

Course Code: **CSE 312**

Course Title: **Database Management System Laboratory**

Project Title: **Book Shop Management System Sort**

Submitted by:

**Md. Tahmeedul Islam** (2125702012)57th

**Sohan Rana Apurbo** (2115602015)56th

**Israt Jahan Santa** (2115602023)56th

Submitted to:

**Mst – Ayesha Siddka**

Assistant Professor

Faculty of Science and Engineering

Department of Computer Science and Engineering

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**Abstract**

The Internet is by far a significant factor in people's lives. It has significantly raised the level of living and quality of life for a great number of people. Its branches have grown and expanded into several levels and regions. One sector that has recently gained attention is the e-commerce business. By making it simple for book lovers to buy books online, the system of online bookstores has made the lives of many readers easier. Access to a typical bookshop is not always possible because of its operating hours, lack of certain books, location, and most crucially, its capacity and the amount of space needed to keep many books. Due of these difficulties, e-commerce sectors pertaining to bookshops have developed. Our project is an example of a straightforward e-commerce Book Shop that the customers can find their desired books easily.

**Introduction**

A bookshop management system is a software application that helps bookstores manage their daily operations in a more efficient and organized manner. The system automates many of the manual tasks involved in running a bookstore, such as inventory management, sales tracking, and customer management, to allow bookstore owners and staff to focus on other important tasks. The bookshop management system is designed to simplify the process of managing books, orders, and customer data. It helps the bookstore to keep track of its inventory levels and reorder stock when necessary. The system can also help bookstore owners to track sales data, customer trends, and preferences, and generate reports to help make informed business decisions. With the bookshop management system, bookstores can also improve their customer service by providing more personalized recommendations and targeted marketing messages. The system can help bookstores to stay competitive by enabling them to offer promotions, discounts, and loyalty programs to attract and retain customers. Overall, a bookshop management system is a valuable tool for any bookstore looking to streamline its operations and increase its profitability. It allows bookstore owners and staff to focus on what they do best - providing customers with a wide selection of books and a great shopping experience.

**Why do we choose Book Shop management system for our project?**

There are several reasons why a Book Shop management system would be a good choice for a project. Here are a few:

1. **Streamlined operations:** A Book Shop management system automates many of the manual tasks involved in running a bookstore, such as inventory management, sales tracking, and customer management. This means that the system can help streamline operations and save time for bookstore owners and staff.
2. **Improved customer service:** A Book Shop management system can help improve customer service by providing personalized recommendations and targeted marketing messages. This can help increase customer satisfaction and loyalty.
3. **Better decision-making:** A Book Shop management system can generate reports and analytics that can help bookstore owners make more informed business decisions. For example, reports on sales trends and customer preferences can help with inventory management and stocking decisions.
4. **Increased profitability:** By streamlining operations, improving customer service, and making better business decisions, a Book Shop management system can help increase profitability for the bookstore.

Overall, a Book Shop management system can provide many benefits for a bookstore and its customers. It can help the bookstore run more efficiently, improve customer satisfaction, and increase profitability.

**Objective**

1. Searching: To search the availability of books.
2. To know the details of customers.
3. To provide customer’s better service.
4. It keeps database of price, sales record.
5. Processing a large amount of data more effectively and efficiently.

**Features**

1. Login Functionality
2. Selling Books
3. Managing Books
4. Search Books by Name, Writer & Category
5. Check Report

**Relational Schema**

**Admin** (id, acc\_type, person\_id)

**Books** (id, name, price, discount, writer, quantity, condition, category)

**Person** (person\_id, mobile, name, gender, email, address, password)

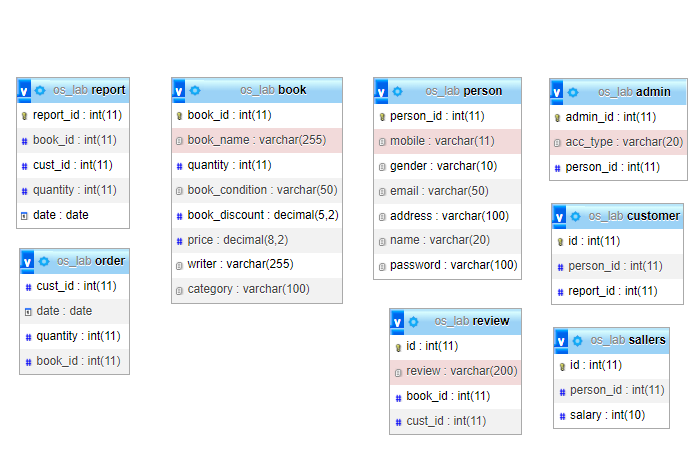
**Customer** (id, person\_id, refund)

