Library Management Database

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Write the Attributes of the entities as Bullet points or list.

That will look neat and good.

Library Management Database has the following description:

The Library Management System database keeps track of readers with the following considerations –

* The system keeps track of the staff with a single point authentication system comprising login Id and password.
* Staff maintains the book catalog with its ISBN (International standard book number), Book title, price (in INR), category (novel, general, and story), edition, author Number and details.
* A publisher has publisher Id, Year when the book was published, and name of the book.
* Readers are registered with their User ID, email, name (first name, last name), Phone no (multiple entries allowed), communication address. The staff keeps track of readers.
* Readers can return/reserve books that stamps with issue date and return date. If not returned within the prescribed time period, it may have a due date too.
* Staff also generate reports that has Readers ID, Registration no of report, book no and return/issue info.

Write the Attributes of the entities as Bullet points or list. That will look neat and good.

## Entities and their Attributes –

* **Book Entity:** It has Book\_ID,Author\_no,Author\_ multi valued attribute, ISBN\_no, Title, Edition, Category, Price,Subject,Publisher\_ID,Country\_of\_publication,Purchage\_date,Gifted (yes or no),Volume\_no,Reserved(yes or no),Reserved\_date,Issue\_date.Book\_ID is the Primary Key for Book Entity.
* **User Entity:** It has User ID, Email, address, phone\_no, User\_name,User\_type,User\_gender,User\_date of birth,User\_department,Fine\_amount. Name is composite attribute of first\_name,middle\_name,last\_name. Phone\_no is multi valued attribute. User ID is the Primary Key for User entity.
* **Publisher Entity:** It has Publisher\_ID, Publisher\_name,Publisher\_address, Year of publication. Publisher ID is the Primary Key.
* **Staff Entity:** It has Staff\_name,Staff\_ID, Staff\_type, Staff\_date of birth, Staff\_department,Staff\_address,Staff\_phone number,Staff\_Gender,Staff\_joining date,Staff\_salary,Staff\_ID as Primary Key.
* **Author Entity:** It has Author\_id, Author\_name, Country, Date\_of\_birth

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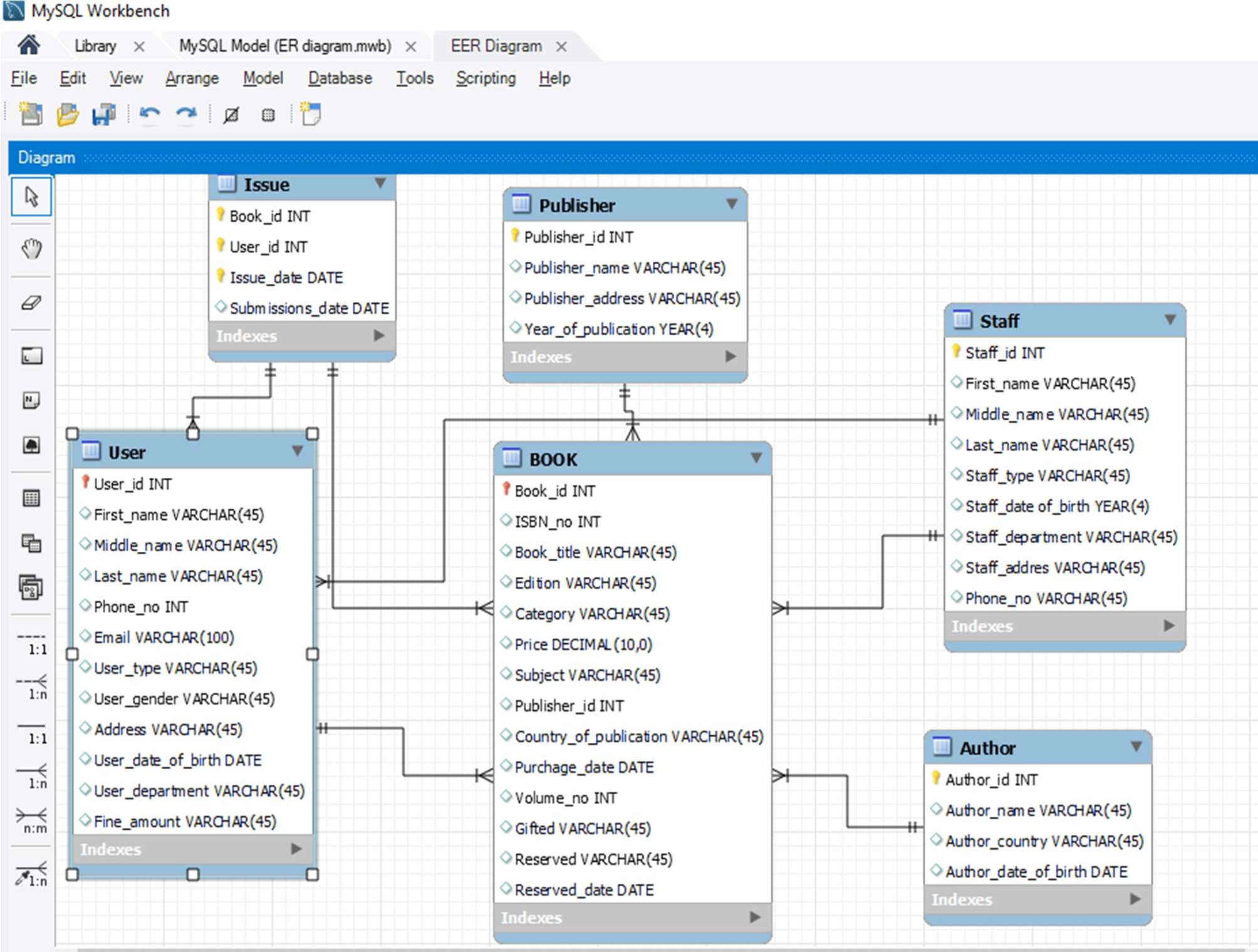
This is Very good. can add some more description if possible

