# **DATA-236 Sec 12 - Distributed Systems for Data Engineering**

# **HOMEWORK 4**

1. **React**

**Create a Book Management App where users can add, update, and delete books.**

1. **Home Page**

**Write the necessary code to creat the ‘Home.jsx’ component which will display all the books.**

**The Home component should be rendered when the user is on the root route ‘/’.**

**Code: Home.jsx**

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1. **Add a New Book**

**Write the necessary code to create the ‘CreateBook.jsx’ component. The component should be rendered when the user is on the ‘/create’ route. The component should accept props (similar to demo) to add the new book and have the following:**

* **An input field for entering the Book Title.**
* **An input field for entering the Author Name.**
* **A submit button labeled "Add Book".**
* **When the user clicks the Add book button:**
* **A new book should be added to the book list with an auto-incremented book ID.**
* **The user should be redirected to the home page to see the updated book list.**

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**Code: CreateBook.jsx**

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1. **Update Book**

**Write the necessary code to create the ‘UpdateBook.jsx’ component. The component should be rendered when the user is on the ‘/update’ route.**

**The component should accept props (similar to demo) to update the new book and have the following:**

* + **An input field for Book Title.**
  + **An input field for Author Name.**
  + **A submit button labeled "Update Book".**

**When the user clicks the Update Book button the book within context should be updated and the user should be redirected to the home page showing updated book list.**

**Code: UpdateBook.jsx**

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1. **Delete the Book**

**Write the necessary code to create the ‘DeleteBook.jsx’ component. The component should be rendered when the user is on the ‘/delete’ route.**

**The component should accept props (similar to demo) to delete a book and have the following:**

* **A button labeled "Delete Book".**

**When the user clicks the Delete Book button the book in context should be deleted and the user should be redirected to the home page showing the updated book list.**

**Code: DeleteBook.jsx**

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1. **For all the above questions make sure to:**

* **Pass props for the Create, Update, and Delete components**
* **Use hooks like useState and useEffect wherever necessary**
* **User React-Router-Dom for routing.**

**Code: App.js**

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1. **MySQL**

**In this question, you will apply the concepts learned in class to build a simple CRUD (Create, Read, Update, Delete) application using Node.js and MySQL using Sequelize. Create an appropriate book Model, *View(Optional*), and Controller.**

**You are required to create a Book Management System that allows users to:**

* **Add a new book (POST)**

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* **View all books (GET)**

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* **View a book by ID (GET)**

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* **Update book details (PUT)**

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* **Delete a book (DELETE)**

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**Screenshot:**

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**After deleting book with Id-1**

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**Create a MySQL database named book\_db with a table called books for this task.**

**Database Screenshots:**

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**Folder structure:**

**Screenshot:**

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