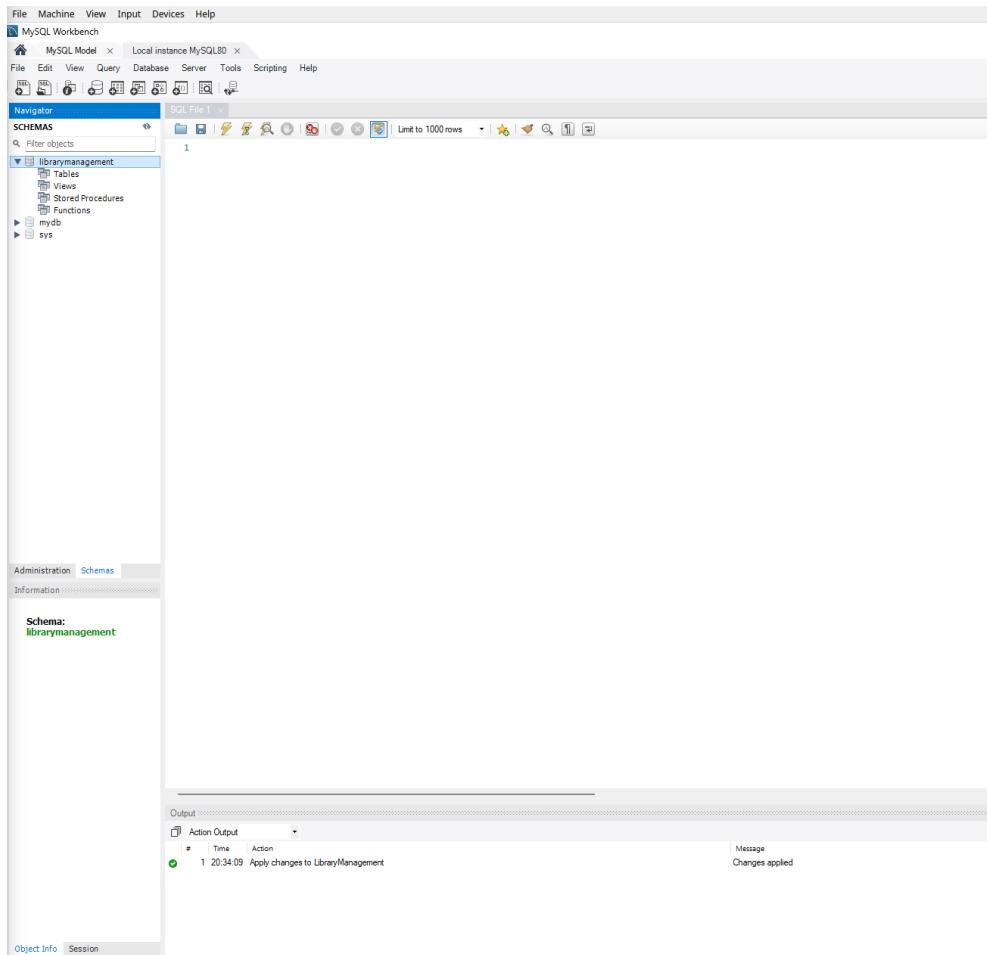


## 1a Create a Schema “LibraryManagement”



## 1b Table Authors

MySQL Workbench

MySQL Model Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects

librarymanagement

- Tables
  - authors
    - Columns
    - Indexes
    - Foreign Keys
    - Triggers
- Views
- Stored Procedures
- Functions

mydb sys

SQL File 1\*

1 • USE librarymanagement;

2

3 • create table authors (

4     author\_id INT AUTO\_INCREMENT PRIMARY KEY,

5     author\_name VARCHAR(255) NOT NULL

6 );

7

8

Administration Schemas

Information

No object selected

1c create genres

MySQL Workbench

MySQL Model Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects

librarymanagement

- Tables
  - authors
  - genre
    - Columns
    - Indexes
    - Foreign Keys
    - Triggers
  - Views
  - Stored Procedures
  - Functions
- mydb
- sys

SQL File 1\*

```
1 • USE librarymanagement;
2
3 •◦ create table authors (
4     author_id INT AUTO_INCREMENT PRIMARY KEY,
5     author_name VARCHAR(255) NOT NULL
6 );
7
8 •◦ create table genre(
9     genre_id int auto_increment primary key,
10    genre_name varchar(255)
11 );
```