## Relationships between Entities –

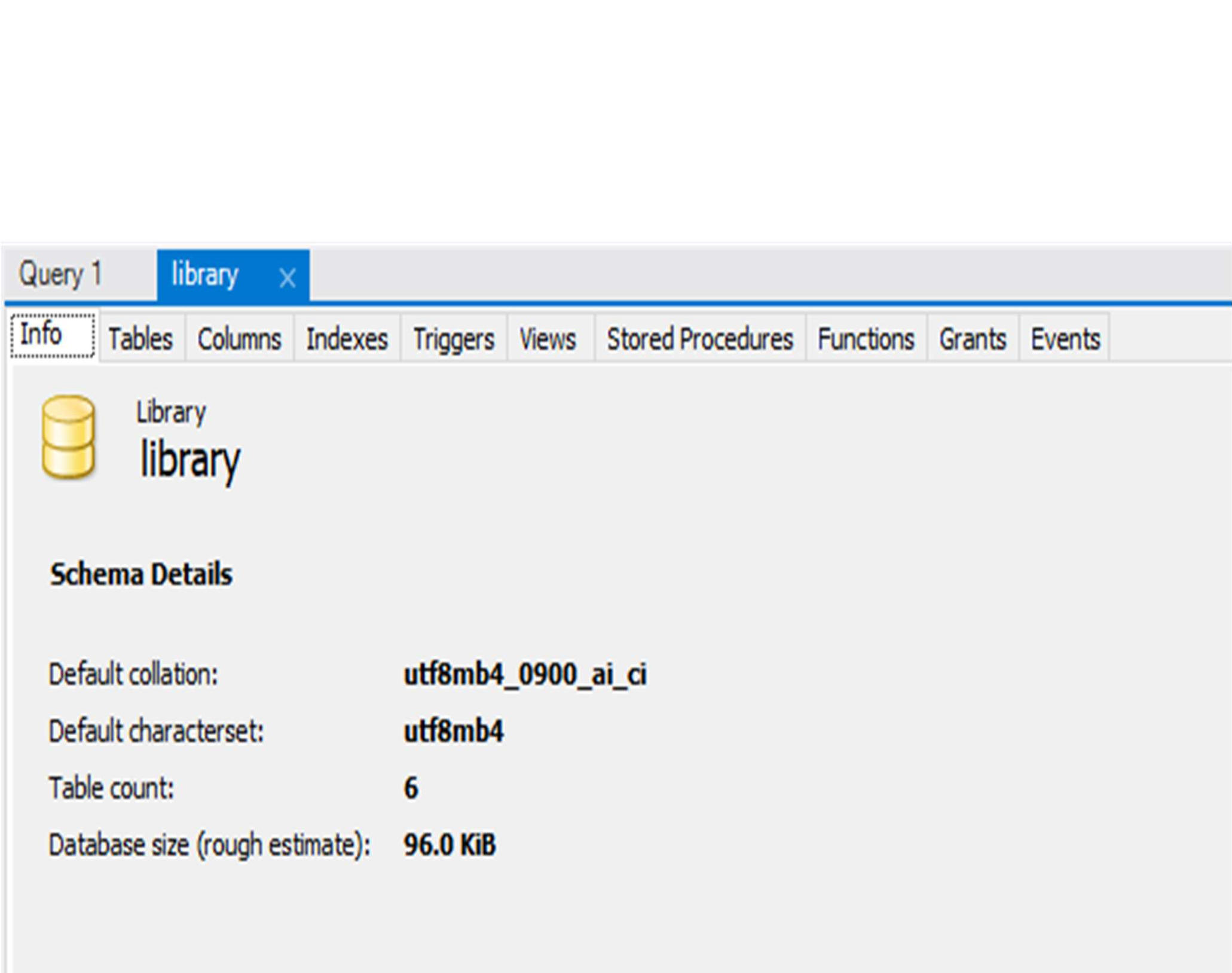
This is Very good. can add some more description if possible

* A User can reserve N books but one book can be reserved by only one User. The relationship 1:N.
* A publisher can publish many books but a book is published by only one publisher. The relationship 1:N.
* Staff keeps track of readers. The relationship is M:N.
* Staff maintains multiple Books. The relationship 1:N.
* A user can borrow multiple books.
* Multiple books belongs to publisher.
* An author can have multiple books.
* A user can received multiple books.
* Book is borrowed by user.

# Library database ER Diagram:



**Schema details:**



**Table Structure:**

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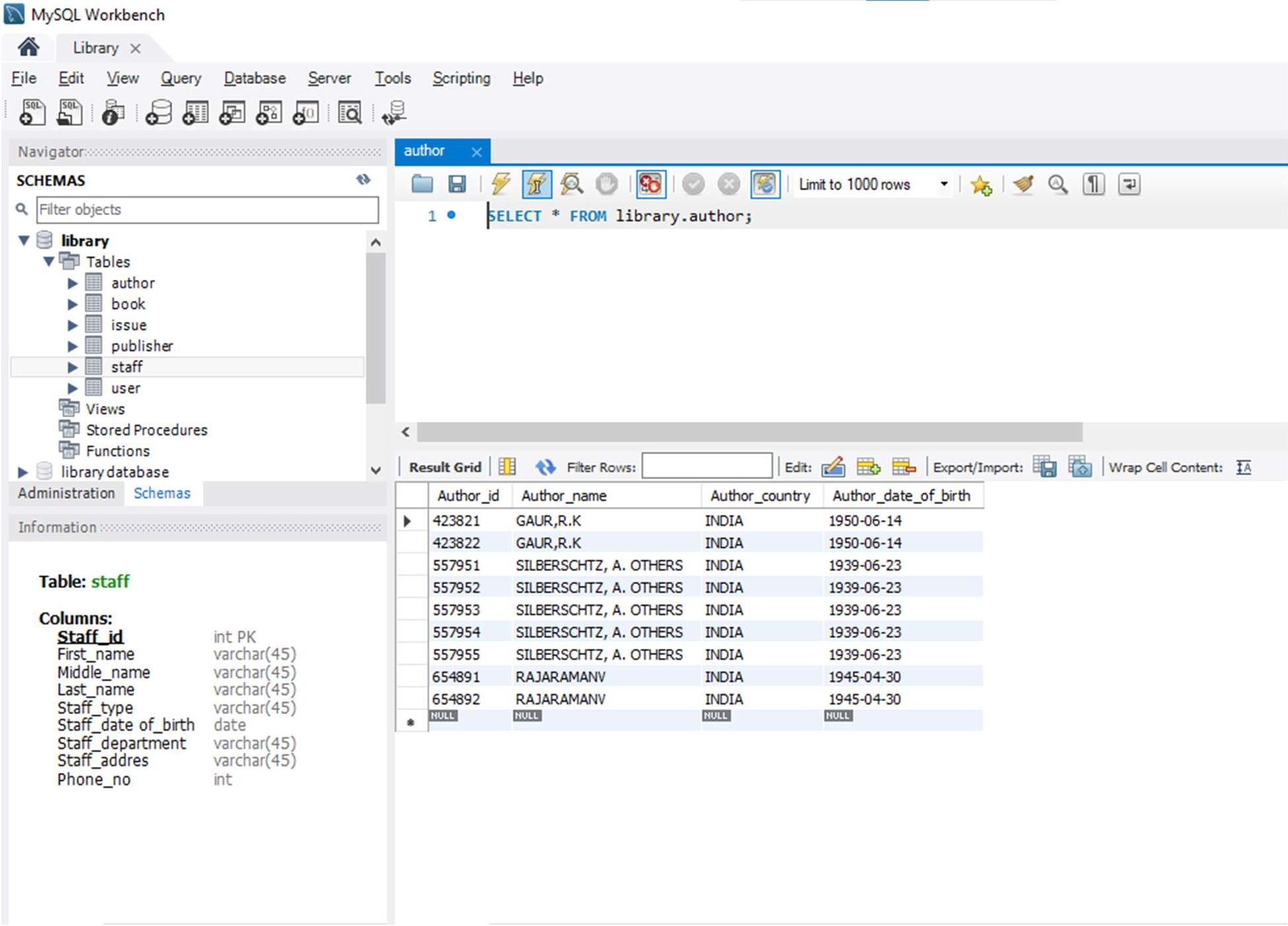
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They will not get printed when you print them. use different color./

