

-- Basic Question

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 publised_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) 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 ASC  
LIMIT 1;
```

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

```
Select SUM(total_amount)
AS revenue from orders;
```

-- Advance Question

1) --Retrieve the total number of books sold for each genre
Select * from orders

```
Select b.genre, SUM(o.quantity) AS total_book_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 Avg_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 c.customer_id = o.customer_id
GROUP BY o.customer_id, c.name
HAVING COUNT(o.order_id) >= 2;
```

4) --Find the most frequently ordered genre
Select b.genre , COUNT(*) AS book_count
FROM orders o
JOIN books b ON o.book_id = b.book_id
GROUP BY b.genre
ORDER BY book_count DESC
LIMIT 1;

5) --Show the top 3 most expensive books of 'Fantasy' Genre

```
Select genre, price
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(quantity) AS book_total
```

```
FROM orders o
JOIN books b ON b.book_id = o.book_id
GROUP BY b.author;
```

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

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

8) --Find the customer who spent the most on orders

```
Select * from customers
Select * from orders
```

```
Select c.customer_id, c.name , SUM(total_amount) AS total_spent
FROM customers c JOIN orders o ON c.customer_id = o.customer_id
GROUP BY c.customer_id , c.name
ORDER BY total_spent DESC;
```

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;
```