Administration Schemas

Information

No object selected

1d create books table

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects

librarymanagement

- Tables
  - authors
  - books
    - Columns
      - book\_id
      - title
      - publication\_year
      - author\_id
      - genre\_id
    - Indexes
    - Foreign Keys
    - Triggers
  - genre
    - Columns
    - Indexes
    - Foreign Keys
    - Triggers
  - Views
  - Stored Procedures
  - Functions
- mydb
- sys

Administration Schemas Information

No object selected

SQL File 1\* Limit to 1000 rows

```
1 • USE librarymanagement;
2
3 • create table authors (
4     author_id INT AUTO_INCREMENT PRIMARY KEY,
5     author_name VARCHAR(255) NOT NULL
6 );
7
8 • create table genre(
9     genre_id int auto_increment primary key,
10    genre_name varchar(255)
11 );
12
13 • create table books(
14     book_id int auto_increment primary key,
15     title varchar(255),
16     publication_year year,
17     author_id int,
18     genre_id int,
19     foreign key (author_id) references authors(author_id),
20     foreign key (genre_id) references genre(genre_id)
21 );
```

1e create a table users

MySQL Workbench

MySQL Model Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects librarymanagement

Tables authors books genre users

Views

Stored Procedures

Functions mydb sys

Administration Schemas Information

No object selected

SQL File 1\*

```
4     author_id INT AUTO_INCREMENT PRIMARY KEY,
5     author_name VARCHAR(255) NOT NULL
6 );
7
8 •◦ create table genre(
9     genre_id int auto_increment primary key,
10    genre_name varchar(255)
11 );
12
13 •◦ create table books(
14     book_id int auto_increment primary key,
15     title varchar(255),
16     publication_year year,
17     author_id int,
18     genre_id int,
19     foreign key (author_id) references authors(author_id),
20     foreign key (genre_id) references genre(genre_id)
21 );
22
23 •◦ create table users(
24     user_id int auto_increment primary key,
25     username varchar(255),
26     email varchar(255)
27 );
```

Output

**If create a table borrowed books**

MySQL Workbench

MySQL Model Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects

librarymanagement

- Tables
  - authors
  - books
  - borrowed\_books
    - Columns
      - borrow\_id
      - book\_id
      - user\_id
      - borrow\_date
      - return\_date
  - Indexes
  - Foreign Keys
  - Triggers
- genre
- users
- Views
- Stored Procedures
- Functions

mydb sys

SQL File 1\*

```
14     book_id int auto_increment primary key,
15     title varchar(255),
16     publication_year year,
17     author_id int,
18     genre_id int,
19     foreign key (author_id) references authors(author_id),
20     foreign key (genre_id) references genre(genre_id)
21 );
22
23 •◦ create table users(
24     user_id int auto_increment primary key,
25     username varchar(255),
26     email varchar(255)
27 );
28
29 •◦ create table borrowed_books(
30     borrow_id int auto_increment primary key,
31     book_id int,
32     user_id int,
33     borrow_date date not null,
34     return_date date,
35     foreign key (book_id) references books(book_id),
36     foreign key (user_id) references users(user_id)
37 );
```

Administration Schemas Information

No object selected

2 insert into tables

MySQL Workbench

MySQL Model Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS Filter objects

librarymanagement

- Tables
  - authors
  - books
  - borrowed\_books
    - Columns
      - borrow\_id
      - book\_id
      - user\_id
      - borrow\_date
      - return\_date
    - Indexes
    - Foreign Keys
    - Triggers
  - genre
  - users
- Views
- Stored Procedures
- Functions
- mydb
- sys

Administration Schemas Information

No object selected

SQL File 1\*

```
35     foreign key (book_id) references books(book_id),
36     foreign key (user_id) references users(user_id)
37 );
38
39
40 • INSERT INTO authors (author_name) VALUES
41 ('Джордж Орвелл'),
42 ('Джоан Роулінг');
43
44 • INSERT INTO genres (genre_name) VALUES
45 ('Антиутопія'),
46 ('Фентезі');
47
48 • INSERT INTO users (username, email) VALUES
49 ('ivan_petrov', 'ivan@example.com'),
50 ('olenka', 'olenka@test.com');
51
52 • INSERT INTO books (title, publication_year, author_id, genre_id) VALUES
53 ('1984', 1949, 1, 1),
54 ('Гаррі Поттер і філософський камінь', 1997, 2, 2);
55
56 • INSERT INTO borrowed_books (book_id, user_id, borrow_date, return_date) VALUES
57 (1, 1, '2023-10-01', '2023-10-15'),
58 (2, 2, '2023-11-05', NULL);
```