**Program 7 : Book Database**

BOOK (Book\_id, Title, Publisher\_Name, Pub\_Year)

BOOK\_AUTHORS (Book\_id, Author\_Name)

PUBLISHER (Name, Address, Phone)

BOOK\_COPIES (Book\_id, Branch\_id, No-of\_Copies)

BOOK\_LENDING (Book\_id, Branch\_id, Card\_No, Date\_Out, Due\_Date)

LIBRARY\_BRANCH (Branch\_id, Branch\_Name, Address)



create database Lab7;

use Lab7;

create table publisher (

name varchar (20) primary key,

phone integer,

address varchar (20)

);

desc publisher;



create table book (

book\_id integer primary key,

title varchar (20),

pub\_year varchar (20),

publisher\_name varchar (20),

foreign key (publisher\_name) references publisher (name) on delete cascade

);

desc book;



create table book\_authors (

author\_name varchar (20),

book\_id integer,

foreign key (book\_id) references book (book\_id) on delete cascade,

primary key (book\_id, author\_name)

);

desc book\_authors;



create table library\_branch (

branch\_id integer primary key,

branch\_name varchar (50),

address varchar (50)

);

desc library\_branch;



create table book\_copies (

no\_of\_copies integer,

book\_id integer,

branch\_id integer,

foreign key (book\_id) references book (book\_id) on delete cascade,

foreign key (branch\_id) references library\_branch (branch\_id) on delete cascade,

primary key (book\_id, branch\_id)

);

desc book\_copies;



create table card (

card\_no integer primary key

);

desc card;



create table book\_lending (

date\_out date,

due\_date date,

book\_id integer,

branch\_id integer,

card\_no integer,

foreign key (book\_id) references book (book\_id) on delete cascade,

foreign key (branch\_id) references library\_branch (branch\_id) on delete cascade,

foreign key (card\_no) references card (card\_no) on delete cascade,

primary key (book\_id, branch\_id, card\_no)

);

desc book\_lending;



insert into publisher values ('mcgraw-hill', 99890, 'bangalore');

insert into publisher values ('pearson', 98890, 'newdelhi');

insert into publisher values ('random house', 74556, 'hyderabad');

insert into publisher values ('hachette livre', 897086, 'chenai');

insert into publisher values ('grupo planeta', 77561, 'bangalore');

select \* from publisher;



insert into book values (1,'dbms','01-2017', 'mcgraw-hill');

insert into book values (2,'adbms','06-2016', 'mcgraw-hill');

insert into book values (3,'cn','09-2016', 'pearson');

insert into book values (4,'cg','09-2015', 'grupo planeta');

insert into book values (5,'os','05-2016', 'pearson');

select \* from book;



insert into book\_authors values ('navathe', 1);

insert into book\_authors values ('navathe', 2);

insert into book\_authors values ('tanenbaum', 3);

insert into book\_authors values ('edward angel', 4);

insert into book\_authors values ('galvin', 5);

select \* from book\_authors;



insert into library\_branch values (10,'rr nagar','bangalore');

insert into library\_branch values (11,'rnsit','bangalore');

insert into library\_branch values (12,'rajaji nagar', 'bangalore');

insert into library\_branch values (13,'nitte','mangalore');

insert into library\_branch values (14,'manipal','udupi');

select \* from library\_branch;



insert into book\_copies values (10, 1, 10);

insert into book\_copies values (5, 1, 11);

insert into book\_copies values (2, 2, 12);

insert into book\_copies values (5, 2, 13);

insert into book\_copies values (7, 3, 14);

insert into book\_copies values (1, 5, 10);

insert into book\_copies values (3, 4, 11);

select \* from book\_copies;



insert into card values (100);

insert into card values (101);

insert into card values (102);

insert into card values (103);

insert into card values (104);

select \* from card;



insert into book\_lending values ('01-01-17','01-06-17', 1, 10, 101);

insert into book\_lending values ('11-01-17','11-03-17', 3, 14, 101);

insert into book\_lending values ('21-02-17','21-04-17', 2, 13, 101);

insert into book\_lending values ('15-03-17','15-07-17', 4, 11, 101);

insert into book\_lending values ('12-08-17','12-08-17', 1, 11, 104);

select \* from book\_lending;



Write SQL queries to

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

select b.book\_id, b.title, b.pub\_year, b.publisher\_name, bc.no\_of\_copies, ba.author\_name, lb.branch\_name from book b, book\_authors ba,

library\_branch lb, book\_copies bc where b.book\_id = ba.book\_id and b.book\_id = bc.book\_id and lb.branch\_id = bc.branch\_id;



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

select card\_no from book\_lending where year(date\_out) >17 and month(date\_out)<7 group by card\_no having count(card\_no) >2 ;



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

delete from book where book\_id = 3;

select \* from book;

select \* from book\_authors;

select \* from book\_copies;

select \* from book\_lending;









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

create view q4\_view as select pub\_year from book;

select \* from q4\_view;



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

create view q5\_view as select b.book\_id, b.title, bc.no\_of\_copies from book b,

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

select \* from q5\_view;

