

## Assignment: Library Book Management System

### Description:

You are to create a simple library book management system. The system should allow for:

1. **Adding books:** Books should have a title, author, and ISBN (International Standard Book Number).
2. **Borrowing books:** Books can be borrowed by their ISBN.
3. **Returning books:** Borrowed books can be returned by their ISBN.
4. **Listing available books:** The system should list all books that are currently available.
5. **Listing borrowed books:** The system should list all books that are currently borrowed.

### Specifications:

- The system should maintain a list of books and their borrowing status.
- Implement the system as a Library class.
- Ensure proper error handling (e.g., book not found, book already borrowed).
- The system should operate in memory (no file storage required for this assignment).

### Marking Scheme:

- **20% - Book Class:**
  - Correct implementation of the Book class with title, author, isbn, and borrowed attributes.
  - Correct implementation of the \_\_str\_\_ method.
- **50% - Library Class:**

- Correct implementation of `add_book`, `borrow_book`, `return_book`, `list_available_books`, and `list_borrowed_books` methods.
  - Proper handling of book borrowing and returning status.
  - Correctly managing the book list.
  - Proper return values for borrow and return functions.
- **20% - Error Handling:**
    - Handling cases where a book is not found (returning `None`).
    - Handling cases where a book is already borrowed or returned (returning `False`).
- **10% - Code Quality:**
    - Readability, comments, and proper code structure.
    - Adherence to Python coding conventions.
    - Correct usage of lists and booleans.
    - Correct execution of the test function.