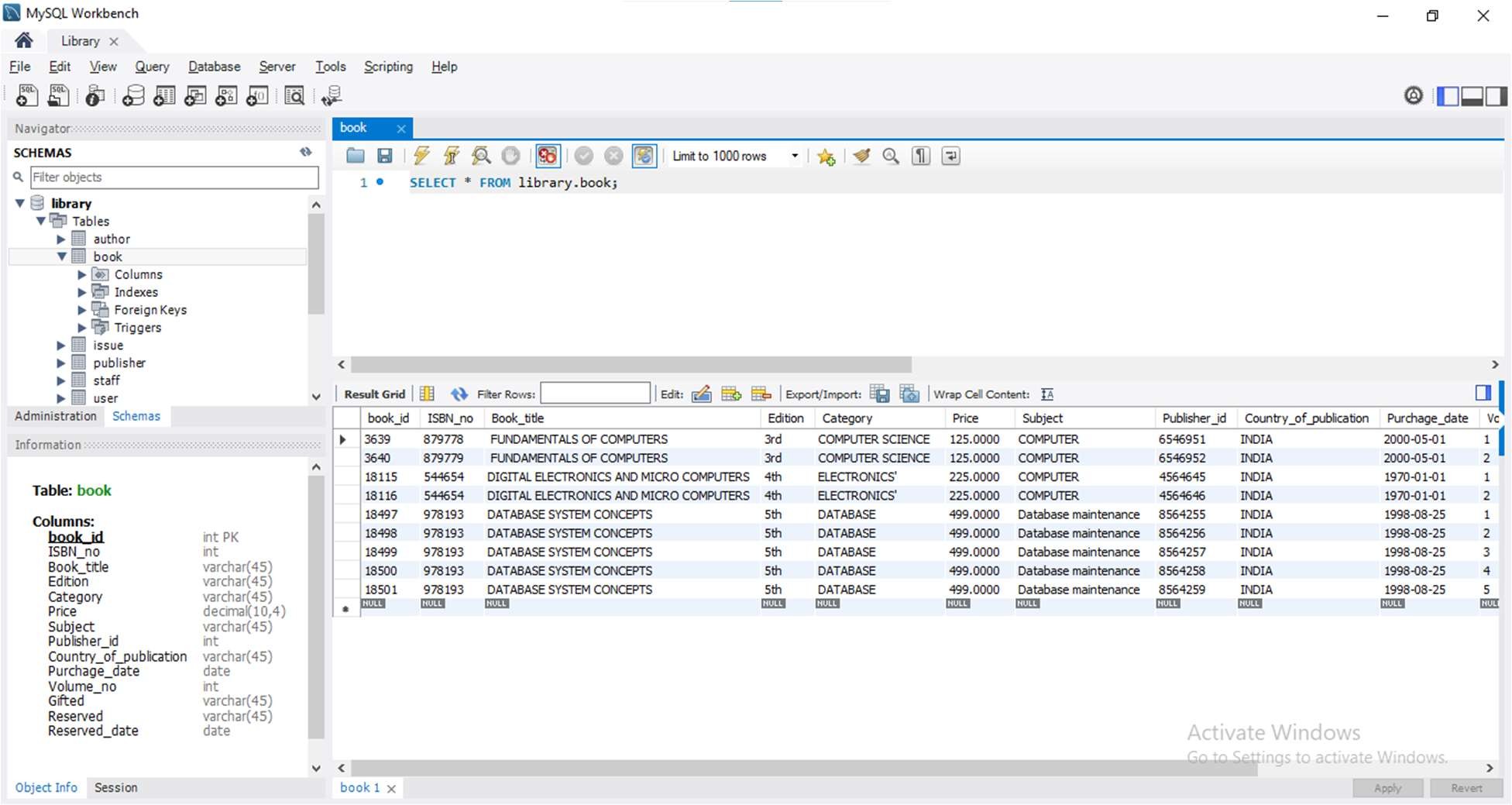
**Author table**:

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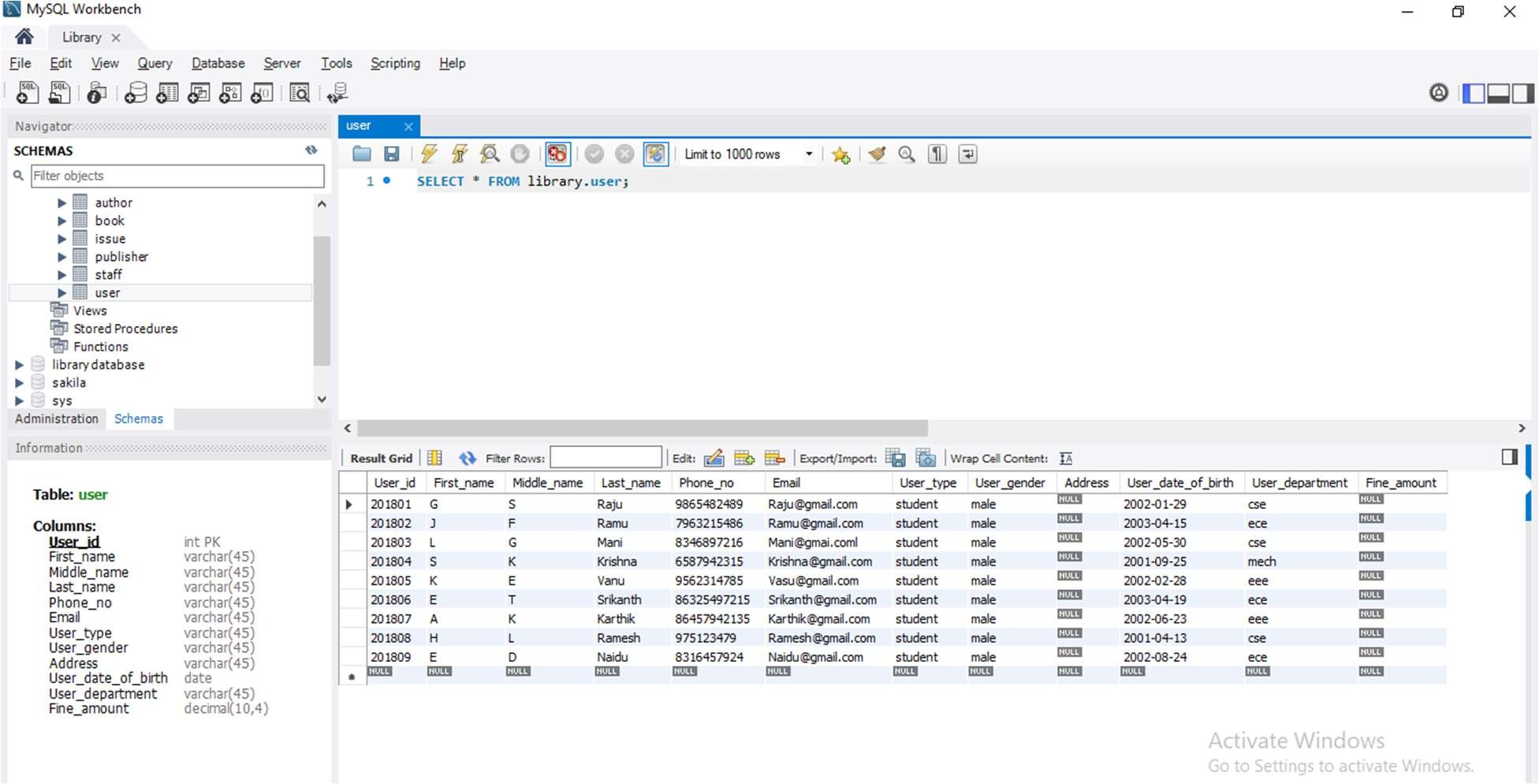
They will not get printed when you print them. use different color./



