

LAB 7- BOOKDEALER DATABASE

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1BM19CS194

4-D

```
create database bookdb;
```

```
use bookdb;
```

```
create table publisher (  
    name varchar (20) primary key,  
    phone integer,  
    address varchar (20)  
);
```

```
desc publisher;
```

	Field	Type	Null	Key	Default	Extra
►	name	varchar(20)	NO	PRI	NULL	
	phone	int	YES		NULL	
	address	varchar(20)	YES		NULL	

```

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;

```

	Field	Type	Null	Key	Default	Extra
►	book_id	int	NO	PRI	NULL	
	title	varchar(20)	YES		NULL	
	pub_year	varchar(20)	YES		NULL	
	publisher_name	varchar(20)	YES	MUL	NULL	

```

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;

```

	Field	Type	Null	Key	Default	Extra
►	author_name	varchar(20)	NO	PRI	NULL	
	book_id	int	NO	PRI	NULL	

```
create table library_branch (
    branch_id integer primary key,
    branch_name varchar (50),
    address varchar (50)
);
desc library_branch;
```

	Field	Type	Null	Key	Default	Extra
►	branch_id	int	NO	PRI	NULL	
	branch_name	varchar(50)	YES		NULL	
	address	varchar(50)	YES		NULL	

```
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;

	no_of_copies	book_id	branch_id
▶	10	1	10
	5	1	11
	2	2	12
	5	2	13
	7	3	14
	3	4	11
	1	5	10
●	NULL	NULL	NULL

create table card (

card_no integer primary key

);

desc card;

	Field	Type	Null	Key	Default	Extra
▶	card_no	int	NO	PRI	NULL	

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;

```

	Field	Type	Null	Key	Default	Extra
►	date_out	date	YES		NULL	
	due_date	date	YES		NULL	
	book_id	int	NO	PRI	NULL	
	branch_id	int	NO	PRI	NULL	
	card_no	int	NO	PRI	NULL	

```

insert into publisher values ('mcgraw-hill', 99890, 'bangalore');
insert into publisher values ('pearson', 98890, 'newdelhi');
insert into publisher values ('random house', 74556, 'hydrabad');
insert into publisher values ('hachette livre', 897086, 'chenai');
insert into publisher values ('grupo planeta', 77561, 'bangalore');
select * from publisher;

```

	name	phone	address
▶	grupo planeta	77561	bangalore
	hachette livre	897086	chenai
	mcgraw-hill	99890	bangalore
	pearson	98890	newdelhi
	random house	74556	hyderabad
●	NULL	NULL	NULL

```

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;

```

	book_id	title	pub_year	publisher_name
▶	1	dbms	01-2017	mcgraw-hill
	2	adbms	06-2016	mcgraw-hill
	3	cn	09-2016	pearson
	4	cg	09-2015	grupo planeta
	5	os	05-2016	pearson
●	NULL	NULL	NULL	NULL

```

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;

```

	author_name	book_id
▶	navathe	1
	navathe	2
	tanenbaum	3
	edward angel	4
	galvin	5
●	NULL	NULL

```

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;

```

	branch_id	branch_name	address
▶	10	rr nagar	bangalore
	11	rnsit	bangalore
	12	rajaji nagar	bangalore
	13	nitte	mangalore
	14	manipal	udupi
•	NULL	NULL	NULL

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;

	Field	Type	Null	Key	Default	Extra
▶	no_of_copies	int	YES		NULL	
	book_id	int	NO	PRI	NULL	
	branch_id	int	NO	PRI	NULL	

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;

	card_no
▶	100
	101
	102
	103
	104
●	NULL

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;

	date_out	due_date	book_id	branch_id	card_no
▶	2001-01-17	2001-06-17	1	10	101
	2012-08-17	2012-08-17	1	11	104
	2021-02-17	2021-04-17	2	13	101
	2011-01-17	2011-03-17	3	14	101
	2015-03-17	2015-07-17	4	11	101
●	NULL	NULL	NULL	NULL	NULL

Additional Queries

```
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;
```

	book_id	title	pub_year	publisher_name	no_of_copies	author_name	branch_name
▶	1	dbms	01-2017	mcgraw-hill	10	navathe	rr nagar
	1	dbms	01-2017	mcgraw-hill	5	navathe	rnsit
	2	adbms	06-2016	mcgraw-hill	2	navathe	rajaji nagar
	2	adbms	06-2016	mcgraw-hill	5	navathe	nitte
	3	cn	09-2016	pearson	7	tanenbaum	manipal
	4	cg	09-2015	grupo planeta	3	edward angel	rnsit
	5	os	05-2016	pearson	1	galvin	rr nagar

```
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 ;
```

	card_no
▶	101

delete from book where book_id = 3;

select * from book;

select * from book_authors;

select * from book_copies;

select * from book_lending;

	book_id	title	pub_year	publisher_name
▶	1	dbms	01-2017	mcgraw-hill
	2	adbms	06-2016	mcgraw-hill
	4	cg	09-2015	grupo planeta
	5	os	05-2016	pearson
●	NULL	NULL	NULL	NULL

	author_name	book_id
▶	navathe	1
	navathe	2
	edward angel	4
	galvin	5
●	NULL	NULL

	no_of_copies	book_id	branch_id
▶	10	1	10
	5	1	11
	2	2	12
	5	2	13
	3	4	11
	1	5	10
●	NULL	NULL	NULL

	date_out	due_date	book_id	branch_id	card_no
▶	2001-01-17	2001-06-17	1	10	101
	2012-08-17	2012-08-17	1	11	104
	2021-02-17	2021-04-17	2	13	101
	2015-03-17	2015-07-17	4	11	101
●	NULL	NULL	NULL	NULL	NULL

```
create view partition select pub_year from book;  
select * from partition;
```

	pub_year
▶	01-2017
	06-2016
	09-2015
	05-2016

```
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;
```

	book_id	title	no_of_copies
▶	1	dbms	10
	1	dbms	5
	2	adbms	2
	2	adbms	5
	4	cg	3
	5	os	1

