

```

--Create Database
CREATE DATABASE OnlineBookStore;

-- Switch to the database
\c OnlineBookstore;

-- Create Tables
DROP TABLE IF EXISTS Books;
CREATE TABLE Books (
    Book_ID SERIAL PRIMARY KEY,
    Title VARCHAR(100),
    Author VARCHAR(100),
    Genre VARCHAR(50),
    Published_Year INT,
    Price NUMERIC(10, 2),
    Stock INT
);
DROP TABLE IF EXISTS customers;
CREATE TABLE Customers (
    Customer_ID SERIAL PRIMARY KEY,
    Name VARCHAR(100),
    Email VARCHAR(100),
    Phone VARCHAR(15),
    City VARCHAR(50),
    Country VARCHAR(150)
);
DROP TABLE IF EXISTS orders;
CREATE TABLE Orders (
    Order_ID SERIAL PRIMARY KEY,
    Customer_ID INT REFERENCES Customers(Customer_ID),
    Book_ID INT REFERENCES Books(Book_ID),
    Order_Date DATE,
    Quantity INT,
    Total_Amount NUMERIC(10, 2)
);

SELECT * FROM Books;
SELECT * FROM Customers;
SELECT * FROM Orders;

-- Import Data Into Books Table
COPY Books(Book_ID, Title, Author, Genre, Published_Year, Price, Stock)
From 'D:\SQL_Code\sql_code\Books.csv'
CSV HEADER;

--Import Data Into Customers Table
COPY Customers(Customer_ID, Name, Email, Phone, City, Country)
From 'D:/SQL_Code/sql_code/Customers.csv'
CSV HEADER;

--Import Data Into Orders Table
COPY Orders(Order_ID, Customer_ID, Book_ID, Order_Date, Quantity, Total_Amount)
From 'D:\SQL_Code\sql_code\Orders.csv'
CSV HEADER;

```

-- 1) Retrieve all books in the "Fiction" genre:

```
SELECT * FROM Books
WHERE Genre='Fiction';
```

-- 2) Find books published after the year 1950:

```
SELECT * FROM Books
WHERE Published_year>1950;
```

-- 3) List all customers from the Canada:

```
SELECT * FROM Customers
WHERE country='Canada';
```

-- 4) Show orders placed in November 2023:

```
SELECT * FROM Orders
WHERE order_date BETWEEN '2023-11-01' AND '2023-11-30';
```

-- 5) Retrieve the total stock of books available:

```
SELECT SUM(stock) AS Total_Stock
From Books;
```

-- 6) Find the details of the most expensive book:

```
SELECT * FROM Books
ORDER BY Price DESC
LIMIT 1;
```

-- 7) Show all customers who ordered more than 1 quantity of a book:

```
SELECT * FROM Orders
WHERE quantity>1;
```

-- 8) Retrieve all orders where the total amount exceeds \$20:

```
SELECT * FROM Orders
WHERE total_amount>20;
```

-- 9) List all genres available in the Books table:

```
SELECT DISTINCT genre FROM Books;
```

-- 10) Find the book with the lowest stock:

```
SELECT * FROM Books
ORDER BY stock
LIMIT 1;
```

-- 11) Calculate the total revenue generated from all orders:

```
SELECT SUM(total_amount) As Revenue
FROM Orders;
```

-- Advance Questions :

-- 1) Retrieve the total number of books sold for each genre:

```
SELECT * FROM ORDERS;
```

```
SELECT b.Genre, SUM(o.Quantity) AS Total_Books_sold  
FROM Orders o  
JOIN Books b ON o.book_id = b.book_id  
GROUP BY b.Genre;
```

```
-- 2) Find the average price of books in the "Fantasy" genre:  
SELECT AVG(price) AS Average_Price  
FROM Books  
WHERE Genre = 'Fantasy';
```

```
-- 3) List customers who have placed at least 2 orders:  
SELECT o.customer_id, c.name, COUNT(o.Order_id) AS ORDER_COUNT  
FROM orders o  
JOIN customers c ON o.customer_id=c.customer_id  
GROUP BY o.customer_id, c.name  
HAVING COUNT(Order_id) >=2;
```

```
-- 4) Find the most frequently ordered book:  
SELECT o.Book_id, b.title, COUNT(o.order_id) AS ORDER_COUNT  
FROM orders o  
JOIN books b ON o.book_id=b.book_id  
GROUP BY o.book_id, b.title  
ORDER BY ORDER_COUNT DESC LIMIT 1;
```

```
-- 5) Show the top 3 most expensive books of 'Fantasy' Genre :  
SELECT * FROM books  
WHERE genre ='Fantasy'  
ORDER BY price DESC LIMIT 3;
```

```
-- 6) Retrieve the total quantity of books sold by each author:
```

```
SELECT b.author, SUM(o.quantity) AS Total_Books_Sold  
FROM orders o  
JOIN books b ON o.book_id=b.book_id  
GROUP BY b.Author;
```

```
-- 7) List the cities where customers who spent over $30 are located:
```

```
SELECT DISTINCT c.city, total_amount  
FROM orders o  
JOIN customers c ON o.customer_id=c.customer_id  
WHERE o.total_amount > 30;
```

```
-- 8) Find the customer who spent the most on orders:  
SELECT c.customer_id, c.name, SUM(o.total_amount) AS Total_Spent  
FROM orders o  
JOIN customers c ON o.customer_id=c.customer_id  
GROUP BY c.customer_id, c.name  
ORDER BY Total_spent Desc LIMIT 1;
```

```
--9) Calculate the stock remaining after fulfilling all orders:
```

```
SELECT b.book_id, b.title, b.stock, COALESCE(SUM(o.quantity),0) AS  
Order_quantity,  
       b.stock- COALESCE(SUM(o.quantity),0) AS Remaining_Quantity  
FROM books b  
LEFT JOIN orders o ON b.book_id=o.book_id  
GROUP BY b.book_id ORDER BY b.book_id;
```