

## **Problem Statement: Library Management System**

You need to implement a simple library management system using **classes** and **data structures** in Python.

### **Requirements:**

1. Create a Book class with the following attributes:
  - o title (string)
  - o author (string)
  - o isbn (string)
2. Create a Library class that:
  - o Stores books using a **dictionary**, where the key is the ISBN and the value is the Book object.
  - o Provides the following methods:
    - add\_book(book: Book): Adds a new book to the library.
    - remove\_book(isbn: str): Removes a book using its ISBN.
    - search\_by\_title(title: str): Returns a **list** of books matching the title.
    - display\_books(): Displays all books in the library.
3. Demonstrate the functionality by:
  - o Adding at least three books.
  - o Searching for a book by title.
  - o Removing a book and displaying the updated list.