**Reports** (id, book\_id, cust\_id, quantity, date)

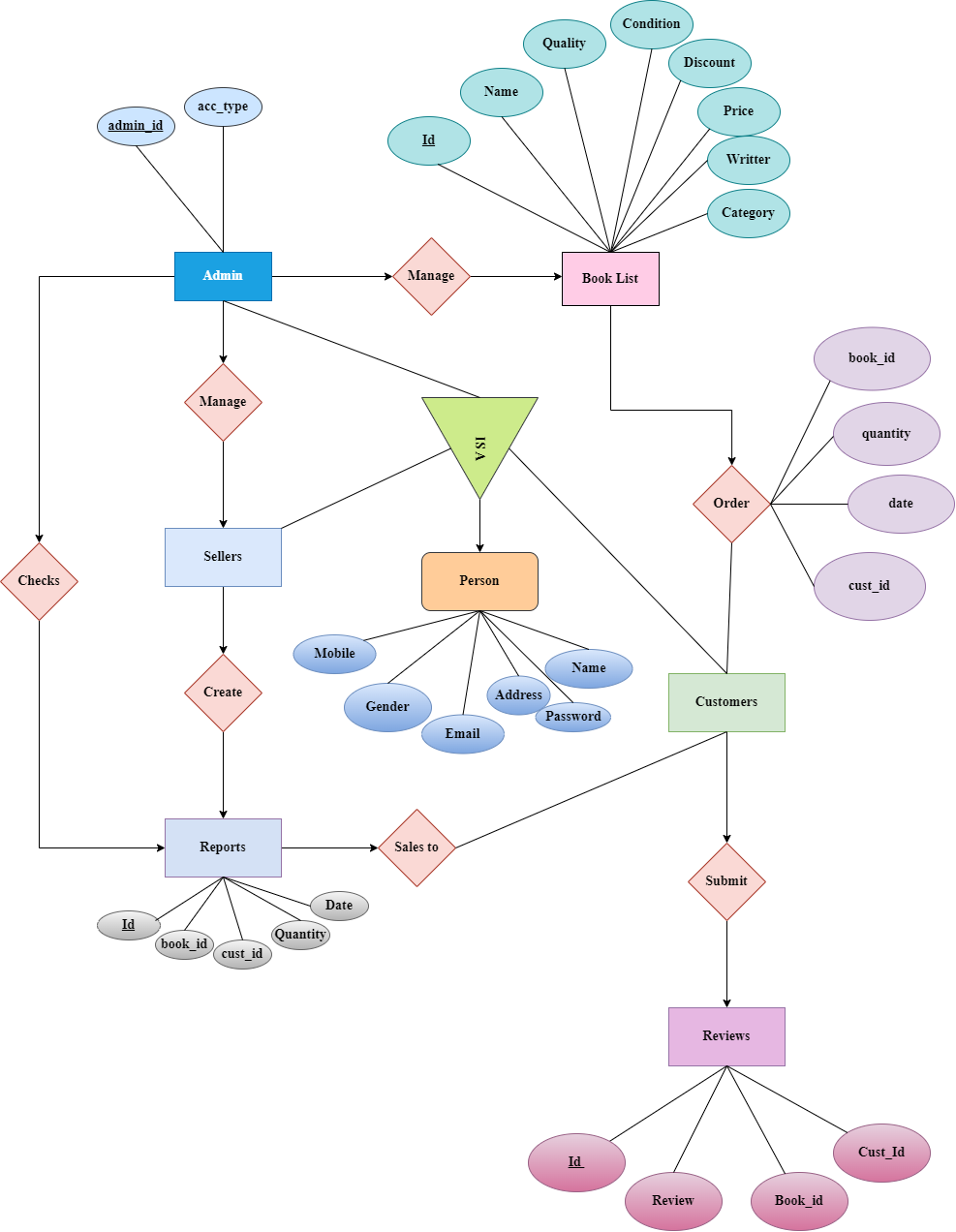
**Reviews** (id, review, book\_id, cust\_id)

