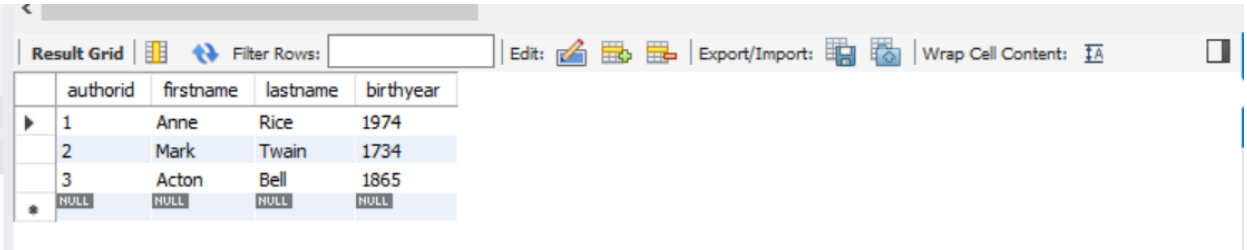
Assignment 4 :- Write SQL statements to CREATE a new database and tables that reflect the library schema you designed earlier. Use ALTER statements to modify the table structures and DROP statements to remove a redundant table.

```
create database librarydb;
use librarydb;

create table authors (
authorid int not null primary key auto_increment,
firstname varchar(300) not null,
lastname varchar(300) not null,
birthyear int check (birthyear >= 0)
);

insert into authors (firstname, lastname, birthyear) values
('Anne', 'Rice', 1974),
('Mark', 'Twain', 1734),
('Acton', 'Bell', 1865);

Select * from authors;
```

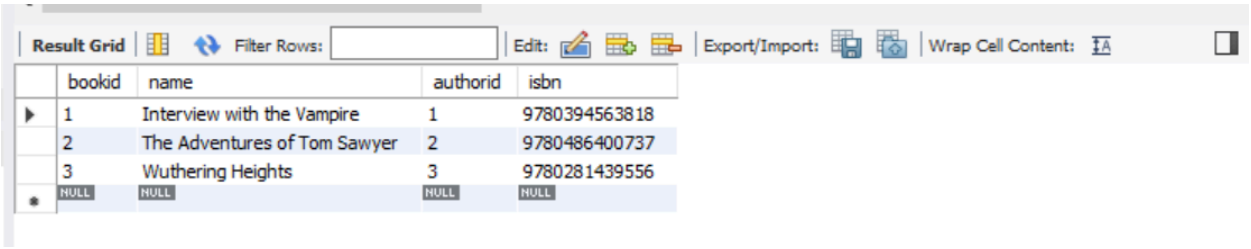


authorid	firstname	lastname	birthyear
1	Anne	Rice	1974
2	Mark	Twain	1734
3	Acton	Bell	1865
NULL	NULL	NULL	NULL

```
create table books (
bookid int not null primary key auto_increment,
name varchar (300) not null,
authorid int not null,
isbn varchar(13) not null unique,
foreign key (authorid) references authors(authorid)
);
```

insert into books (name, authorid, isbn) values
('Interview with the Vampire', 1, '9780394563818'),
('The Adventures of Tom Sawyer', 2, '9780486400737'),
('Wuthering Heights', 3, '9780281439556');

Select * from books;

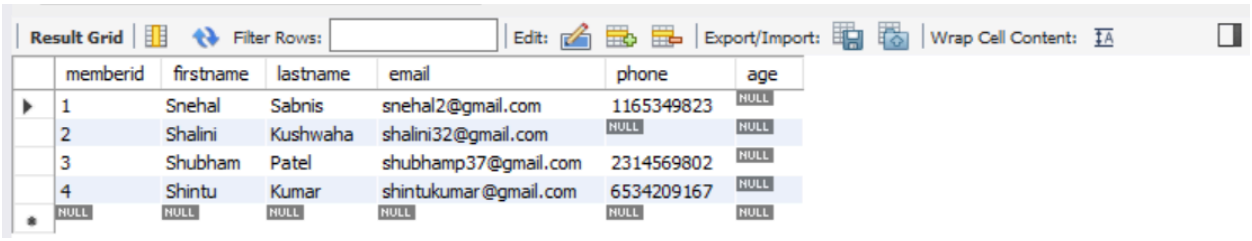


bookid	name	authorid	isbn
1	Interview with the Vampire	1	9780394563818
2	The Adventures of Tom Sawyer	2	9780486400737
3	Wuthering Heights	3	9780281439556
NULL	NULL	NULL	NULL

