
□ Problem Statement – Library System

A library wants to keep track of books. Each book has a title, author, genre, year of publication, and availability status.

1. Create Database & Collection

```
use libraryDB

db.books.insertMany([
  { title: "The Alchemist", author: "Paulo Coelho", genre: "Fiction", year: 1988,
    available: true },
  { title: "Clean Code", author: "Robert C. Martin", genre: "Programming", year: 2008,
    available: true },
  { title: "The Pragmatic Programmer", author: "Andrew Hunt", genre: "Programming",
    year: 1999, available: false },
  { title: "Sapiens", author: "Yuval Noah Harari", genre: "History", year: 2011,
    available: true },
  { title: "Atomic Habits", author: "James Clear", genre: "Self-Help", year: 2018,
    available: false }
]);
```

2. Exercises

Basic Queries

1. Show all books in the collection.
2. Display only title and author of all books.
3. Find all books that are currently available.
4. Find all books in the "Programming" genre.
5. Find books published after the year 2010.

Updates

6. Mark "Atomic Habits" as available.
7. Update the year of publication for "The Alchemist" to 1993.

Deletes

8. Delete one book by "Andrew Hunt".
9. Delete all books in the "History" genre.

Aggregations

10. Count how many books exist in each genre.
 11. Find the earliest published book.
 12. Show the average publication year of all books.
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