Lab-7

Book database

**Code:**

create database book\_db;

use book\_db;

CREATE TABLE Publisher

(name VARCHAR(20) PRIMARY KEY,

phone real,

address VARCHAR(20));

CREATE TABLE Book

(book\_id int PRIMARY KEY,

title VARCHAR(20),

pub\_year VARCHAR(20),

publisher\_name varchar(20) REFERENCES Publisher (name) ON DELETE CASCADE);

CREATE TABLE Book\_Authors

(author\_name VARCHAR(20),

book\_id int REFERENCES Book (book\_id) ON DELETE CASCADE,

PRIMARY KEY (book\_id, author\_name));

CREATE TABLE Library\_Branch

(branch\_id int PRIMARY KEY,

branch\_name VARCHAR(50),

address VARCHAR(50));

CREATE TABLE Book\_Copies

(no\_of\_copies int,

book\_id int REFERENCES Book(book\_id) ON DELETE CASCADE,

branch\_id int REFERENCES Library\_Branch (branch\_id) ON DELETE CASCADE,

PRIMARY KEY (book\_id, branch\_id));

CREATE TABLE Card

(card\_no int PRIMARY KEY);

CREATE TABLE Book\_Lending

(date\_out DATE,

due\_date DATE,

book\_id int REFERENCES book (book\_id) ON DELETE CASCADE,

branch\_id int REFERENCES Library\_Branch (branch\_id) ON DELETE CASCADE,

card\_no int REFERENCES Card (card\_no) ON DELETE CASCADE,

PRIMARY KEY (book\_id, branch\_id, card\_no));

INSERT INTO Publisher VALUES

("MCGRAW-HILL", 9989076587, "BANGALORE"),

("PEARSON",9889076565,"NEWDELHI"),

("RANDOM HOUSE",7455679345,"HYDRABAD"),

("HACHETTE LIVRE",8970862340,"CHENNAI"),

("GRUPO PLANETA",7756120238,"BANGALORE");

INSERT INTO Book VALUES

(1,"DBMS","JAN-2017","MCGRAW-HILL"),

(2,"ADBMS","JUN-2016","MCGRAW-HILL"),

(3,"CN","SEP-2016","PEARSON"),

(4,"CG","SEP-2015","GRUPO PLANETA"),

(5,"OS","MAY-2016","PEARSON");

INSERT INTO Book\_Authors VALUES

("NAVATHE", 1),

("NAVATHE", 2),

("TANENBAUM", 3),

("EDWARD ANGEL", 4),

("GALVIN", 5);

INSERT INTO Library\_Branch VALUES

(10,"RR NAGAR","BANGALORE"),

(11,"RNSIT","BANGALORE"),

(12,"RAJAJI NAGAR","BANGALORE"),

(13,"NITTE","MANGALORE"),

(14,"MANIPAL","UDUPI");

INSERT INTO Book\_Copies VALUES

(10, 1, 10),

(5, 1, 11),

(2, 2, 12),

(5, 2, 13),

(7, 3, 14),

(1, 5, 10),

(3, 4, 11);

INSERT INTO Card VALUES

(100),

(101),

(102),

(103),

(104);

INSERT INTO Book\_Lending VALUES

("2017-01-01","2017-06-01", 1, 10, 101),

("2017-01-11","2017-03-11", 3, 14, 101),

("2017-02-21","2017-04-21", 2, 13, 101),

("2017-03-17","2017-07-15", 4, 11, 101),

("2017-04-12","2017-05-12", 1, 11, 104);

Queries and screenshot:

**1.** Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc.

**2.** Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017

**3.** Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.

**4.** Partition the BOOK table based on year of publication. Demonstrate its working with a simple query.

**5.** Create a view of all books and its number of copies that are currently available in the Library.

**1.** select l.branch\_id,b.book\_id,b.title,p.name,ba.author\_name,bc.no\_of\_copies from Library\_Branch l, Book\_Copies bc,Publisher p,Book b,Book\_Authors ba

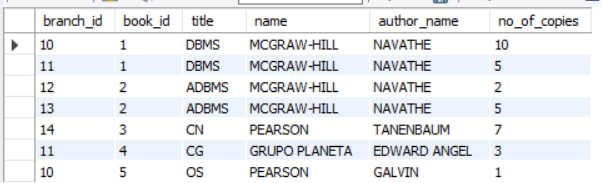
where

l.branch\_id=bc.branch\_id and

bc.book\_id=b.book\_id and

b.book\_id=ba.book\_id and

b.publisher\_name=p.name;

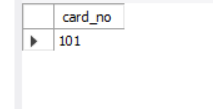


**2.** select card\_no from Book\_Lending

where date\_out between "2017-01-01" and "2017-06-30"

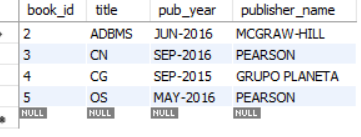
group by card\_no

having count(\*)>3;



**3.** delete from Book where book\_id=1;

Select \* from book;

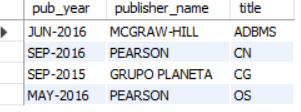


**4.**

create view Year\_Publishing as

select pub\_year,publisher\_name,title from Book;

select \* from Year\_Publishing;



**5.**

create view Book\_Copies\_Library as

select b.title,bc.no\_of\_copies,bl.branch\_name from Library\_Branch bl,Book\_Copies bc,Book b

where bl.branch\_id=bc.branch\_id and

bc.book\_id=b.book\_id;

select \* from Book\_Copies\_Library;