create table members(
memberid int not null primary key auto_increment,
firstname varchar(300) not null,
lastname varchar(300) not null,
dateofbirth date not null,
email varchar(300) not null unique,
phone varchar(20)
);

insert into members (firstname, lastname, dateofbirth, email, phone) values
('Snehal', 'Sabnis', '2001-02-02', 'snehal2@gmail.com', '1165349823'),
('Shalini', 'Kushwaha', '2000-10-25', 'shalini32@gmail.com', null),
('Shubham', 'Patel', '1999-08-13', 'shubhamp37@gmail.com', '2314569802'),
('Shintu', 'Kumar', '1998-06-11', 'shintukumar@gmail.com', '6534209167');

Select * from members;

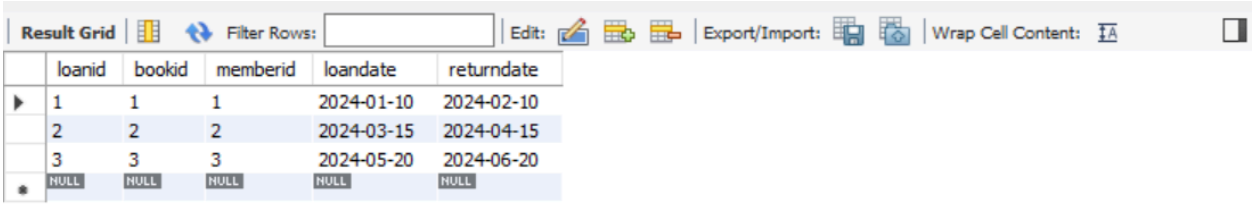


memberid	firstname	lastname	email	phone	age
1	Snehal	Sabnis	snehal2@gmail.com	1165349823	NULL
2	Shalini	Kushwaha	shalini32@gmail.com	NULL	NULL
3	Shubham	Patel	shubhamp37@gmail.com	2314569802	NULL
4	Shintu	Kumar	shintukumar@gmail.com	6534209167	NULL
NULL	NULL	NULL	NULL	NULL	NULL

```
create table loans (
loanid int primary key auto_increment,
bookid int not null,
memberid int not null,
loandate date not null,
returndate date,
foreign key (bookid) references books(bookid),
foreign key (memberid) references members(memberid)
);

insert into loans (bookid, memberid, loandate, returndate) values
(1, 1, '2024-01-10', '2024-02-10'),
(2, 2, '2024-03-15', '2024-04-15'),
(3, 3, '2024-05-20', '2024-06-20');

Select * from loans;
```



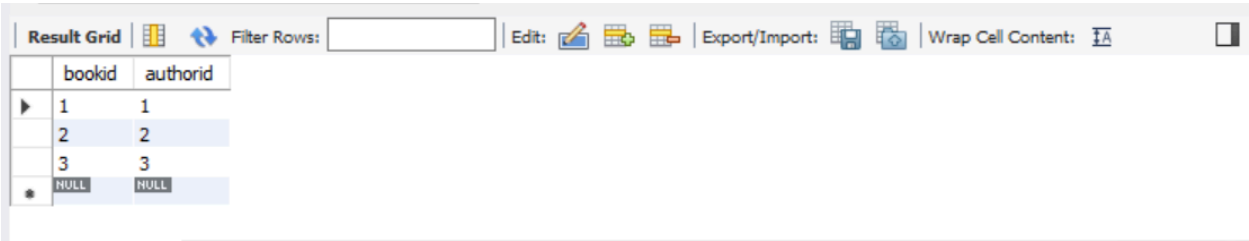
loanid	bookid	memberid	loandate	returndate
1	1	1	2024-01-10	2024-02-10
2	2	2	2024-03-15	2024-04-15
3	3	3	2024-05-20	2024-06-20
NULL	NULL	NULL	NULL	NULL

```
create table bookauthors (
bookid int not null,
authorid int not null,
primary key (bookid, authorid),
foreign key (bookid) references books(bookid),
foreign key (authorid) references authors(authorid)
```

);

insert into bookauthors (bookid, authorid) values
(1, 1),
(2, 2),
(3, 3);

Select * from bookauthors;



alter table members
add age int (10);

alter table books
modify isbn char(13);

alter table members
drop column age;