**Order** (cust\_id, date, quantity, book\_id)

**Relational Database**

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**E-R Diagram**



**SQL code with screenshot according to the features**

**Log In**

**SQL:**

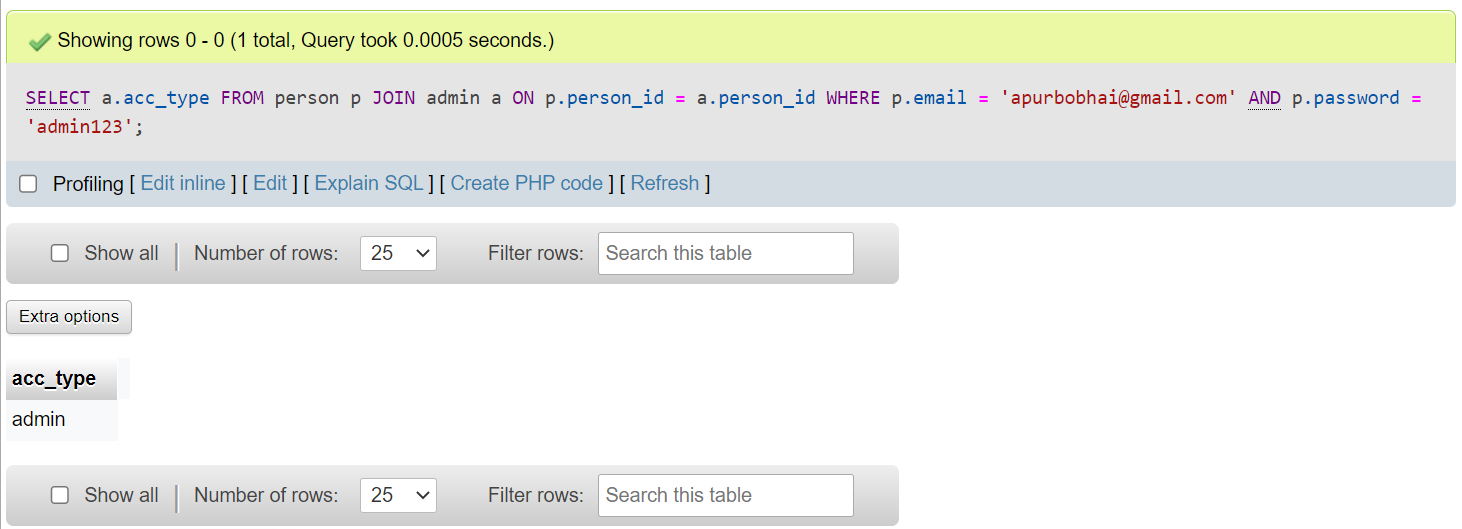
SELECT a.acc\_type

FROM person p

JOIN admin a ON p.person\_id = a.person\_id

WHERE p.email = 'apurbobhai@gmail.com' AND p.password = 'admin123'

