Problem 3: Bookstore Inventory
Schema:
● Books(book_id INT, title VARCHAR(100), price DECIMAL(8,2), pub_year INT)
● Sales(sale_id INT, book_id INT, quantity INT, sale_date DATE)
Questions:
1. Create tables with suitable constraints.
2. Insert 4 books and 5 sales records.

3. Display titles of books sold in the year 2024.
4. Show total sales revenue for each book using SUM(price * quantity).
5. Find the title of the most sold book using ORDER BY and LIMIT.

```
CREATE TABLE Books (
    book_id INT PRIMARY KEY,
    title VARCHAR(100) NOT NULL,
    price DECIMAL(8,2) CHECK (price >= 0),
    pub_year INT
);

CREATE TABLE Sales (
    sale_id INT PRIMARY KEY,
    book_id INT,
    quantity INT CHECK (quantity > 0),
    sale_date DATE,
    FOREIGN KEY (book_id) REFERENCES Books(book_id)
);

-- Insert Books
INSERT INTO Books VALUES
(1, 'The Alchemist', 350.00, 2015),
(2, 'Atomic Habits', 499.00, 2020),
(3, 'Sapiens', 599.00, 2018),
(4, 'Deep Work', 450.00, 2019);

-- Insert Sales
INSERT INTO Sales VALUES
(101, 1, 3, '2024-01-10'),
(102, 2, 5, '2024-02-15'),
(103, 3, 2, '2023-12-20'),
(104, 1, 4, '2024-03-05'),
(105, 4, 6, '2024-04-01');

-- 3. Display Titles of Books Sold in the Year 2024
SELECT DISTINCT b.title
FROM Books b
JOIN Sales s ON b.book_id = s.book_id
WHERE YEAR(s.sale_date) = 2024;
```

```sql
-- 4. Show Total Sales Revenue for Each Book Using SUM(price * quantity)
SELECT b.title, SUM(b.price * s.quantity) AS total_revenue
FROM Books b
JOIN Sales s ON b.book_id = s.book_id
GROUP BY b.book_id, b.title;

--  5. Find the Title of the Most Sold Book Using ORDER BY and LIMIT
SELECT b.title, SUM(s.quantity) AS total_quantity
FROM Books b
JOIN Sales s ON b.book_id = s.book_id
GROUP BY b.book_id, b.title
ORDER BY total_quantity DESC
LIMIT 1;
```