NIK BOOK STORE

Welcome To

NIK BOOK SHOP

kmrnikhil54@gmail.com
github.com/kumar-nikhilnishad

NIK BOOK STORE

This project involves designing and implementing a relational database to manage a bookstore's operations effectively. The database stores information about books, authors, customers, etc.

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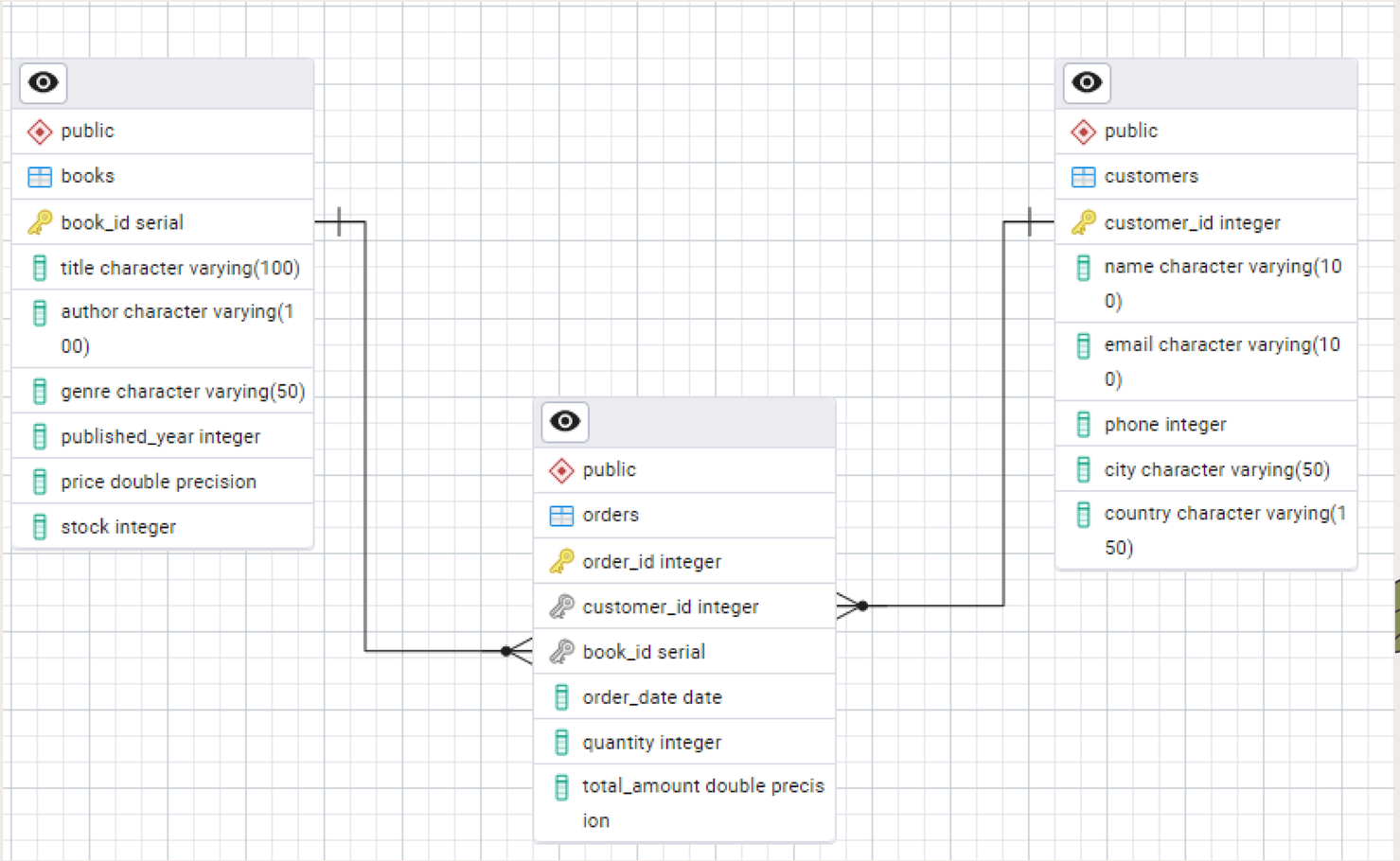
Here the ERD of Nik Book Store