**Output:**



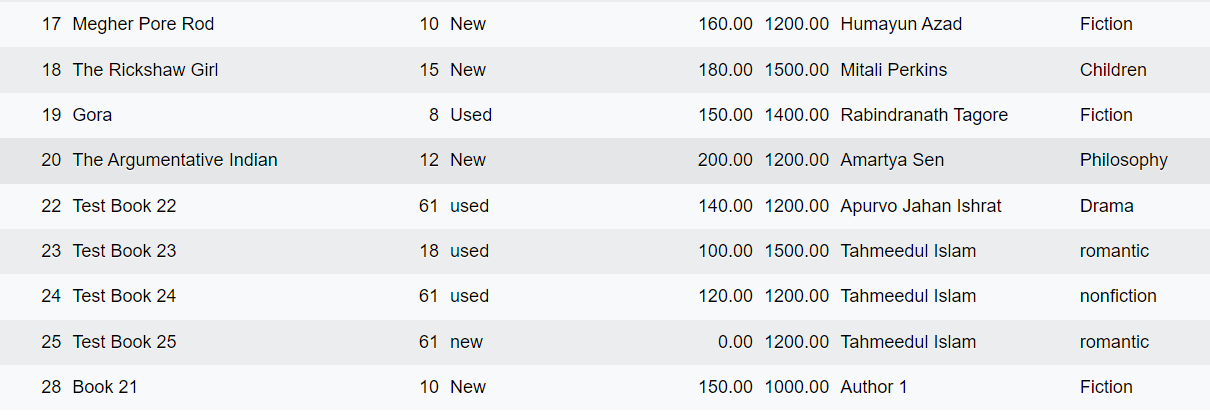
**Managing books**

**Inserting a new book:**

INSERT INTO book (book\_id, book\_name, quantity, book\_condition, book\_discount, price, writer, category)

VALUES ('21', 'Book 21', '10', 'New', '150.00', '1000.00', 'Author 1', 'Fiction');

**Output:**



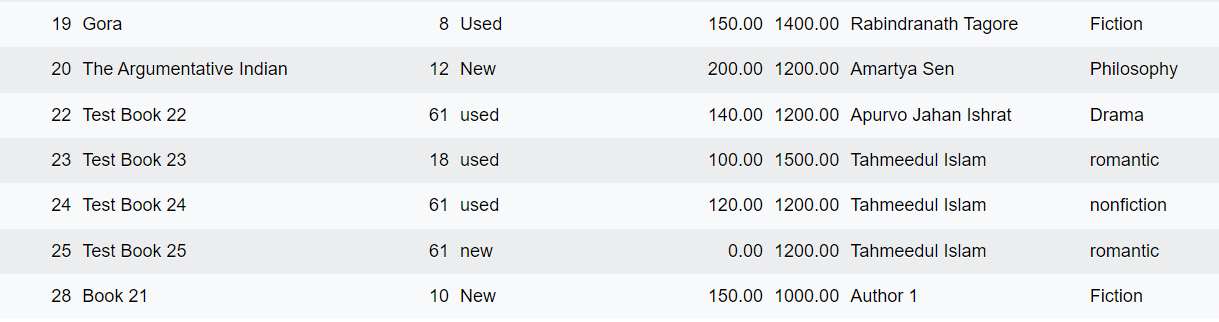
**Updating a book:**

UPDATE book

SET quantity = '15', price = '1200.00'

WHERE book id = '1';

**Output:**

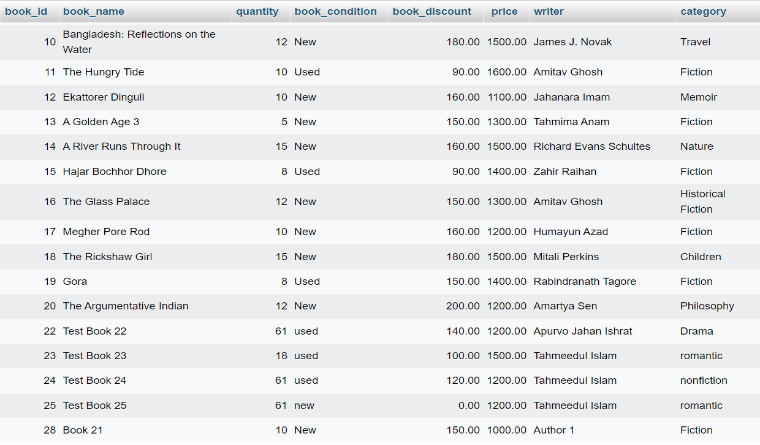


**Deleting a book:**

DELETE FROM book

WHERE book\_id = '21';

