**Table Schema: Book Table**

Let's create a new table called **Book** for performing various CRUD and advanced operations.

**Book Table Structure:**

| **BookID (PK)** | **Title** | **Author** | **Genre** | **Price** | **PublishedYear** | **Stock** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | The Alchemist | Paulo Coelho | Fiction | 300 | 1988 | 50 |
| 2 | Sapiens | Yuval Noah Harari | Non-Fiction | 500 | 2011 | 30 |
| 3 | Atomic Habits | James Clear | Self-Help | 400 | 2018 | 25 |
| 4 | Rich Dad Poor Dad | Robert Kiyosaki | Personal Finance | 350 | 1997 | 20 |
| 5 | The Lean Startup | Eric Ries | Business | 450 | 2011 | 15 |

**Tasks:**

**1. CRUD Operations:**

1. **Add a new book:**
   * Insert a book titled **"Deep Work"** by **Cal Newport**, Genre **Self-Help**, Price **420**, Published Year **2016**, Stock **35**.
2. **Update book price:**
   * Increase the **price** of all **Self-Help** books by **50**.
3. **Delete a book:**
   * Remove the book with **BookID = 4** (Rich Dad Poor Dad).
4. **Read all books:**
   * Display all books sorted by **Title** in **ascending order**.

**2. Sorting and Filtering:**

1. **Sort by price:**
   * List books sorted by **Price** in **descending order**.
2. **Filter by genre:**
   * Display all books belonging to the **Fiction** genre.
3. **Filter with AND condition:**
   * List all **Self-Help** books priced **above 400**.
4. **Filter with OR condition:**
   * Retrieve all books that are either **Fiction** or published **after 2000**.

**3. Aggregation and Grouping:**

1. **Total stock value:**
   * Calculate the **total value of all books in stock** (Price \* Stock).
2. **Average price by genre:**
   * Calculate the **average price** of books grouped by **Genre**.
3. **Total books by author:**
   * Count the **number of books** written by **Paulo Coelho**.

**4. Conditional and Pattern Matching:**

1. **Find books with a keyword in title:**

* List all books whose **Title** contains the word **"The"**.

1. **Filter by multiple conditions:**

* Display all books by **Yuval Noah Harari** priced **below 600**.

1. **Find books within a price range:**

* List books priced **between 300 and 500**.

**5. Advanced Queries:**

1. **Top 3 most expensive books:**
   * Display the **top 3 books** with the **highest price**.
2. **Books published before a specific year:**
   * Find all books published **before the year 2000**.
3. **Group by Genre:**
   * Calculate the **total number of books** in each **Genre**.
4. **Find duplicate titles:**
   * Identify any books having the **same title**.

**6. Join and Subqueries (if related tables are present):**

1. **Author with the most books:**
   * Find the **author** who has written the **maximum number of books**.
2. **Oldest book by genre:**
   * Find the **earliest published book** in each genre.