NIK BOOK STORE

Retrieve all books in the "Fiction" genre

```sql
SELECT title, genre FROM books
WHERE genre = 'Fiction';
```

	title character varying (100)	genre character varying (50)
1	Customizable 24hour product	Fiction
2	Multi-layered optimizing migration	Fiction
3	Expanded analyzing portal	Fiction
4	Quality-focused multi-tasking challenge	Fiction
5	Implemented encompassing conglomerati...	Fiction
6	Optimized national process improvement	Fiction
7	Adaptive didactic interface	Fiction

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Find books published after the year 1950

```sql
SELECT * FROM books
WHERE published_year > 1950;
```

	book_id [PK] integer	title character varying (100)	author character varying (100)	genre character varying (50)	published_year integer	price double precision	stock integer
1	2	Persevering reciprocal knowledge user	Mario Moore	Fantasy	1971	35.8	19
2	4	Customizable 24hour product	Christopher Andrews	Fiction	2020	43.52	8
3	5	Adaptive 5thgeneration encoding	Juan Miller	Fantasy	1956	10.95	16
4	6	Advanced encompassing implementation	Bryan Morgan	Biography	1985	6.56	2
5	8	Persistent local encoding	Troy Cox	Science Fiction	2019	48.99	84
6	9	Optimized interactive challenge	Colin Buckley	Fantasy	1987	14.33	70
7	10	Ergonomic national hub	Samantha Ruiz	Mystery	2015	24.63	25

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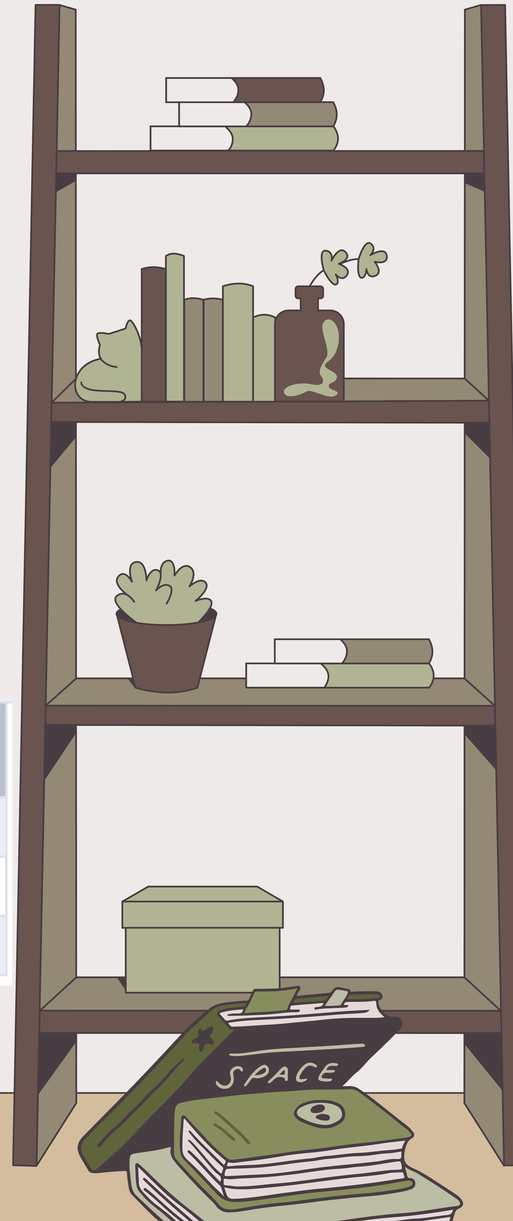
List all customers from the Canada

```
SELECT * FROM customers
WHERE Country = 'Canada';
```

	customer_id [PK] integer	name character varying (100)	email character varying (100)	phone integer	city character varying (50)	country character varying (150)
1	38	Nicholas Harris	christine93@perkins.com	1234567928	Davistown	Canada
2	415	James Ramirez	robert54@hall.com	1234568305	Maxwelltown	Canada
3	468	David Hart	stokesrebecca@gmail.com	1234568358	Thompsonfurt	Canada