**Output:**



**Search**

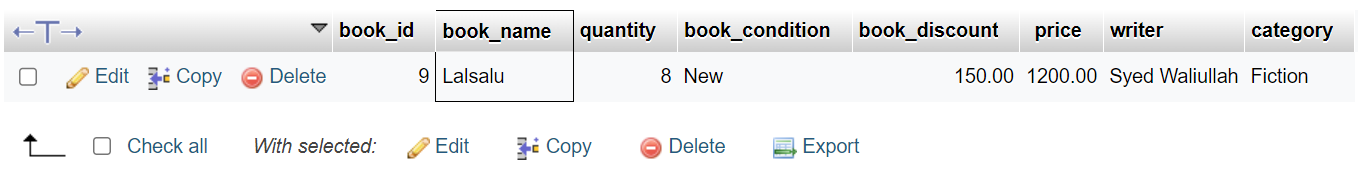
**Searching a book by name:**

SELECT

FROM book

WHERE book\_name LIKE '%Lalsalu%'

**Output:**



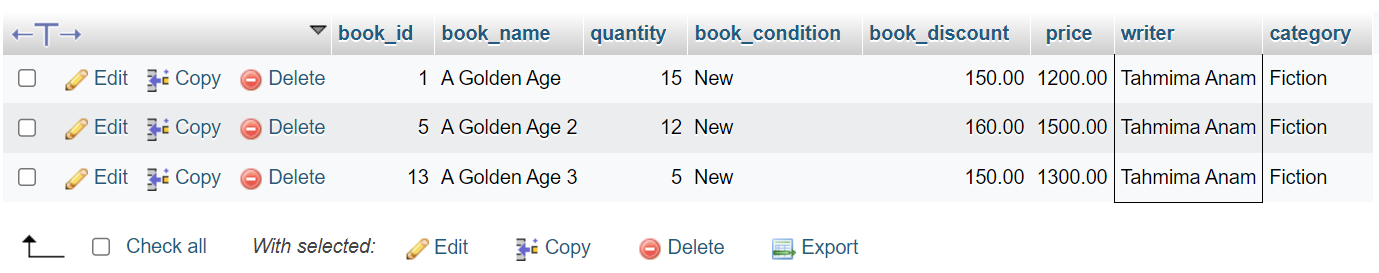
**Searching a book by writer name:**

SELECT \*

FROM book

WHERE writer LIKE '%Tahmima Anam%'

