

 Marwadi University Marwadi Chandarana Group 	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Subject: Advanced Web Technology	Aim: Create a react application to perform CRUD operations with Firebase.	
Task:- 1	Date:- 12-04-2025	Enrollment No:- 92200133003

CODE :

addBook.jsx

```
import React, { useState } from "react";
import { Button, Form, InputGroup } from "react-bootstrap";
import { bookService } from "../Services/firebase-services";
const AddBook = () => {
  const [formData, setformData] = useState({
    title: "",
    author: "",
    status: "",
  });
  const handleSubmit = (e) => {
    e.preventDefault();
    addBook();
  };
  const addBook = () => {
    const newBook = {
      title: formData.title,
      author: formData.author,
      status: formData.status,
    };
    var ret = bookService.addBook(newBook);
    console.log(ret);
  };
  const handleChange = (e) => {
    const { name, value } = e.target;
    setformData((prevData) => ({ ...prevData, [name]: value }));
    console.log(formData);
  };
  return (
    <div className="p-4 box">
      <Form onSubmit={handleSubmit}>
        <Form.Group>
          <InputGroup>
            <InputGroup.Text id="formBookTitle">Title</InputGroup.Text>
            <Form.Control
              name="title"
              type="text"
              placeholder="Book Title"
              value={formData.title}
              onChange={handleChange}
            ></Form.Control>
          </InputGroup>
        </Form.Group>
        <Form.Group>
          <InputGroup>
            <InputGroup.Text id="formBookAuthor">Author</InputGroup.Text>
            <Form.Control
              name="author"
              type="text"
              placeholder="Book Author"
              value={formData.author}
              onChange={handleChange}
            ></Form.Control>
          </InputGroup>
        </Form.Group>
        <Form.Group>
          <InputGroup>
            <InputGroup.Text id="formBookStatus">Status</InputGroup.Text>
            <Form.Select
              aria-label="Default select example"
              onChange={handleChange}
              name="status"
            >
              <option>Open this select menu</option>
              <option value="Available">Available</option>
              <option value="Not Available">Not Available</option>
            </Form.Select>
          </InputGroup>
        </Form.Group>
      </Form>
    </div>
  );
};
```

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```

    </InputGroup>
  </Form.Group>
  <Button variant="primary" type="submit">
    Add
  </Button>
</Form>
</div>
);
};

export default AddBook;

```

ListBook.jsx

```

import React, { useEffect, useState } from "react";
import { bookService } from "../Services/firebase-services";
import "../ListBooks.css";

const BookManagement = () => {
  const [books, setBooks] = useState([]);
  const [showModal, setShowModal] = useState(false);
  const [currentBook, setCurrentBook] = useState({ id: "", title: "", author: "", status: "Available" });
  const [newBook, setNewBook] = useState({ title: "", author: "", status: "Available" });

  useEffect(() => {
    getBooks();
  }, []);

  const getBooks = async () => {
    const data = await bookService.getAllBooks();
    const newdata = data.docs.map((doc) => ({ ...doc.data(), id: doc.id }));
    setBooks(newdata);
  };

  const handleDelete = async (id) => {
    await bookService.deleteBook(id);
    setBooks(books.filter((book) => book.id !== id));
  };

  const handleUpdateClick = (book) => {
    setCurrentBook(book);
    setShowModal(true);
  };


  const handleUpdate = async (e) => {
    e.preventDefault();
    await bookService.updateBook(currentBook.id, {
      title: currentBook.title,
      author: currentBook.author,
      status: currentBook.status,
    });
    setShowModal(false);
    getBooks();
  };

  const handleCurrentBookChange = (e) => {
    const { name, value } = e.target;
    setCurrentBook({ ...currentBook, [name]: value });
  };

  const handleNewBookChange = (e) => {
    const { name, value } = e.target;
    setNewBook({ ...newBook, [name]: value });
  };

  const handleAddBook = async (e) => {
    e.preventDefault();
    if (!newBook.title || !newBook.author) {
      alert("Please fill in all fields");
      return;
    }
    await bookService.addBook(newBook);
    setNewBook({ title: "", author: "", status: "Available" });
    getBooks();
  };

```

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```

};

return (
  <div className="book-management">
    <div className="header">
      <h1>Book Management System</h1>
    </div>

    <div className="container">
      <div className="add-book-section">
        <h2>Add New Book</h2>
        <form onSubmit={handleAddBook} className="add-book-form">
          <div className="form-group">
            <label htmlFor="title">Title</label>
            <input
              type="text"
              id="title"
              name="title"
              value={newBook.title}
              onChange={handleNewBookChange}
              placeholder="Enter book title"
              required
            />
          </div>

          <div className="form-group">
            <label htmlFor="author">Author</label>
            <input
              type="text"
              id="author"
              name="author"
              value={newBook.author}
              onChange={handleNewBookChange}
              placeholder="Enter author name"
              required
            />
          </div>

          <div className="form-group">
            <label htmlFor="status">Status</label>
            <select
              id="status"
              name="status"
              value={newBook.status}
              onChange={handleNewBookChange}
            >
              <option value="Available">Available</option>
              <option value="Not Available">Not Available</option>
            </select>
          </div>

          <button type="submit" className="btn btn-add">Add Book</button>
        </form>
      </div>

      <div className="book-list-section">
        <h2>Book Collection</h2>
        <div className="table-container">
          <table className="book-table">
            <thead>
              <tr>
                <th>Sr. No.</th>
                <th>Title</th>
                <th>Author</th>
                <th>Status</th>
                <th>Actions</th>
              </tr>
            </thead>
            <tbody>
              {books.length > 0 ? (
                books.map((book, index) => (
                  <tr key={book.id}>
                    <td>{index + 1}</td>