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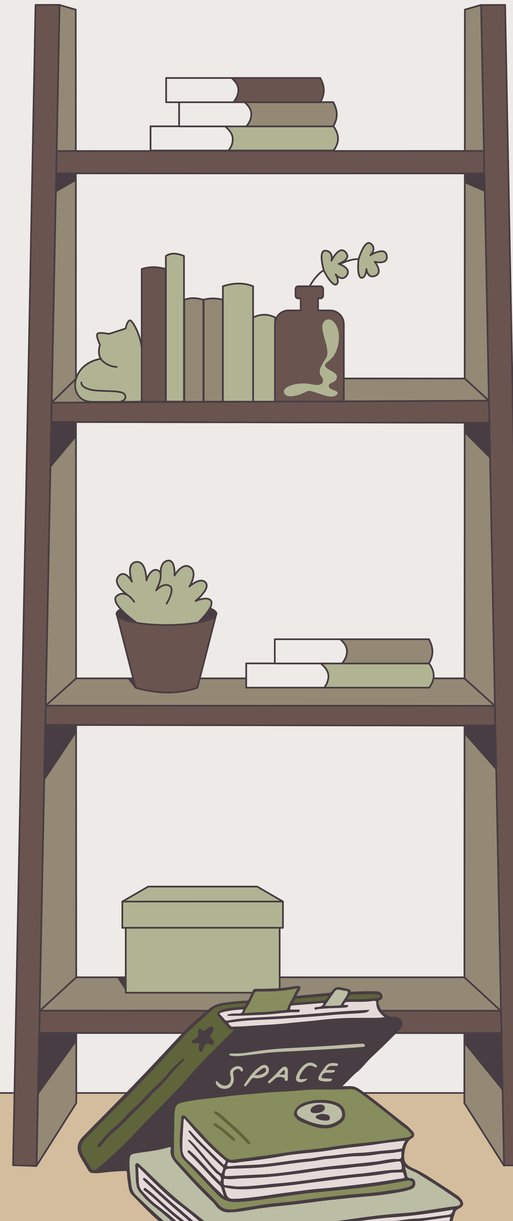
Show orders placed in November 2023

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

	order_id [PK] integer	customer_id integer	book_id integer	order_date date	quantity integer	total_amount double precision
1	4	433	343	2023-11-25	7	301.21
2	19	496	60	2023-11-17	9	316.26
3	75	291	375	2023-11-30	5	170.75
4	132	469	333	2023-11-22	7	194.32
5	137	474	471	2023-11-25	8	363.04
6	163	207	384	2023-11-23	3	101.76
7	182	129	293	2023-11-01	7	125.51



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Retrieve the total stock of books available

```
SELECT SUM(Stock) AS total_stock
FROM books;
```

	total_stock bigint
1	25056

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Find the details of the most expensive book

```
SELECT Title, MAX(price) AS max_price
FROM books
GROUP BY 1
ORDER BY 2 DESC
LIMIT 1;
```

	title character varying (100)	max_price double precision
1	Proactive system-worthy orchestration	49.98

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Show all customers who ordered more than 1 quantity of a book

```sql
SELECT Name, quantity
FROM
(
  SELECT customers.Name, orders.Quantity As quantity
  FROM
  customers
  JOIN
  orders
  ON
  customers.Customer_ID = orders.Order_ID
)
WHERE quantity > 1;
```

	name character varying (100)	quantity integer
1	Deborah Griffith	8
2	Crystal Clements	10
3	Susan Fuller	6
4	Jamie Ramirez	7
5	Marcus Murphy	7