**Output:**



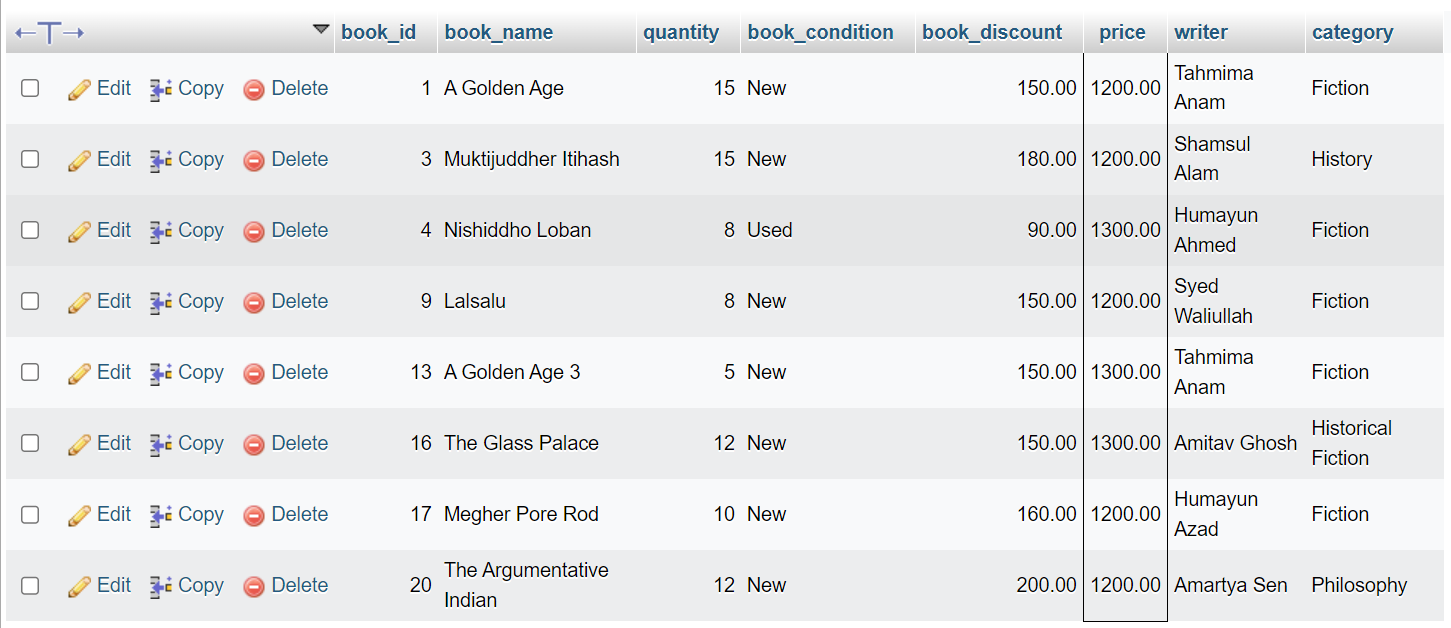
**Searching a book by price range:**

SELECT \*

FROM book

WHERE price BETWEEN 1200 AND 1300;

**Output:**



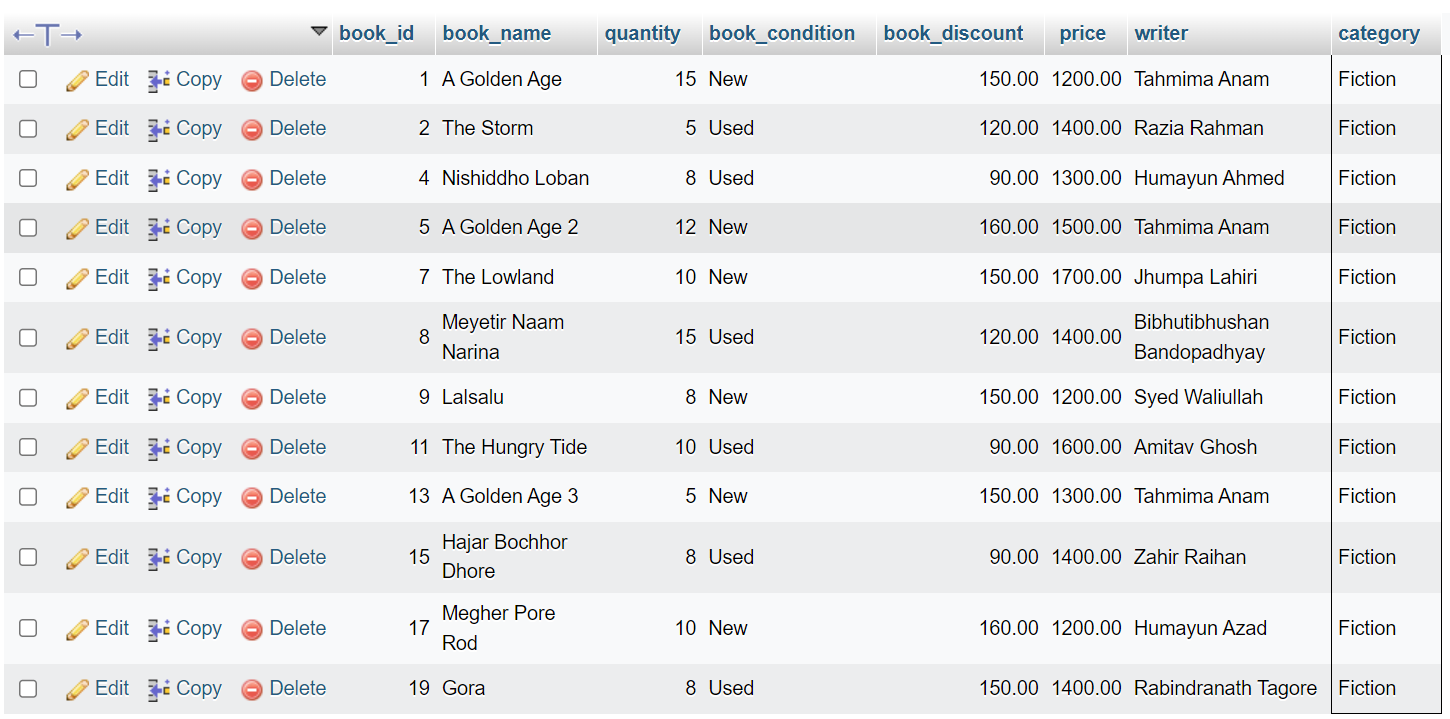
**Searching a book by writer name:**

SELECT \*

FROM book

WHERE category = 'Fiction';

