Database Context: Bookstore

CREATE SCHEMA IF NOT EXISTS Bookstore;

Task 1: Create Tables

Create Table 'Books': Columns - BookID (Primary Key), Title, Author, Genre, Price, and YearPublished.

create table bookstore.books(

BookID varchar(10) Primary Key,

Title varchar(10),

Author varchar(10),

Genre varchar(10),

Price float,

YearPublished integer)

Create Table 'Customers': Columns - CustomerID (Primary Key), FirstName, LastName, Email, and JoinDate.

create table bookstore.customers(

CustomerID varchar(10)Primary Key,

FirstName varchar(10),

LastName varchar(10),

Email varchar(10),

JoinDate Date

);

Create Table 'Sales': Columns - SaleID (Primary Key), CustomerID (Foreign Key), BookID (Foreign Key), DateOfPurchase, and Quantity.

Create Table bookstore.Sales(

SaleID varchar(10)Primary Key,

CustomerID varchar(10) references bookstore.customers(CustomerID),

BookID varchar(10) references bookstore.books(BookID),

DateOfPurchase DATE,

Quantity integer

);

Task 2: Insert Data

Insert at least 10 books into 'Books'.

insert into bookstore.books(

BookID, Title, Author, Genre, Price,YearPublished)

values

('B001', 'Book1', 'Author1', 'Fiction', 19.99, 2005),

('B002', 'Book2', 'Author2', 'NonFiction', 29.99, 2010),

('B003', 'Book3', 'Author3', 'Mystery', 24.99, 2015),

('B004', 'Book10', 'Author10', 'Science', 39.99, 2020),

('B005', 'Book11', 'Author11', 'Fantasy', 34.99, 2012),

('B006', 'Book12', 'Author12', 'Biography', 22.99, 2018),

('B007', 'Book13', 'Author13', 'Historical', 27.99, 2008),

('B008', 'Book14', 'Author14', 'Romance', 19.99, 2014),

('B009', 'Book15', 'Author15', 'Thriller', 31.99, 2017),

('B010', 'Book16', 'Author16', 'Self-Help', 25.99, 2022);

Insert at least 5 customers into 'Customers'.

insert into bookstore.customers(

CustomerID, FirstName, LastName, Email,JoinDate)

values

('C001', 'John', 'Doe', 'john.doe@email.com', '2021-01-15'),

('C002', 'Jane', 'Smith', 'jane.smith@email.com', '2021-02-20'),

('C003', 'Bob', 'Johnson', 'bob.johnson@email.com', '2021-03-25'),

('C004', 'Alice', 'Williams', 'alice.williams@email.com', '2021-04-10'),

('C005', 'Charlie', 'Brown', 'charlie.brown@email.com', '2021-05-05'),

('C006', 'Eva', 'Miller', 'eva.miller@email.com', '2021-06-15'),

('C007', 'David', 'Davis', 'david.davis@email.com', '2021-07-20'),

('C008', 'Grace', 'Smith', 'grace.smith@email.com', '2021-08-25'),

('C009', 'Frank', 'Taylor', 'frank.taylor@email.com', '2021-09-10'),

('C010', 'Helen', 'Martin', 'helen.martin@email.com', '2021-10-05');

Record at least 5 sales in 'Sales' (make sure to use existing CustomerIDs and BookIDs).

insert into bookstore.Sales(

SaleID, CustomerID, BookID, DateOfPurchase,Quantity)

values

('S001', 'C001', 'B001', '2021-01-20', 2),

('S002', 'C002', 'B002', '2021-02-25', 1),

('S003', 'C003', 'B003', '2021-03-30', 3),

('S004', 'C004', 'B004', '2021-04-05', 1),

('S005', 'C005', 'B005', '2021-05-10', 2),

('S006', 'C006', 'B006', '2021-06-20', 1),

('S007', 'C007', 'B007', '2021-07-15', 4),

('S008', 'C008', 'B008', '2021-08-10', 2),

('S009', 'C009', 'B009', '2021-09-05', 3),

('S010', 'C010', 'B010', '2021-10-15', 1);

Task 3: Basic Queries

Select all books published after 2010.

select \* from bookstore.books where yearpublished = 2010

Find all customers who joined after January 1, 2023.

select \* from bookstore.customers where joindate = '2023-01-01'

List all sales for a specific customer (choose one).

select \* from bookstore.customers where joindate = '2023-01-01'

Task 4: Aggregate Functions

Calculate the total number of books sold.

select count(\*) from bookstore.sales

Find the average price of all books in a specific genre (choose one).

select Genre,avg(Price) from bookstore.books group by Genre

Identify the customer who made the most purchases.

select CustomerID, sum(Quantity) as totalQuantity from bookstore.Sales

group by CustomerID

order by totalQuantity

limit 1

Task 5: Joins

List all books that have been sold (use JOIN).

select \* from bookstore.books b

join bookstore.Sales s

on s.bookid = b.bookid

Show details of all purchases made by a specific customer (including book titles).

select \* from bookstore.customers c

join bookstore.sales s

on s.customerid = c.customerid

join bookstore.books b

n b.bookid = s.bookid

where s.customerid = 'C001'

Find the most popular book genre.

select b.Genre,sum(s.quantity) totalquantity from bookstore.customers c

join bookstore.sales s

on s.customerid = c.customerid

join bookstore.books b

on s.bookid = b.bookid

group by b.Genre

order by totalquantity

limit 1