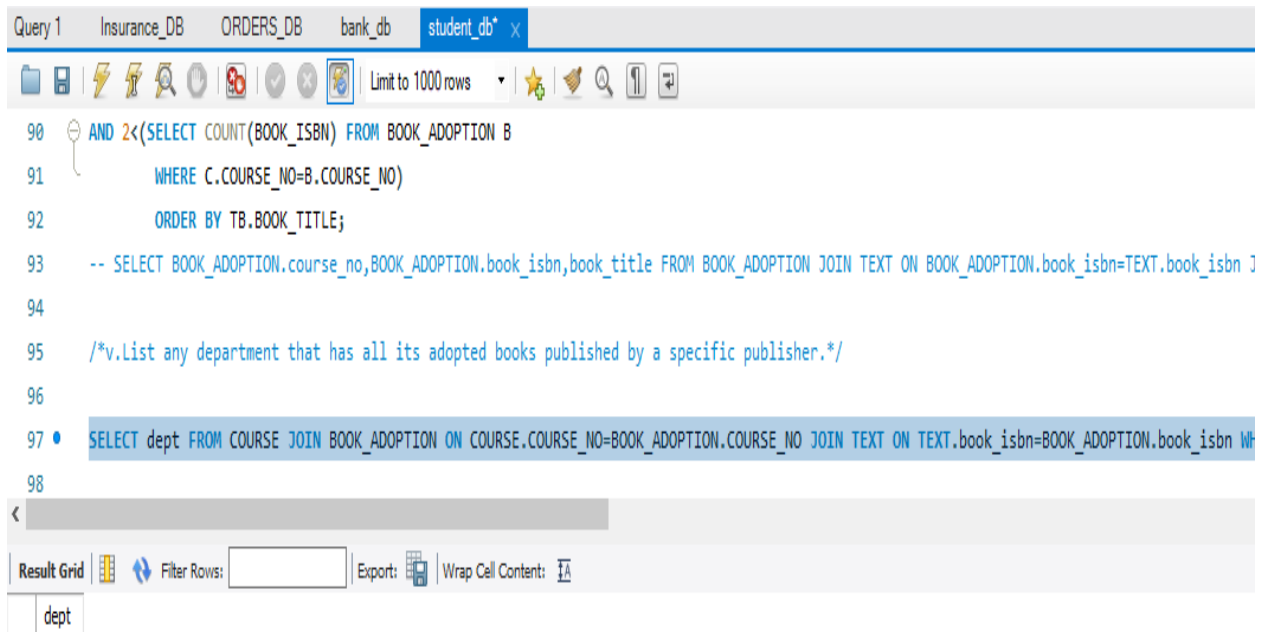
Limit to 1000 rows

```
85
86 /*iv. Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for
87
88 SELECT C.COURSE_NO, BA.BOOK_ISBN, TB.BOOK_TITLE FROM COURSE C, BOOK_ADOPTION BA, TEXT TB
89 WHERE C.COURSE_NO=BA.COURSE_NO AND BA.BOOK_ISBN=TB.BOOK_ISBN AND C.DEPT="CS"
90 AND 2<(SELECT COUNT(BOOK_ISBN) FROM BOOK_ADOPTION B
91 WHERE C.COURSE_NO=B.COURSE_NO)
92 ORDER BY TB.BOOK_TITLE;
93 -- SELECT BOOK_ADOPTION.course no, BOOK_ADOPTION.book isbn, book title FROM BOOK_ADOPTION JOIN TEXT ON BOOK
```

Result Grid

	COURSE_NO	BOOK_ISBN	BOOK_TITLE
▶	44	5	Electronic circuits
	44	3	Fundamentals of DBMS
	44	4	SQL

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



The screenshot shows a SQL query editor with a tab labeled 'student\_db'. The query is as follows:

```
90 AND 2<(SELECT COUNT(BOOK_ISBN) FROM BOOK_ADOPTION B
91     WHERE C.COURSE_NO=B.COURSE_NO)
92     ORDER BY TB.BOOK_TITLE;
93 -- SELECT BOOK_ADOPTION.course_no,BOOK_ADOPTION.book_isbn,book_title FROM BOOK_ADOPTION JOIN TEXT ON BOOK_ADOPTION.book_isbn=TEXT.book_isbn J
94
95 /*v.List any department that has all its adopted books published by a specific publisher.*/
96
97 • SELECT dept FROM COURSE JOIN BOOK_ADOPTION ON COURSE.COURSE_NO=BOOK_ADOPTION.COURSE_NO JOIN TEXT ON TEXT.book_isbn=BOOK_ADOPTION.book_isbn WH
98
```

Below the query editor, there is a 'Result Grid' section with a 'Filter Rows' input field and an 'Export' button. The result grid shows a single column labeled 'dept'.

**\*\*\*\*\*LAB 5 ENDS\*\*\*\*\***