**Output:**



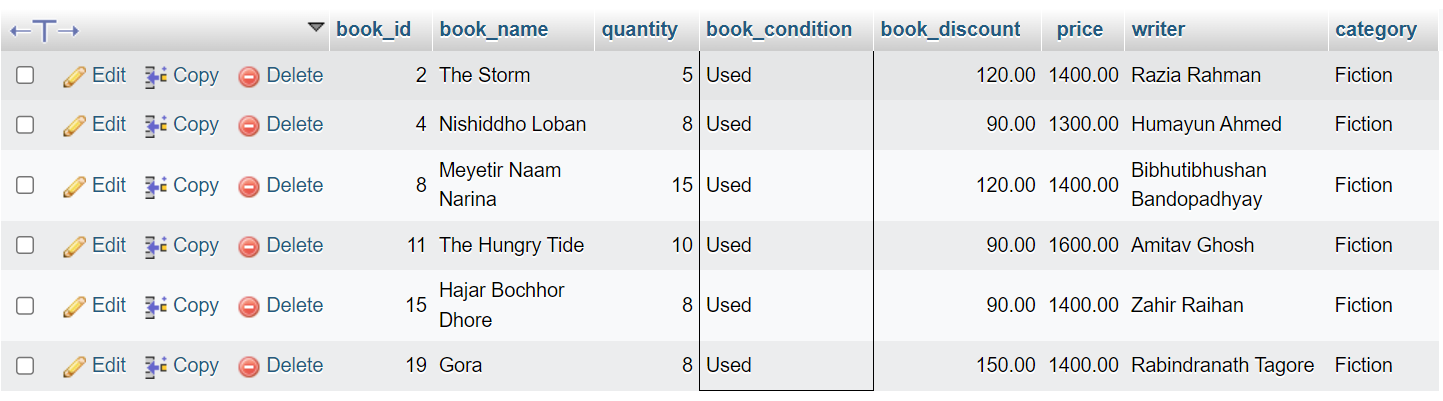
**Searching a book by condition:**

SELECT \*

FROM book

WHERE book\_condition = 'Used'.

**Output:**



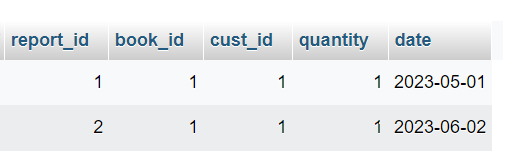
**Report**

**Inserting new report:**

INSERT INTO report (report\_id, book\_id, cust\_id, quantity, date)

VALUES ('1', '1', '1', '1', '2023-05-01');

**Output:**



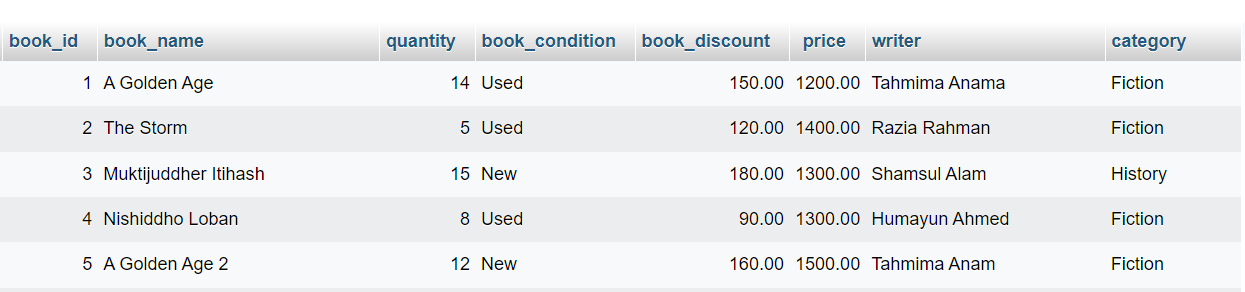
**Decreasing book quantity:**

UPDATE book

SET quantity = quantity - 1

WHERE book\_id = '1';