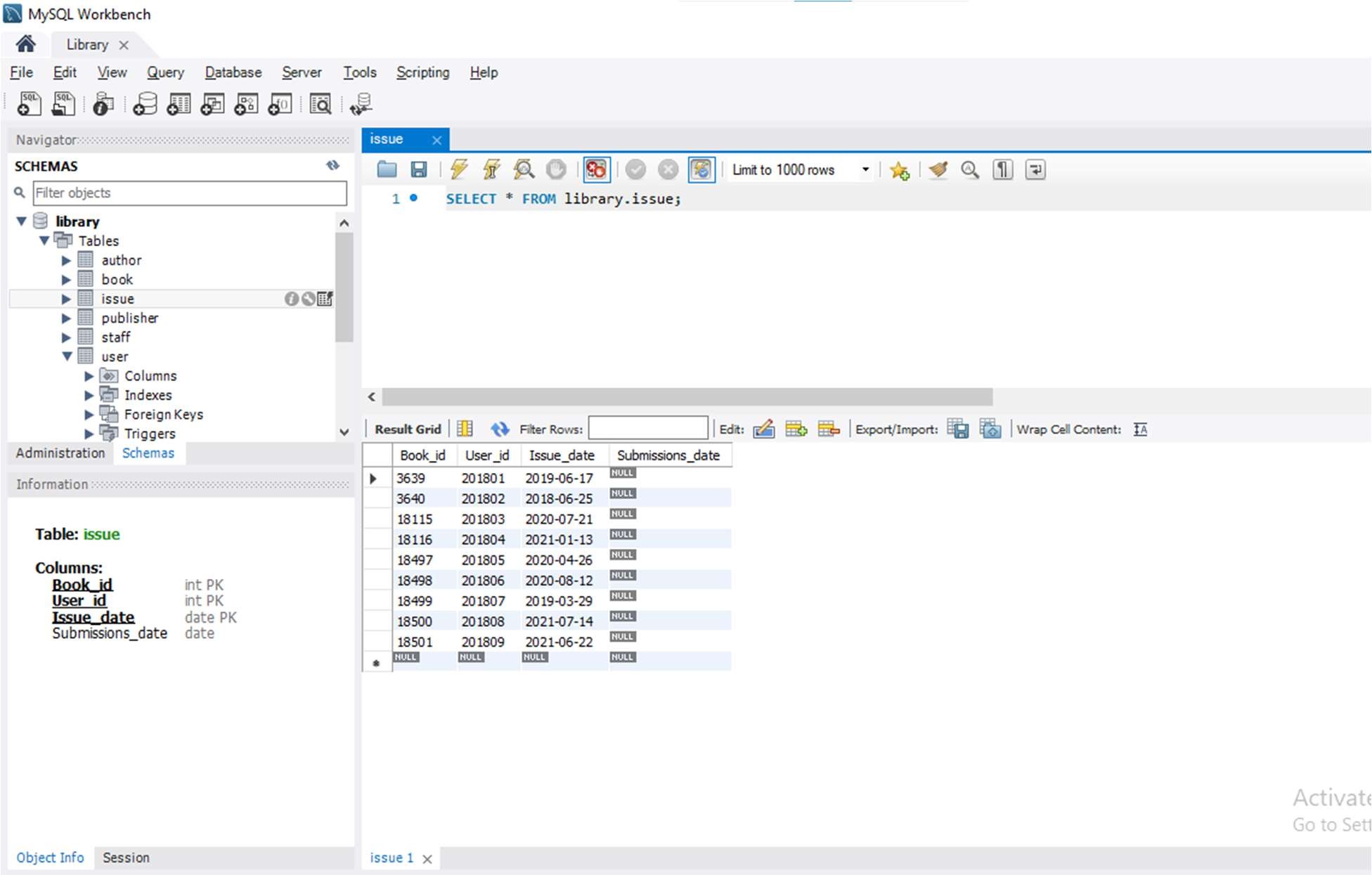
**Book table**:



