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## Practice 2 – React :

### Title

Library Management UI with Search, Add, and Remove Book Functionality.

### Objective

Build an interactive library management interface using React that allows users to view a list of books and perform actions like searching, adding, and removing books. This task strengthens your understanding of state management, event handling, and dynamic rendering in React.

### Task Description

Create a React-based UI that displays a list of books (each with a title and author). Add a search input box to filter books by title or author as the user types. Provide an input form to add new books to the list, and include a remove button next to each book to delete it from the list. All actions (searching, adding, removing) should work dynamically without reloading the page, demonstrating React's ability to update the UI based on state changes.

# Code

## App.jsx-

```
import React, { useState } from "react"; import
"./App.css";
```

```
function App() {
  // Initial list of books  const [books,
setBooks] = useState([
  { title: "1984", author: "George Orwell" },
  { title: "The Great Gatsby", author: "F. Scott Fitzgerald" },
  { title: "To Kill a Mockingbird", author: "Harper Lee" },
]);
```

```
  // States for search and new book inputs  const
[searchTerm, setSearchTerm] = useState("");  const
[newTitle, setNewTitle] = useState("");  const
[newAuthor, setNewAuthor] = useState(""); // Add
```

```

a new book const addBook = () => { if
(newTitle.trim() && newAuthor.trim()) {
    setBooks([...books, { title: newTitle.trim(), author:
newAuthor.trim() }]);    setNewTitle("");
setNewAuthor("");
}
};

// Remove a book  const removeBook = (index) => {
const updatedBooks = books.filter((_, i) => i !== index);
setBooks(updatedBooks);
};

// Filter books based on search term
const filteredBooks = books.filter((book) =>
`${book.title}
${book.author}`.toLowerCase().includes(searchTerm.toLowerCase())
);

return (
<div className="container">

```

```
<h2>Library Management</h2>
```

```
{/* Search Box */}
```

```
<input      className="search-box"
type="text"    placeholder="Search by title or
author"      value={searchTerm}    onChange={(e)
=> setSearchTerm(e.target.value)}

/>
```

```
{/* Add Book Form */}
```

```
<div className="add-form">

  <input      type="text"
placeholder="New book title"
value={newTitle}
onChange={(e) =>
setNewTitle(e.target.value)}

/>
```

```
      <input      type="text"      placeholder="New
book author"      value={newAuthor}
onChange={(e) => setNewAuthor(e.target.value)}

/>
```

```
      <button onClick={addBook}>Add Book</button>

</div>
```

```
{/* Books List */}
```

```
<div>
```

```
  {filteredBooks.map((book, index) => (
```

```
    <div key={index} className="book">
```

```
      <div>
```

```
        <strong>{book.title}</strong> by {book.author}
```

```
      </div>
```

```
      <button onClick={() => removeBook(index)}>Remove</button>
```

```
    </div>
```

```
  )))
```

```
</div>
```

```
</div>
```

```
);
```

```
}
```

```
export default App;
```

### **App.css-**

```
.container { max-width:  
600px; margin: 20px auto;  
font-family: Arial, sans-serif;  
border: 1px solid #ccc;  
padding: 20px;  
}
```

```
h2 { margin-bottom:  
15px; }
```

```
.search-box { width:  
100%; padding: 8px;  
margin-bottom: 10px;
```

```
border: 1px solid #ccc;  
border-radius: 3px;  
box-sizing: border-box;  
}
```

```
.add-form { display:  
flex; gap: 5px;  
margin-bottom: 15px;  
}
```

```
.add-form input {  
flex: 1;  
padding: 8px;  
border: 1px solid  
#ccc; border-  
radius: 3px;  
}
```

```
.add-form button {  
padding: 8px 12px;
```

```
background-color: #f2f2f2;
```

```
border: 1px solid #ccc;
```

```
cursor: pointer;
```

```
}
```

```
.book { display: flex; justify-
```

```
content: space-between; align-
```

```
items: center; border: 1px solid
```

```
#221a1a; padding: 10px;
```

```
margin-bottom: 5px; border-
```

```
radius: 3px; background-color:
```

```
#1a1111;
```

```
}
```

```
.book strong { font-
```

```
weight: bold;
```

```
}
```



```
.book button {  
  
background: #2c1f1f;  
  
border: 1px solid #ccc;  
  
padding: 5px 10px;  
  
cursor: pointer;  
  
}
```

**Output-**

## Library Management

Search by title or author

New book title

New book author

Add Book

**1984** by George Orwell

Remove

**The Great Gatsby** by F. Scott Fitzgerald

Remove

**To Kill a Mockingbird** by Harper Lee

Remove