**Output:**



**Advantage**

There are many advantages of implementing a book shop management system, including:

1. Efficient Inventory Management
2. Enhanced Sales Tracking
3. Improved Customer Management
4. Accurate Pricing
5. Streamlined Operations

In summary, a book shop management system can provide many benefits for bookshops, including efficient inventory management, enhanced sales tracking, improved customer management, accurate pricing, and streamlined operations.

**Disadvantage**

While a book shop management system offers numerous advantages, it's important to consider potential disadvantages as well. Here are a few:

1. Initial Cost and Implementation
2. Learning Curve
3. Technical Issues and Downtime
4. Dependency on Technology
5. Data Security and Privacy Concerns
6. Limited Customization

It's important to carefully assess these potential disadvantages against the benefits offered by a book shop management system before implementing it in a bookstore.

**Future Work**

The future of book shop management systems holds several possibilities for improvement and innovation. Here are some potential areas of future work:

1. **Integration with E-commerce Platforms:** As online book sales continue to grow, integrating book shop management systems with popular e-commerce platforms can enable bookstores to seamlessly manage both physical and online sales. This integration would allow for centralized inventory management, streamlined order processing, and synchronized data across multiple sales channels.
2. **Enhanced Data Analytics and Business Intelligence:** Future book shop management systems can further advance their data analytics capabilities to provide more in-depth insights into customer behavior, sales patterns, and market trends. Advanced analytics tools can help bookshops make data-driven decisions, optimize pricing strategies, and improve inventory management.
3. **Mobile and Cloud-based Solutions:** With the increasing use of mobile devices, book shop management systems can evolve to offer mobile applications that allow bookstore owners and staff to access and manage their store operations on the go. Cloud-based solutions can enable real-time data synchronization, facilitate remote access, and enhance collaboration among bookstore teams.
4. **Automation and Artificial Intelligence:** Implementing automation and artificial intelligence (AI) technologies can optimize various aspects of bookshop management. For instance, AI algorithms can analyze customer preferences to provide personalized book recommendations. Automation can handle routine tasks like inventory updates, reordering, and generating reports, freeing up time for bookstore staff to focus on customer service and strategic planning.
5. **Enhanced Customer Engagement:** Future book shop management systems can incorporate features that enhance customer engagement. For instance, integrating loyalty programs, personalized marketing campaigns, and customer feedback mechanisms can help bookshops build stronger relationships with their customers and improve customer satisfaction.
6. **Blockchain for Transparency and Authentication:** Blockchain technology can be utilized in book shop management systems to provide transparency and authenticity for book sales and author royalties. By utilizing blockchain, it becomes possible to track and verify the origin and ownership of books, ensuring fair compensation for authors and combating counterfeit book sales.

These are just a few potential avenues for future development in book shop management systems. As technology advances and new market demands arise, book shop management systems will likely continue to evolve to meet the changing needs of bookstores and their customers.

**Conclusion**

In conclusion, a book shop management system offers numerous benefits for bookstores, helping them streamline operations, improve customer service, and increase profitability. It automates inventory management, sales tracking, and customer management processes, saving time and reducing errors. The system provides accurate pricing, tracks sales data, and generates reports for better decision-making. Additionally, it enables personalized recommendations and targeted marketing to enhance customer satisfaction and loyalty. However, it's essential to consider potential disadvantages such as initial costs, learning curves, technical issues, and data security concerns. Each bookstore should carefully evaluate the specific needs and weigh the advantages against the potential drawbacks before implementing a book shop management system. Looking into the future, there are exciting possibilities for advancements in book shop management systems, including integration with e-commerce platforms, improved data analytics, mobile and cloud-based solutions, automation, AI integration, enhanced customer engagement, and blockchain technology for transparency and authentication. Overall, a well-implemented book shop management system can significantly contribute to the success and growth of a bookstore, allowing it to operate efficiently, deliver excellent customer experiences, and adapt to the evolving market trends in the book industry.