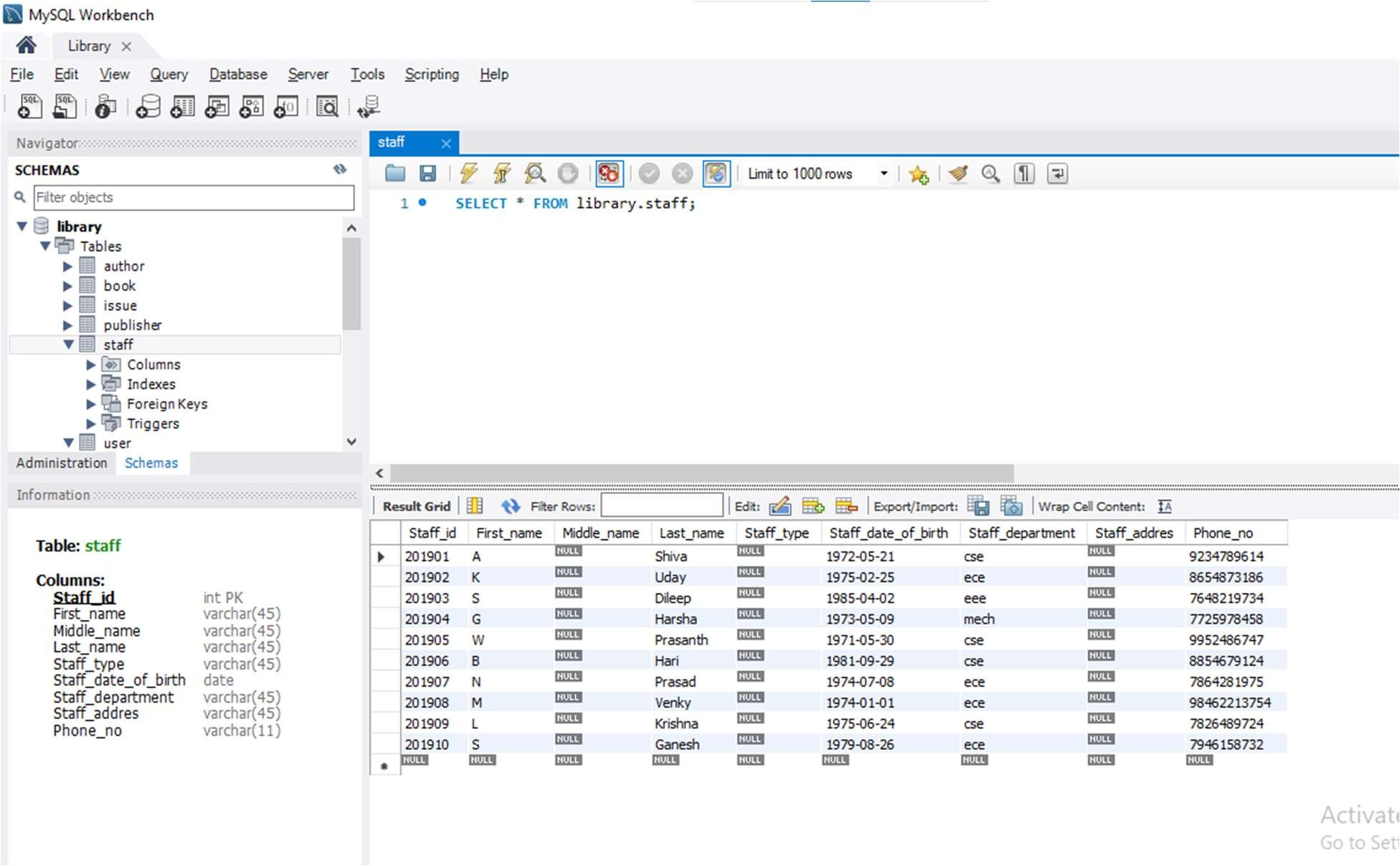
**User table:**



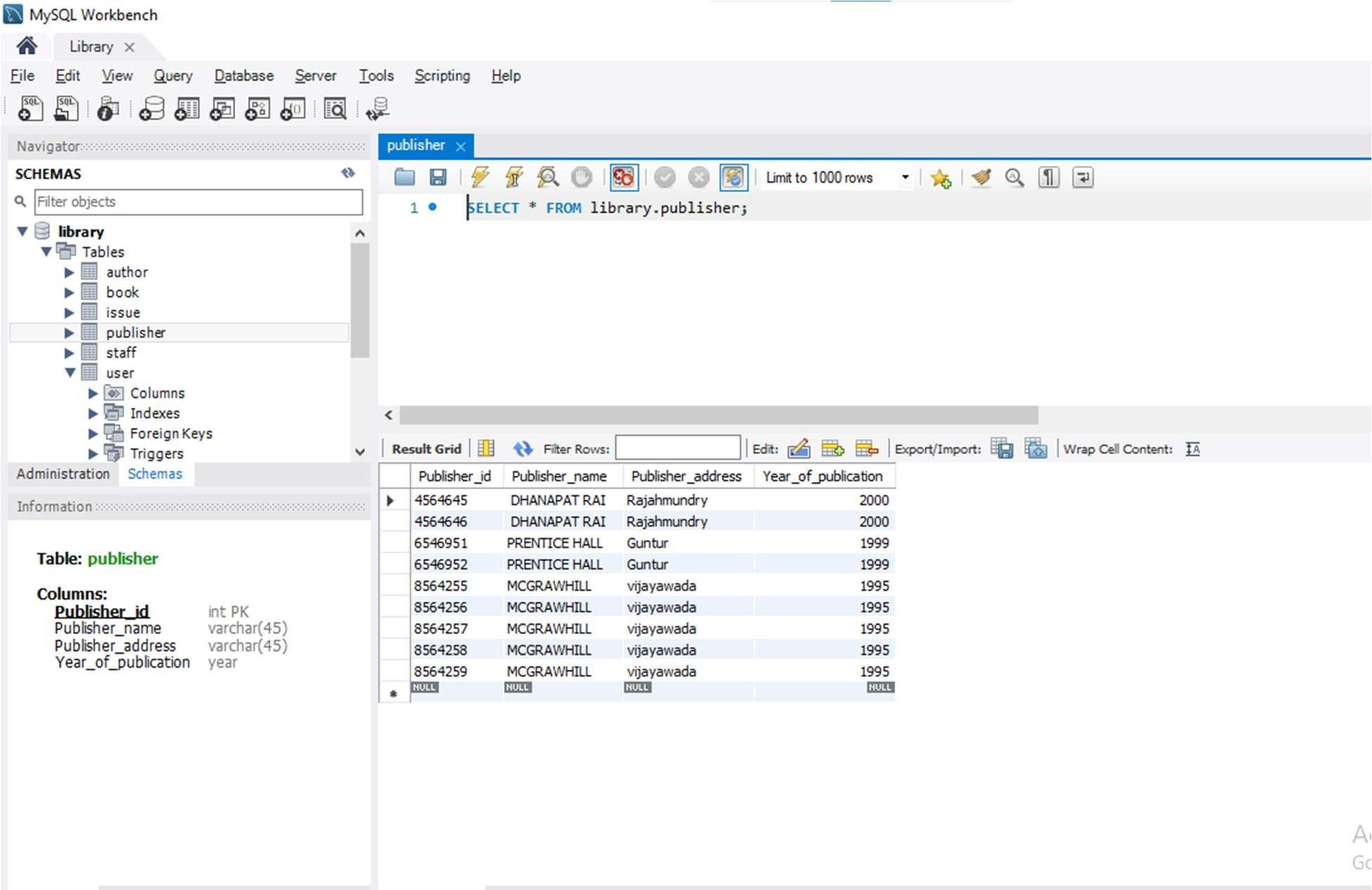
**Issue table:**



# Staff table:

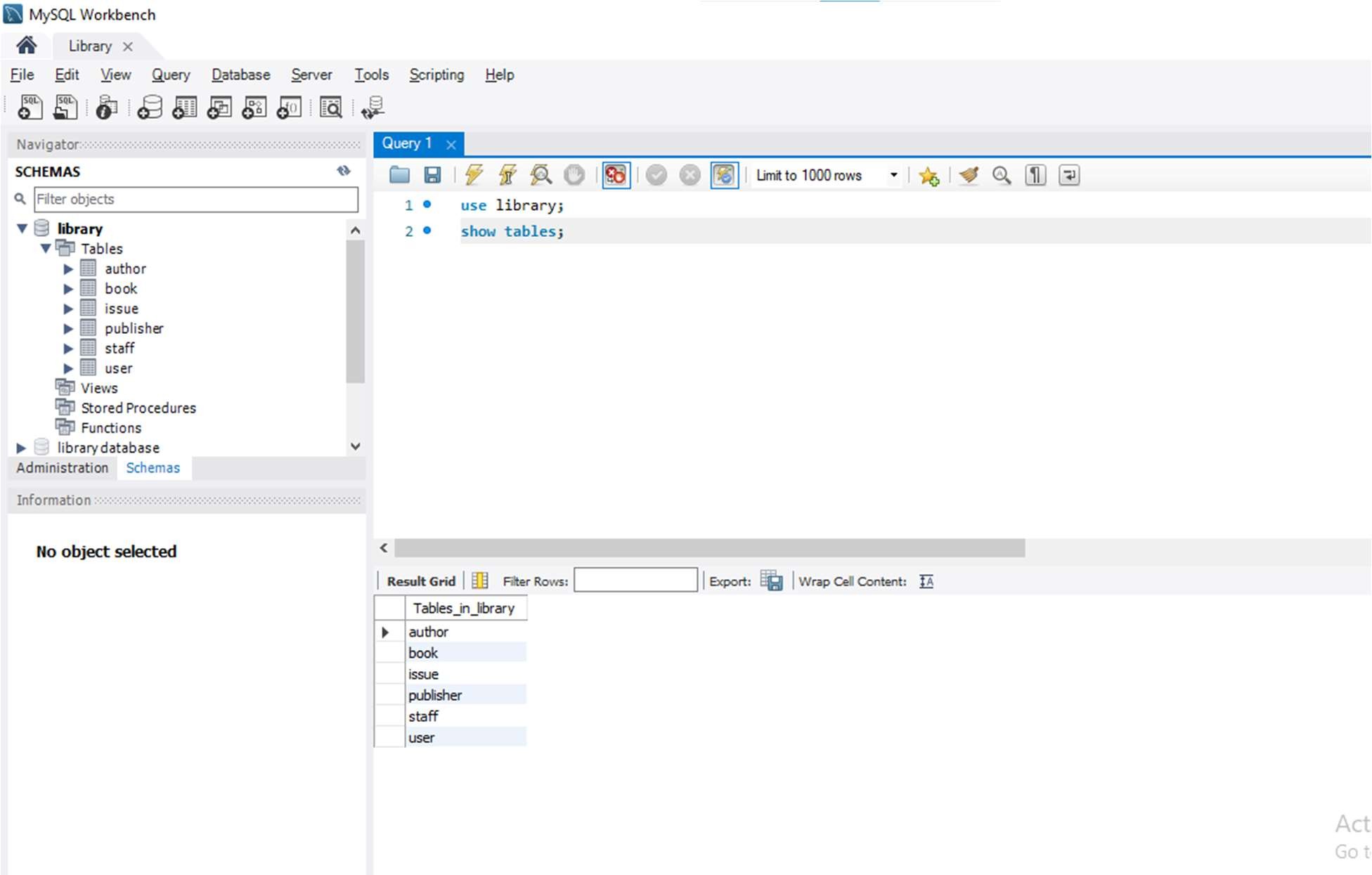


**Publisher table:**

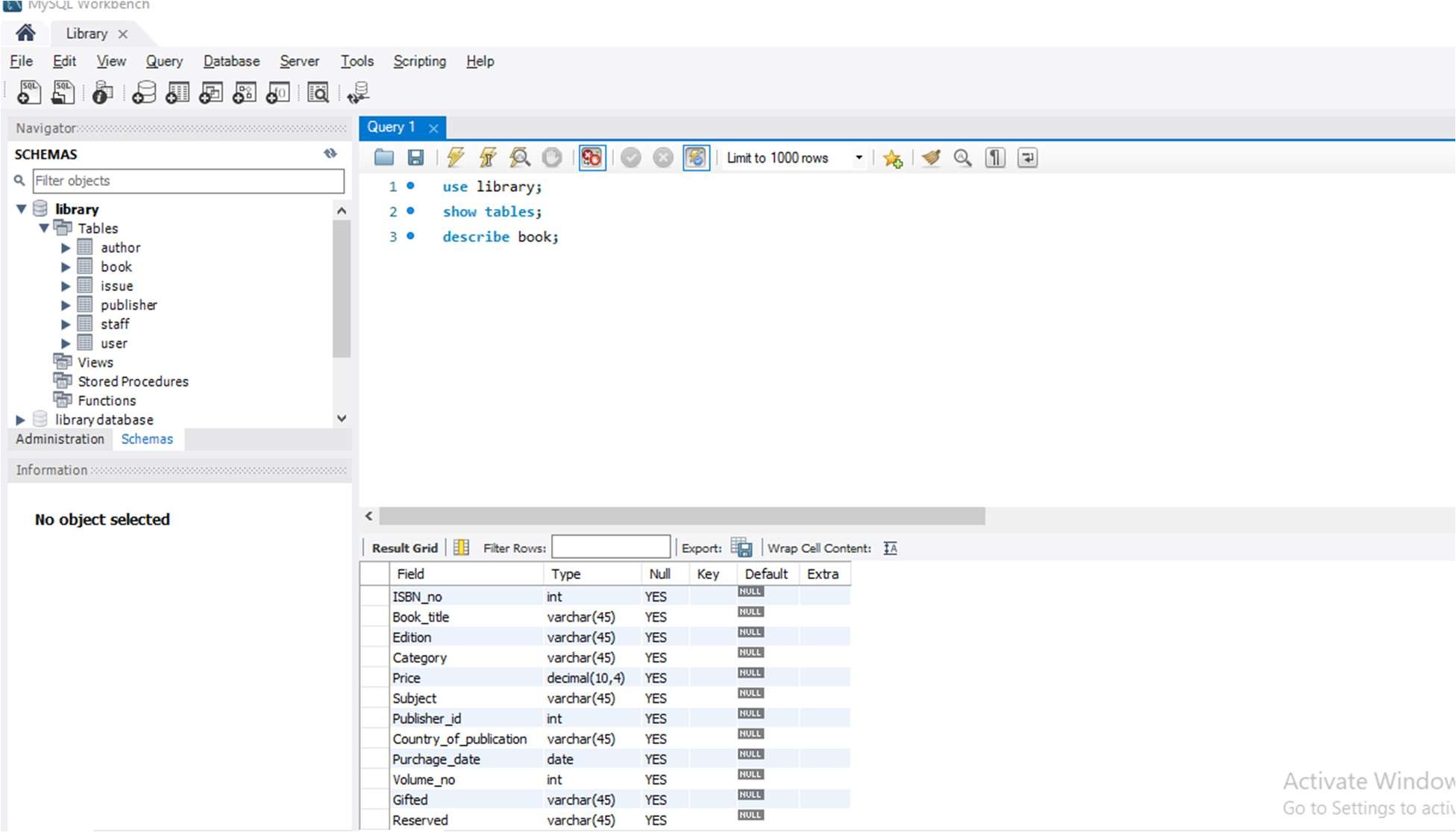


**Queries and demonstrate of