```

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```

<td>{book.title}</td>
<td>{book.author}</td>
<td>
  <span className={`status ${book.status === "Available" ? "available" : "not-available"}`}>
    {book.status}
  </span>
</td>
<td>
  <div className="action-buttons">
    <button
      className="btn btn-update"
      onClick={() => handleUpdateClick(book)}
    >
      Update
    </button>
    <button
      className="btn btn-delete"
      onClick={() => handleDelete(book.id)}
    >
      Delete
    </button>
  </div>
</td>
</tr>
))
): (
  <tr>
    <td colSpan="5" className="no-books">No books available</td>
  </tr>
)
</tbody>
</table>
</div>
</div>
</div>

{/* Update Modal */}
{showModal && (
  <div className="modal-overlay">
    <div className="modal">
      <div className="modal-header">
        <h3>Update Book</h3>
        <button className="close-btn" onClick={() => setShowModal(false)}>×</button>
      </div>
      <div className="modal-body">
        <form onSubmit={handleUpdate}>
          <div className="form-group">
            <label htmlFor="update-title">Title</label>
            <input
              type="text"
              id="update-title"
              name="title"
              value={currentBook.title}
              onChange={handleCurrentBookChange}
              required
            />
          </div>
          <div className="form-group">
            <label htmlFor="update-author">Author</label>
            <input
              type="text"
              id="update-author"
              name="author"
              value={currentBook.author}
              onChange={handleCurrentBookChange}
              required
            />
          </div>
          <div className="form-group">
            <label htmlFor="update-status">Status</label>
            <select
              id="update-status"
              name="status"

```

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```

        value={currentBook.status}
        onChange={handleCurrentBookChange}
      >
        <option value="Available">Available</option>
        <option value="Not Available">Not Available</option>
      </select>
    </div>
    <div className="modal-footer">
      <button type="button" className="btn btn-cancel" onClick={() => setShowModal(false)}>
        Cancel
      </button>
      <button type="submit" className="btn btn-confirm">
        Update
      </button>
    </div>
  </form>
</div>
</div>
</div>
</div>
  )}
</div>
);
};

```

export default BookManagement;

firebaseServices.jsx

```

import { db } from "../firebase-config";
import { addDoc, collection, getDocs, doc, deleteDoc, updateDoc } from "firebase/firestore";

const bookCollectionRef = collection(db, "books");

export const bookService = {
  getAllBooks: () => {
    return getDocs(bookCollectionRef);
  },
  addBook: (newBook) => {
    return addDoc(bookCollectionRef, newBook);
  },
  deleteBook: async (id) => {
    const bookRef = doc(db, "books", id);
    await deleteDoc(bookRef);
  },
  updateBook: async (id, updatedBook) => {
    const bookRef = doc(db, "books", id);
    await updateDoc(bookRef, updatedBook);
  },
};

```

firebaseConfig.jsx

```

// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
import { getAnalytics } from "firebase/analytics";
import { getFirestore } from "firebase/firestore";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AlzaSyClf4cnh9PMEgA53Mi160xk4dmlYpgQH7Q",
  authDomain: "mu-test-fire-2025.firebaseio.com",
  projectId: "mu-test-fire-2025",
  storageBucket: "mu-test-fire-2025.firebaseio.com",
  messagingSenderId: "331974042670",
  appId: "1:331974042670:web:1683e8fc1141394c486bbf",
  measurementId: "G-XNFPXBD1YR"
};

// Initialize Firebase
const app = initializeApp(firebaseConfig);

```

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```
const analytics = getAnalytics(app);
```

```
export const db = getFirestore(app);
```

OUTPUT

CREATE

Book Management System

Add New Book

Title

Enter book title

Author

Enter author name

Status

Available

Add Book

Book Collection

Sr. No.	Title	Author	Status	Actions
1	Marwadi University	Jeet Marwadi	Available	Update Delete
2	Raju Rastogi	WWW	Available	Update Delete

Update

Book Management System

Add New Book

Title

Enter book title

Author

Enter author name

Status

Available

Add Book

Book Collection

Sr. No.	Title	Author	Status	Actions
1	Marwadi University	Jeet Marwadi	Available	Update Delete
2	Raju Rastogi	WWW	Available	Update Delete

Update Book

Title

Marwadi University

Author

Jeet Marwadi

Status

Available

Cancel

Update

DELETE

Book Management System

Add New Book

Title

Enter book title

Author

Enter author name

Status







Available

Add Book

Book Collection

Sr. No.	Title	Author	Status	Actions
1	Raju Rastogi	WWW	Available	Update Delete

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 > books > nT4wTKexzMlh...		
 (default)	 books  	 nT4wTKexzMlhHZbf84SS
+ Start collection	+ Add document	+ Start collection
books >	nT4wTKexzMlhHZbf84SS >	+ Add field
		author: "WWW" status: "Available" title: "Raju Rastogi"