**Angular Assignment: Detailed Requirements for Books Library Application**

**1. Setup & Configuration:**

* Environment Setup:
  + Install the latest version of Node.js and Angular CLI.
  + Initialize a new Angular project named "books-library" using the Angular CLI.
* Library & Module Integration:
  + Incorporate HttpClientModule to facilitate API communication.
  + Integrate ReactiveFormsModule for reactive form management.

**2. Components Creation:**

a) BooksListComponent:

* Display an organized list of books, showing a short description (utilize the ShortenPipe), title, and author.
* Each book should have a clickable link or button leading to its detailed view.

b) BookDetailsComponent:

* Detailed view should present the complete book information, including its ISBN and the full description.
* Add a "Back" button or link to navigate back to the books list.

c) AddBookComponent:

* Implement a reactive form with fields:
  + Title (Text input)
  + Author (Text input)
  + Description (Textarea)
  + Published Year (Number input)
  + ISBN (Text input)
* Each field should have appropriate validators. For instance:
  + All fields should be mandatory.
  + The year should be a four-digit number.
  + ISBN could be validated against a general pattern.
* A "Submit" button should be present to submit the form, which remains disabled until the form is valid.
* On form submission, invoke the service to save the book's details and navigate back to the book's listing page with an appropriate success message.

**3. Services & Data Handling:**

a) BookService:

* Methods to include:
  + getAllBooks(): Retrieve a list of all books.
  + getBookById(id: number): Fetch a specific book by its ID.
  + addBook(book: Book): Save a new book to the collection.
* Utilize HttpClient to communicate with the backend or mock backend.
* Implement error handling, possibly returning user-friendly error messages.

**4. Routing:**

* Properly set up and configure Angular Routers.
* Routes to set:
  + /books: Displays BooksListComponent.
  + /book/:id: Displays BookDetailsComponent – the ID parameter indicates which book's details to show.
  + /add-book: Displays AddBookComponent for adding a new book.

**5. Custom Pipes:**

a) ShortenPipe:

* It should truncate text based on a defined character limit, appending an ellipsis ("...") to the end.
* Use this pipe in the BooksListComponent for shortening long book descriptions.

b) YearHighlightPipe:

* A pipe that conditionally styles or flags books published in the current year.
* Integrate this pipe in both list and detail views.

**6. Styling & UI/UX:**

* Ensure a user-friendly interface and experience.
* Utilize a CSS framework or library (like Angular Material, Bootstrap, or Tailwind CSS) to enhance the presentation.
* The design should be responsive, adjusting seamlessly to different screen sizes.

**7. Bonus Features (Optional):**

a) Search & Filter:

* Integrate a real-time search functionality in the BooksListComponent.
  + As users type in a search box, filter the books list based on their input.
  + Leverage the reactive form's valueChanges observable for this real-time search.

b) Edit Book:

* Add functionality to edit existing books.
  + Add an "Edit" button in the BookDetailsComponent.
  + This should navigate to a form similar to the AddBookComponent, but pre-filled with the book's current details.

Evaluation Criteria:

1. Functionality: Does the application function as intended without errors?
2. Code Organization: Is the code well-structured, modular, and organized?
3. Reactive Forms Implementation: Proper creation, validation, and handling of reactive forms.
4. API Communication: Proper implementation of CRUD operations, handling of asynchronous operations, and error management.
5. UI/UX: User-friendly design, responsiveness, and proper use of styles and layouts.
6. Bonus: Implementation of any additional features beyond the main requirements.

**Code submit ion**

* Upload application into git hub, and share with me the url of your repository

**Sample Data for Books**

[

{

"id": 1,

"title": "To Kill a Mockingbird",

"author": "Harper Lee",

"description": "The unforgettable novel of a childhood in a sleepy Southern town and the crisis of conscience that rocked it.",

"publishedYear": 1960,

"isbn": "978-0061120084"

},

{

"id": 2,

"title": "1984",

"author": "George Orwell",

"description": "A startling and haunting vision of the world, 1984 is powerful, terrifying, and unforgettable.",

"publishedYear": 1949,

"isbn": "978-0451524935"

},

{

"id": 3,

"title": "Pride and Prejudice",

"author": "Jane Austen",

"description": "A story about the manners and matrimonial machinations among the British middle class at the end of the 18th century.",

"publishedYear": 1813,

"isbn": "978-1503290563"

},

{

"id": 4,

"title": "The Catcher in the Rye",

"author": "J.D. Salinger",

"description": "A story about a teenage boy who is confused, angry, and rebellious. He wants to protect the innocent and children from the phoniness and hypocrisy of the adult world.",

"publishedYear": 1951,

"isbn": "978-0316769174"

},

{

"id": 5,

"title": "Brave New World",

"author": "Aldous Huxley",

"description": "A vision of a future where life is pain-free but meaningless. It explores the dehumanizing effects of technology and uncontrolled desire.",

"publishedYear": 1932,

"isbn": "978-0060850524"

}

]