the Library Management Database**

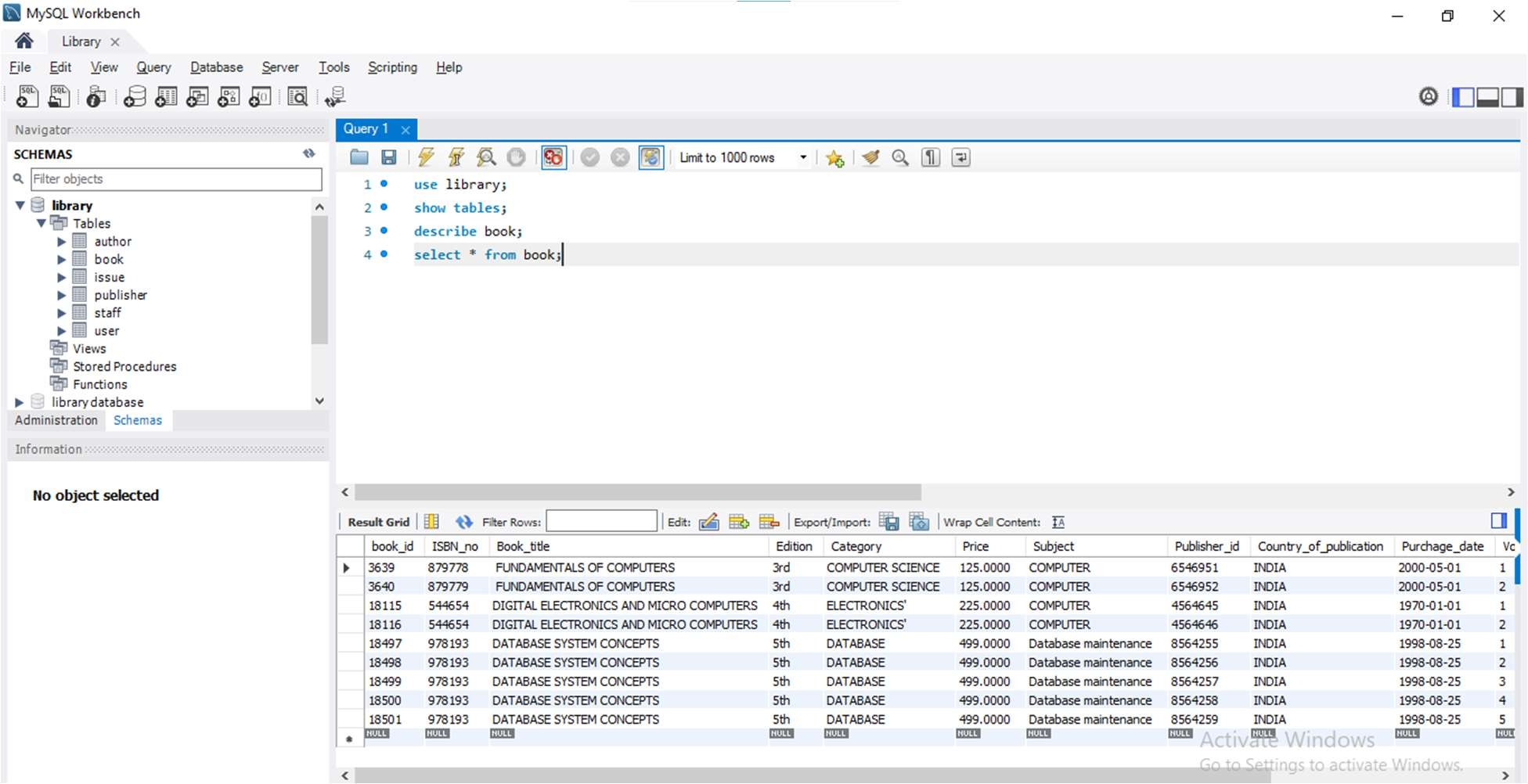
**Using library data base show tables in it. Query-1:**