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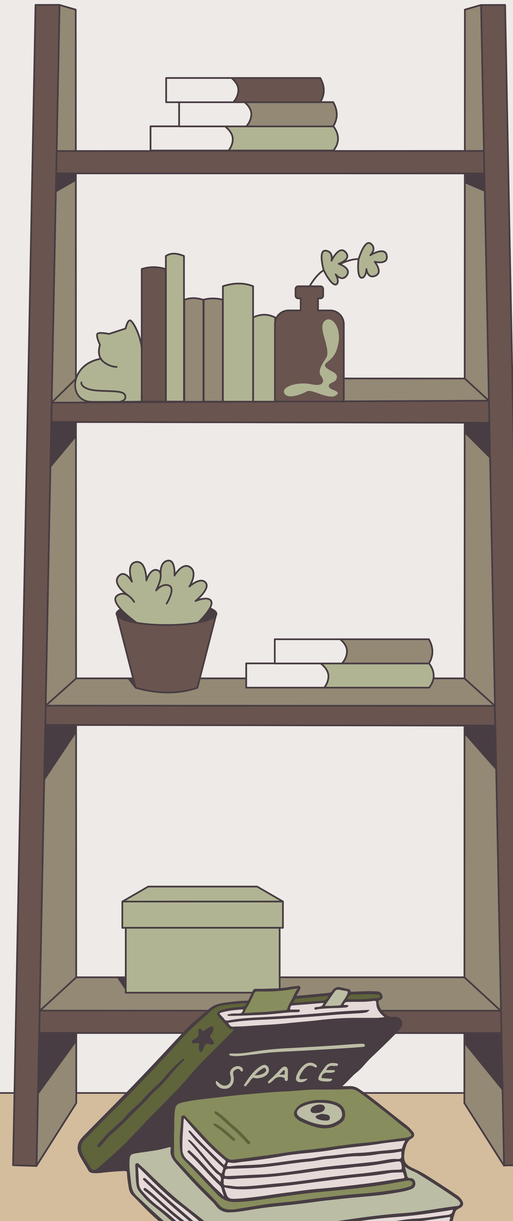
Retrieve all orders where the total amount exceeds $20

```sql
SELECT * FROM orders
WHERE total_amount > 20;
```

	order_id [PK] integer	customer_id integer	book_id integer	order_date date	quantity integer	total_amount double precision
1	1	84	169	2023-05-26	8	188.56
2	2	137	301	2023-01-23	10	216.6
3	3	216	261	2024-05-27	6	85.5
4	4	433	343	2023-11-25	7	301.21
5	5	14	431	2023-07-26	7	136.36
6	6	439	119	2024-10-11	5	249.4
7	7	195	467	2023-10-23	6	82.92



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List all genres available in the Books table

```
SELECT DISTINCT genre FROM books;
```

	genre character varying (50)
1	Romance
2	Biography
3	Mystery
4	Fantasy
5	Fiction
6	Non-Fiction
7	Science Fiction

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Find the book with the lowest stock

```
SELECT * FROM books
ORDER BY stock ASC
LIMIT 1;
```

	book_id [PK] integer	title character varying (100)	author character varying (100)	genre character varying (50)	published_year integer	price double precision	stock integer
1	44	Networked systemic implementation	Ryan Frank	Science Fiction	1965	13.55	0

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Calculate the total revenue generated from all orders

```sql
SELECT SUM(total_amount) AS revenue
FROM orders;
```

	revenue double precision
1	75628.66000000003

Advance Query

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Retrieve the total number of books sold for each genre

```
SELECT b.genre, SUM(o.quantity) AS book_sold
FROM books b
JOIN orders o
ON b.book_id = o.book_id
GROUP BY 1;
```

	genre character varying (50)	book_sold bigint
1	Romance	439
2	Biography	285
3	Mystery	504
4	Fantasy	446
5	Fiction	225
6	Non-Fiction	351
7	Science Fiction	447

