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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);
  <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>
      </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
```

</Form.Select>



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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">
      <a href="lambda"><label htmlFor="status">Status</a>/label>
      <select
       id="status"
       name="status"
       value={newBook.status}
       onChange={handleNewBookChange}
       <option value="Available">Available
       <option value="Not Available">Not Available
     </div>
     <button type="submit" className="btn btn-add">Add Book</button>
   </div>
   <div className="book-list-section">
    <h2>Book Collection</h2>
    <div className="table-container">
     <thead>
       Sr. No.
        Title
        Author
        Status
        Actions
      </thead>
      {books.length > 0 ? (
        books.map((book, index) => (
          {index + 1}
```



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```
{book.title}
         {book.author}
          <span className={`status ${book.status === "Available" ? "available" : "not-available"}`}>
          </span>
         <div className="action-buttons">
            className="btn btn-update"
            onClick={() => handleUpdateClick(book)}
            Update
           </button>
           <button
            className="btn btn-delete"
            onClick={() => handleDelete(book.id)}
           </button>
         </div>
        ))
     ):(
      No books available
      </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 className="modal-body">
    <form onSubmit={handleUpdate}>
     <div className="form-group">
      <label htmlFor="update-title">Title</label>
       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>
       id="update-status"
       name="status"
```



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const app = initializeApp(firebaseConfig);

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```
value={currentBook.status}
            onChange={handleCurrentBookChange}
            <option value="Available">Available
            <option value="Not Available">Not Available
           </select>
          </div>
          <div className="modal-footer">
           <button type="button" className="btn btn-cancel" onClick={() => setShowModal(false)}>
           </button>
           <buton type="submit" className="btn btn-confirm">
            Update
           </button>
          </div>
        </form>
       </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.firebaseapp.com",
 projectId: "mu-test-fire-2025"
 storageBucket: "mu-test-fire-2025.firebasestorage.app",
 messagingSenderld: "331974042670",
 appld: "1:331974042670:web:1683e8fc1141394c486bbf",
 measurementId: "G-XNFPXBD1YR"
// Initialize Firebase
```

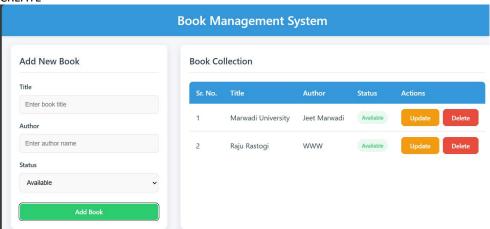


const analytics = getAnalytics(app);

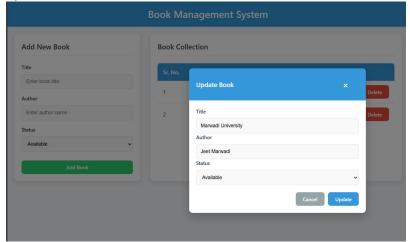
export const db = getFirestore(app);

OUTPUT

CREATE



Update



DELETE

