Topic: SQL, Database Schema

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Important Notes:

All queries should be submitted in a sql file with the query number as the file name. set prefix as 3-2 to differentiate the query file for the day.

The query definition should be in this file.

Case 1

Assume that you are working with a database containing information about a bookstore. The database has several tables:

books table containing information about all books in the bookstore. The table has the following columns:

id: unique identifier for each book

title: title of the book

author_id: foreign key pointing to the authors table

publication_date: publication date of the book

authors table containing information about all authors of the

books in the bookstore. The table has the following columns:

id: unique identifier for each author

name: name of the author

book_categories table containing information about all categories of books in the bookstore. The table has the following columns:

id: unique identifier for each category

name: name of the category

book_category_mappings table containing information about which books belong to which categories. The table has the following columns:

id: unique identifier for each mapping

book_id: foreign key pointing to the books table

category_id: foreign key pointing to the book_categories table

Write SQL queries to solve the following problems:

1. Write a query to find all books published in the year 2020.
2. Write a query to find the name of the author who has written the most number of books.
3. Write a query to find the name of the category with the most number of books.
4. Write a query to find the name of the author who has written the most number of books in the category "fiction".
5. Write a query to find the titles of the top 5 most popular books. The popularity of a book is defined as the number of times it has been borrowed by customers. Assume that information about book borrowings is stored in a separate table called book_borrowings with the following columns:

    id: unique identifier for each borrowing

    book_id: foreign key pointing to the books table

    customer_id: foreign key pointing to the customers table

    borrow_date: date on which the book was borrowed