Lab Assignment 3: Part 1

Consider the Insurance database as given below. The primary keys are underlined, and the data types are specified:

PERSON (driver-id:string,name:string,address:string)

CAR (Regno:string, model:string, year:int)

ACCIDENT (report-number:int, date:date, location:string)

OWNS (driver-id:string, regno:string)

PARTICIPATED (driver-id:string, regno:string, report-number:int, damage-amount:int)

i) Create the above tables by properly specifying the primary keys and the foreign keys

```
create table person(driver_id char(4) primary key,
name varchar2(30),
address varchar2(30)
);

create table car(reg_no char(15) primary key,
model char(20),
year number(4)
);

create table accident(report_no number primary key,
acc_date date,
location varchar2(30)
);

create table owns(driver_id references person,
reg_no references car
);

create table participated( driver_id references person,
reg_no references car,
report_no references accident,
damage_amt number(10,2)
```

ii) Enter at least five tuples for each relation as:

```
insert into person values('1234','amith','no a-1-12 koppal');
insert into person values('2345','anil','23 vijaya apts');
```

```
insert into person values('3412','john','no 3423 vicky apts');
insert into person values('4567','arun','kamal nivas koppal');
insert into person values('4522','sunil','no 54 ravi nagar');


insert into car values('ka37k32','hyundai',2004);
insert into car values('ka05d34','maruti 800',1998);
insert into car values('ka23j90','zen',2002);
insert into car values('ka35f45','fiat',2001);
insert into car values('ka36m78','benz',2000);

insert into accident values(12,'12-feb-1990','vit cross');
insert into accident values(34,'31-jan-1999','jayanagar');
insert into accident values(56,'12-dec-1998','btm layout');
insert into accident values(67,'07-jul-2003','jp nagar');
insert into accident values(87,'01-may-2001','allalsandra');

insert into owns values('1234','ka37k32');
insert into owns values('2345','ka05d34');
insert into owns values('3412','ka23j90');
insert into owns values('4567','ka35f45');
insert into owns values('4522','ka36m78');

insert into participated values('1234','ka37k32',12,12000);
insert into participated values('2345','ka05d34',34,13000);
insert into participated values('3412','ka23j90',56,14000);
insert into participated values('4567','ka35f45',67,12450);
insert into participated values('4522','ka36m78',87,10000);
```

iii) Demonstrate how you

a. Update the damage amount for the car with specific regno in accident with report number 12 to 25000
b. Add a new accident to the database

iv) Find the total number of people who owned cars that were involved in accidents in 2006.

v) Find the number of accidents in which cars belonging to a specific model were involved.