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Find the average price of books in the "Fantasy" genre

```sql
SELECT AVG(Price) AS avg_price
FROM books
WHERE genre = 'Fantasy';
```

	avg_price double precision
1	25.981690140845064

Advance Query

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List customers who have placed at least 2 orders

```
SELECT c.name, o.customer_id, COUNT(o.order_id) AS order_count
FROM orders o
JOIN customers c
ON
o.customer_id = c.customer_id
GROUP BY 1,2
HAVING COUNT(o.order_id)>=2;
```

	name character varying (100)	customer_id integer	order_count bigint
1	Sarah Cameron	290	3
2	Levi Pierce	96	2
3	Christina Mitchell	24	2
4	Andrew Collins	59	3
5	John Wood	14	2
6	Justin Roberson	178	2
7	Jessica Mays	145	2
8	Stacey Flores	16	3
9	Kiara Blankenship MD	418	3
10	Justin Donaldson	376	2

Advance Query

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Find the most frequently ordered book

```
SELECT b.title, o.book_id, COUNT(o.order_id) AS order_count
FROM orders o
JOIN books b
ON
b.book_id = o.book_id
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 1;
```

	title character varying (100)	book_id integer	order_count bigint
1	Pre-emptive intangible adapter	491	4

Advance Query

NIK BOOK STORE

Show the top 3 most expensive books of 'Fantasy' Genre

```
SELECT * FROM books
WHERE genre = 'Fantasy'
ORDER BY price DESC
LIMIT 3;
```

	book_id [PK] integer	title character varying (100)	author character varying (100)	genre character varying (50)	published_year integer	price double precision	stock integer
1	240	Stand-alone content-based hub	Lisa Ellis	Fantasy	1957	49.9	41
2	462	Innovative 3rdgeneration database	Allison Contreras	Fantasy	1988	49.23	62
3	238	Optimized even-keeled analyzer	Sherri Griffith	Fantasy	1975	48.97	72

Advance Query

NIK BOOK STORE

Retrieve the total quantity of books sold by each author

```
SELECT b.author, SUM(o.quantity) AS book_sold
FROM books b
JOIN orders o
ON
b.book_id = o.book_id
GROUP BY 1;
```

	author character varying (100)	book_sold bigint
1	Jared Cortez	10
2	Tracy Parker	11
3	Taylor Wang	9
4	Cathy Knight	6
5	Bianca Matthews	3
6	Douglas Malone	6
7	James Alvarado	9
8	Betty Cross	6
9	Michael Hill	20

Advance Query

NIK BOOK STORE

List the cities where customers who spent over $30 are located

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

	city character varying (50)	total_amount double precision
1	Robinmouth	43.25
2	Rodriguezmouth	148.68
3	Jasonmouth	189.7
4	Frenchburgh	37.29
5	North Keith	216.6
6	Sanchezport	168.56
7	Lake Aaronstad	44.19

Advance Query

NIK BOOK STORE

Find the customer who spent the most on orders

```
SELECT c.name, c.customer_id, SUM(o.total_amount) AS total_spend
FROM customers c
JOIN orders o
ON
c.customer_id = o.customer_id
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 1;
```

	name character varying (100)	customer_id [PK] integer	total_spend double precision
1	Kim Turner	457	1398.9

Advance Query

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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 1;
```

	book_id [PK] integer	title character varying (100)	stock integer	order_quantity bigint	remaining_quantity bigint
1	87	Decentralized actuating analyzer	98	0	98
2	184	Enterprise-wide solution-oriented challenge	22	9	13
3	477	Distributed cohesive approach	17	13	4

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Conclusion

The Bookstore Management System successfully streamlines the management of book inventories, customer profiles, and order processing through a well-structured SQL database. By implementing efficient data storage and retrieval mechanisms, the system ensures accuracy in managing book availability, customer purchases, and transaction records.

Overall, this project demonstrates the practical application of database management principles, offering a scalable and reliable solution for bookstore operations.

Thanking You

Nikhil Kumar