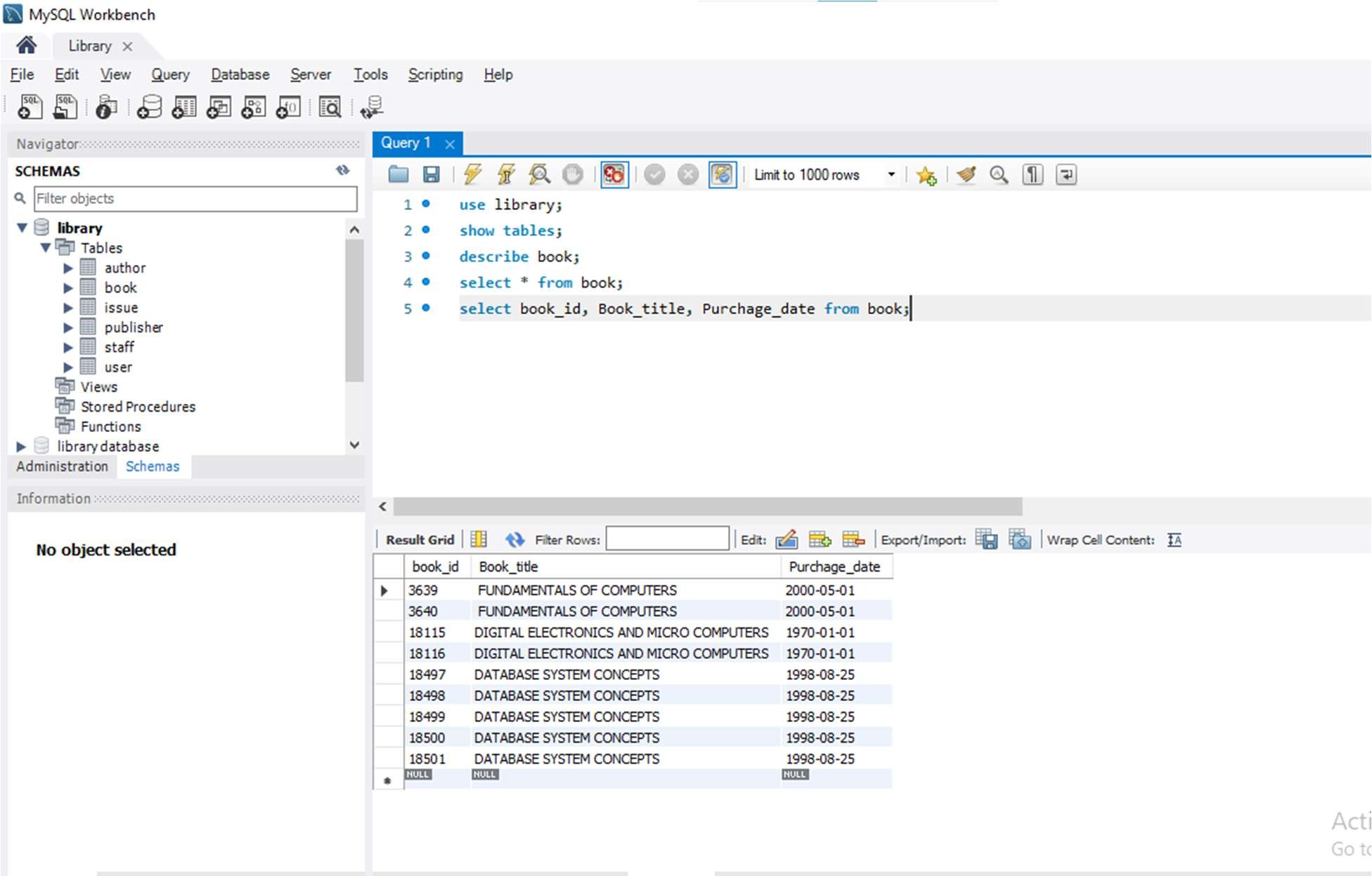
**Using library data base showing book table**: **Query-2:**



**Showing described values in the book tables: Query-3:**

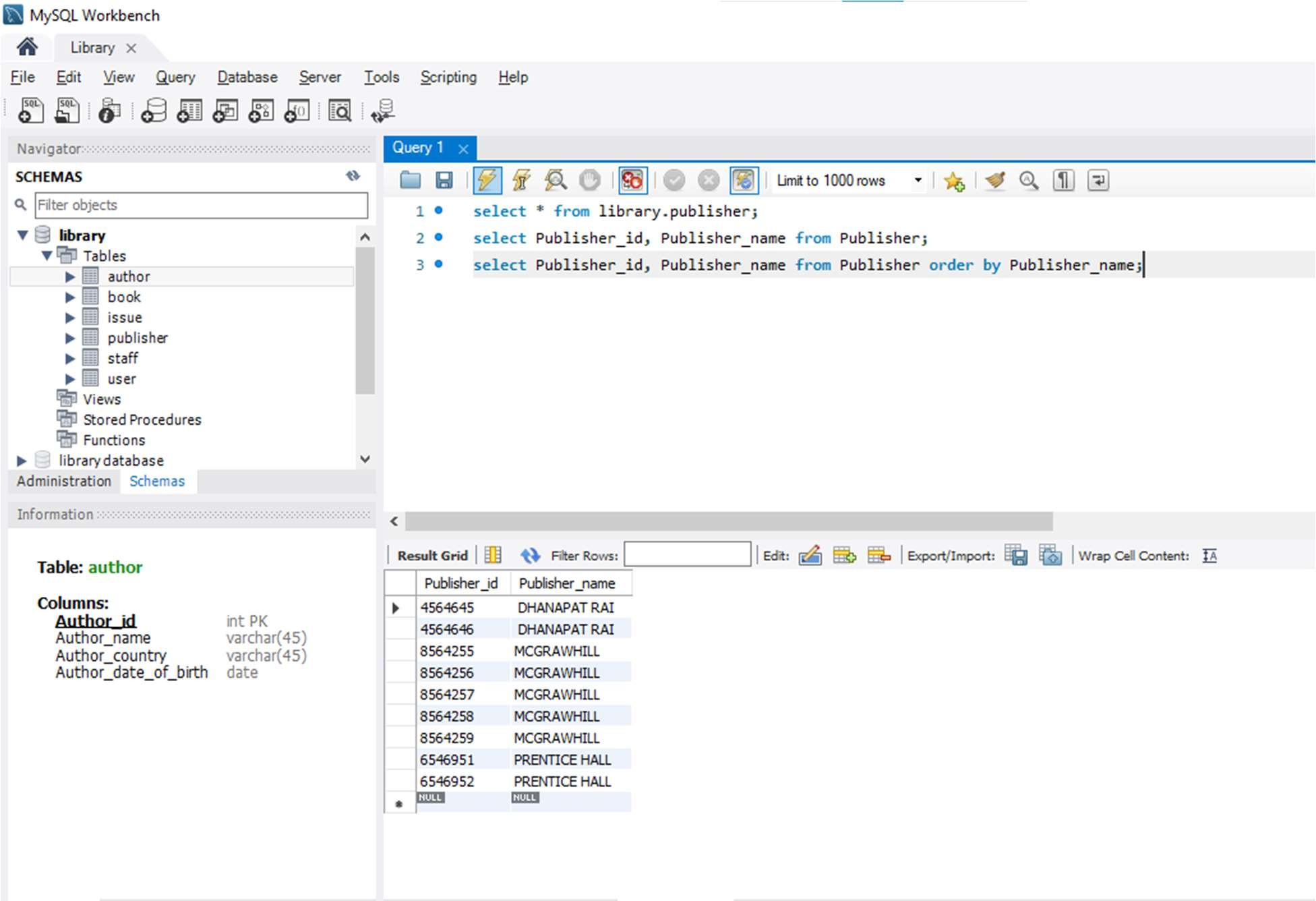


**Showing some columns in the book table Query-4:**



**Showing Publisher\_id and Publisher\_name in Publisher tables order by Publisher\_name**

**Query-5:**



**Showing staff\_id, phone\_no, staff\_date\_of\_birth in staff table order by staff\_date\_of\_birth**

**Query-6:**