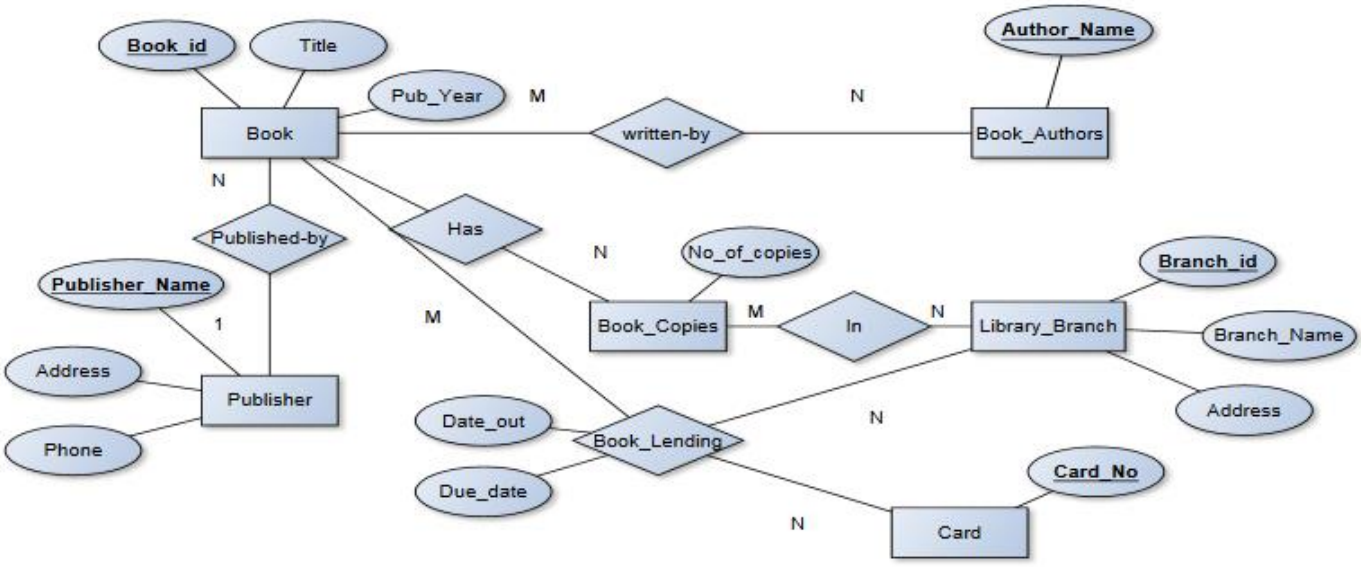
vi) Generation of suitable reports

Part 2

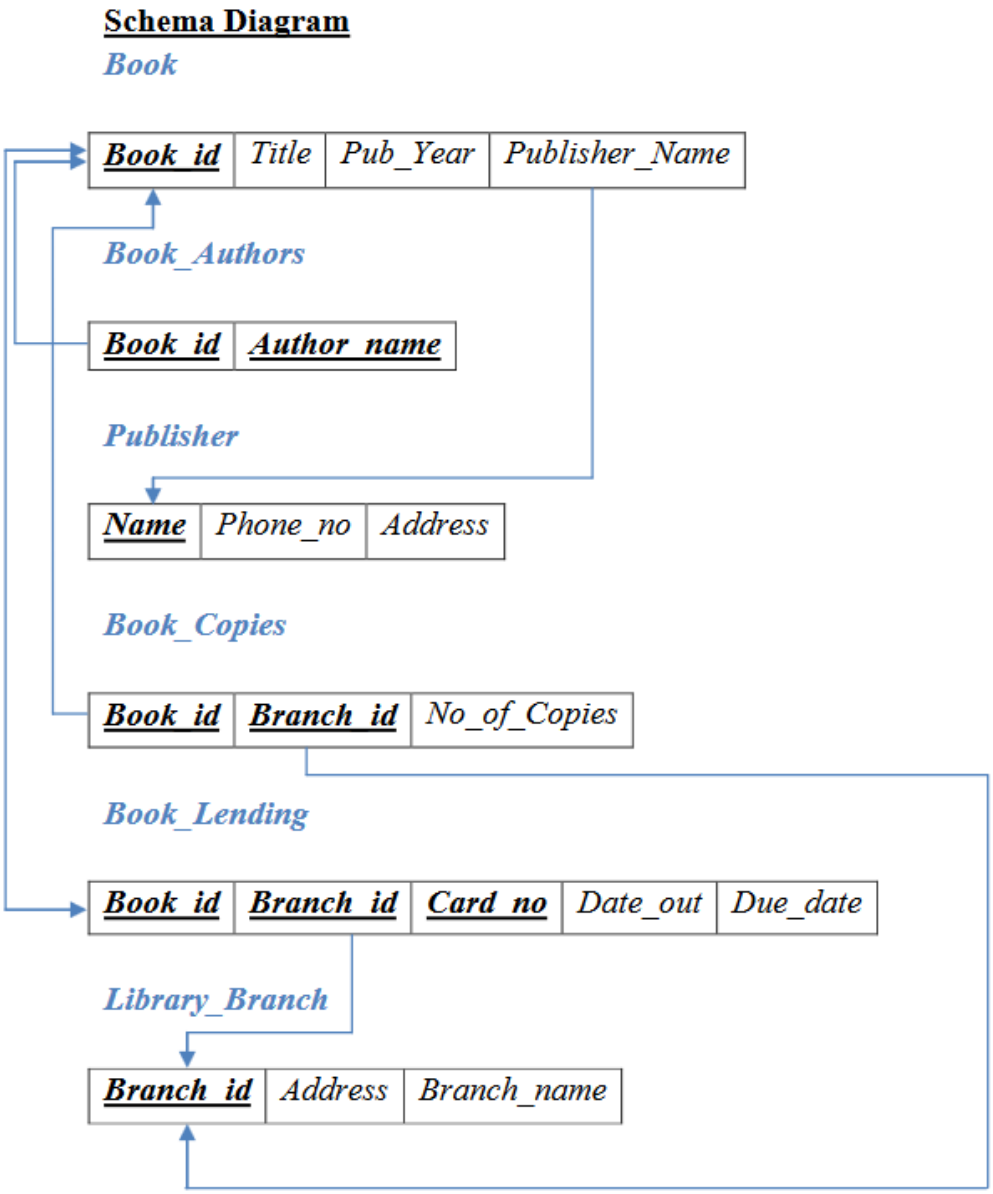
Consider the following schema for a Library Database:

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*)

Entity-Relationship Diagram



Schema Diagram



Insert the following data into respective tables using the following commands (mentioned below): -

INSERT INTO PUBLISHER VALUES ('MCGRAW-HILL', 'BANGALORE', 9989076587);

INSERT INTO PUBLISHER VALUES ('PEARSON', 'NEWDELHI', 9889076565);

INSERT INTO PUBLISHER VALUES ('RANDOM HOUSE', 'HYDRABAD', 7455679345);

INSERT INTO PUBLISHER VALUES ('HACHETTE LIVRE', 'CHENAI', 8970862340);

INSERT INTO PUBLISHER VALUES ('GRUPO PLANETA', 'BANGALORE', 7756120238);

```
INSERT INTO BOOK VALUES (1, ‘DBMS’, ‘MCGRAW-HILL’, ‘JAN-2017’);
INSERT INTO BOOK VALUES (2, ‘ADBMS’, ‘MCGRAW-HILL’, ‘JUN-2016’);
INSERT INTO BOOK VALUES (3, ‘CN’, ‘PEARSON’, ‘SEP-2016’);
INSERT INTO BOOK VALUES (4, ‘CG’, ‘GRUPO PLANETA’, ‘SEP-2015’);
INSERT INTO BOOK VALUES (5, ‘OS’, ‘PEARSON’, ‘MAY-2016’);

INSERT INTO BOOK_AUTHORS VALUES (1, ‘NAVATHE’);
INSERT INTO BOOK_AUTHORS VALUES (2, ‘NAVATHE’);
INSERT INTO BOOK_AUTHORS VALUES (3, ‘TANENBAUM’);
 INSERT INTO BOOK_AUTHORS VALUES (4, ‘EDWARD ANGEL’);
INSERT INTO BOOK_AUTHORS VALUES (5, ‘GALVIN’);

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’);

 INSERT INTO BOOK_COPIES VALUES (1, 10,10);
INSERT INTO BOOK_COPIES VALUES (1, 11,5);
INSERT INTO BOOK_COPIES VALUES (2, 12,2);
 INSERT INTO BOOK_COPIES VALUES (2, 13,5);
INSERT INTO BOOK_COPIES VALUES (3, 14,7);
INSERT INTO BOOK_COPIES VALUES (5, 10,1);
INSERT INTO BOOK_COPIES VALUES (4, 11,3);

 INSERT INTO BOOK_LENDING VALUES (1,10, 101, ‘01-JAN-17’, ‘01-JUN-17’);
```

INSERT INTO BOOK_LENDING VALUES (3, 14, 101, ‘11-JAN-17’, ‘11-MAR-17’);

INSERT INTO BOOK_LENDING VALUES (2, 13, 101, ‘21-FEB-17’, ‘21-APR-17’);

INSERT INTOBOOK_LENDING VALUES (4, 11, 101, ‘15-MAR-17’, ‘15-JUL-17’);

INSERT INTO BOOK_LENDING VALUES (1, 11, 104, ‘12-APR-17’, ‘12-MAY-17’,)

Write SQL commands for the following:

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 list 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. List all the books and its number of copies that are currently available in the Library.