

Day 1: React Basics & Component Fundamentals

Title: “BookVerse: Welcome Page and Featured Books Section”

User Story

As a **visitor**,

I want to view a list of featured books on the home page,
So that I can get an overview of popular books available.

Acceptance Criteria

- Initialize a React app using `create-react-app`.
- Create a BookCard functional component displaying book title, author, and price.
- Create a BookList parent component that renders multiple BookCard components using **props**.
- Use **state** to manage and toggle between two view modes – “Grid” and “List”.
- Handle **button click events** to switch layout.
- Demonstrate **controlled components** with a simple search input box that filters the displayed books.

Technical Focus

- React overview, JSX, Virtual DOM
- Functional Components, Props, and State
- Event Handling, Controlled Components
- Time Estimate:  60 mins

Day 2: Component Composition & Styling

Title: “BookVerse: Author Details and Styling the Components”

User Story

As a **user**,
I want to click on a book and view its author details,
So that I can learn more about the author and similar works.

Acceptance Criteria

- Add an AuthorInfo class component that displays author bio and top 3 books.
- Implement **refs** (Uncontrolled Components) for focusing on the search input when a button is clicked.
- Use **PropTypes** for validating props in BookCard.
- Demonstrate **component lifecycle methods** (e.g., componentDidMount to log data loading).
- Apply **CSS styling and Bootstrap** for layout (cards, grid).
- Use **composable components** – e.g., combine BookCard, AuthorInfo, and BookList.

Technical Focus

- Class Components, PropTypes
- Refs (Uncontrolled Components), Lifecycle methods
- Bootstrap integration, CSS styling
- Component composition

- Time Estimate:  60 mins
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Day 3: Routing and Backend Integration

Title: “BookVerse: Explore & Navigate Between Pages”

User Story

As a **reader**,

I want to navigate between the Home page and Book Details page,
So that I can explore more about a book and see real-time book data.

Acceptance Criteria

- Use **json-server** to serve a local backend with books.json.
- Fetch book data using `fetch()` or `axios`.
- Configure **React Router** for navigation between `/home` and `/book/:id`.
- Implement **routing transitions** (simple fade in/out using CSS or a library).
- Create a **Higher Order Component (HOC)** for loading spinner functionality.
- Add a **Render Props** component for reusable UI elements (e.g., loading status or user greeting).

Technical Focus

- React Router (`BrowserRouter`, `Routes`, `Link`, `useParams`)
- Routing transitions
- json-server integration

- Higher Order Components, Render Props
 - Time Estimate:  60 mins
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Day 4: Form Handling & State Management Pattern

Title: “BookVerse: Add New Book and Manage Data Flow”

User Story

As an **admin**,

I want to add new books through a form with validation,
So that I can expand the book collection easily.

Acceptance Criteria

- Use **Formik** for form handling and **Yup** for validation (title, author, price required).
- Implement **Flux pattern**:
 - Create **Actions** (Add Book), **Dispatcher**, and **Store**.
 - Reflect the newly added book on the home page.
- Demonstrate **Dependency Injection** for modular store management.
- Explain **component lifecycle** within the Flux context (data flow).
- Wrap up by showcasing SPA behavior – smooth navigation without page reloads.

Technical Focus

- Formik & Yup (Form Handling + Validation)

- Flux Architecture (Action, Dispatcher, Store)
 - Dependency Injection
 - SPA Lifecycle & Data Flow
 - Time Estimate: ⏳ 60 mins
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Bonus Integration (Optional After Day 4)

If learners have time:

- Add pagination and filtering logic using context or Redux (as extension).
 - Convert one class component into functional using **Hooks** for better understanding.
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Summary Table

Day	Theme / Focus	User Goal	Key Concepts	Outcome
Day 1	React Fundamentals	View Featured Books	JSX, Props, State, Controlled Components	Basic UI with Search and Layout Toggle
Day 2	Component Styling & Composition	View Author Details	PropTypes, Lifecycle, Refs, Bootstrap	Styled Book Cards + Author Info
Day 3	Routing & Data Integration	Navigate Between Pages	json-server, Router, HOC, Render Props	Multi-Page Navigation with Data

Day 4	Form & Data Management	Add New Books	Formik, Yup, Flux, Dependency Injection	Validated Add Book Form + Data Flow
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