	Marwadi University
	Marwadi University
	Faculty of Technology
	Department of Information and Communication Technology

Subject: Advanced Web Technology (01CT1625)	**Aim:** Create modern, scalable and high-speed Web Applications with React and Node.js +Express

Experiment :- 05	**Date:- 6-04-2025**	**Enrollment No:-** 92200133003

CODE :

App.jsx

```jsx
import React from "react";
import ProductPage from "./ProductPage";

function App() {
 return (
  <div className="App">
   <h1>Product Management</h1>
   <ProductPage />
  </div>
 );
}

export default App;
```

Product.jsx

```jsx
import React, { useEffect, useState } from "react";
import axios from "axios";

function ProductPage() {
 const [products, setProducts] = useState([]);
 const [form, setForm] = useState({ name: "", price: "", category: "" });

 const fetchProducts = async () => {
  const res = await axios.get("http://localhost:5000/api/products");
  setProducts(res.data);
 };

 const handleSubmit = async (e) => {
  e.preventDefault();
  await axios.post("http://localhost:5000/api/products", form);
  setForm({ name: "", price: "", category: "" });
  fetchProducts();
 };

 const deleteProduct = async (id) => {
  await axios.delete(`http://localhost:5000/api/products/${id}`);
  fetchProducts();
 };

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

 return (
  <div>
   <form onSubmit={handleSubmit}>
    <input
```

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```
        placeholder="Name"
        value={form.name}
        onChange={(e) => setForm({ ...form, name: e.target.value })}
      />
      <input
        placeholder="Price"
        value={form.price}
        onChange={(e) => setForm({ ...form, price: e.target.value })}
      />
      <input
        placeholder="Category"
        value={form.category}
        onChange={(e) => setForm({ ...form, category: e.target.value })}
      />
      <button type="submit">Add Product</button>
    </form>

    <ul>
     {products.map((p) => (
      <li key={p._id}>
       {p.name} - ₹{p.price} [{p.category}]
       <button onClick={() => deleteProduct(p._id)}>✖</button>
      </li>
     ))}
    </ul>
   </div>
 );
}

export default ProductPage;
```

SERVER :

ProductController.js

```
import Product from "../models/Product.js";

export const getAllProducts = async (req, res) => {
 const products = await Product.find();
 res.json(products);
};

export const createProduct = async (req, res) => {
 const newProduct = new Product(req.body);
 await newProduct.save();
 res.status(201).json(newProduct);
};

export const updateProduct = async (req, res) => {
 const { id } = req.params;
 const updated = await Product.findByIdAndUpdate(id, req.body, { new: true });
 res.json(updated);
};
```

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```javascript
export const deleteProduct = async (req, res) => {
  await Product.findByIdAndDelete(req.params.id);
  res.json({ message: "Product deleted" });
};
```

productModel.js

```javascript
import mongoose from "mongoose";

const productSchema = new mongoose.Schema({
  name: { type: String, required: true },
  price: Number,
  description: String,
  category: String,
});

export default mongoose.model("Product", productSchema);
```

Productroutes.js

```javascript
import express from "express";
import {
  getAllProducts,
  createProduct,
  updateProduct,
  deleteProduct,
} from "../controllers/productController.js";

const router = express.Router();

router.get("/", getAllProducts);
router.post("/", createProduct);
router.put("/:id", updateProduct);
router.delete("/:id", deleteProduct);

export default router;
```

.env

```
MONGO_URI=mongodb://127.0.0.1:27017/productsDB
```

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Index.js
```
import express from "express";
import mongoose from "mongoose";
import dotenv from "dotenv";
import cors from "cors";
import productRoutes from "./routes/productRoutes.js";

dotenv.config();
const app = express();

app.use(cors());
app.use(express.json());

app.use("/api/products", productRoutes);

mongoose
 .connect(process.env.MONGO_URI)
 .then(() => {
  app.listen(5000, () => console.log("Server running on port 5000"));
 })
 .catch((err) => console.error(err));
```
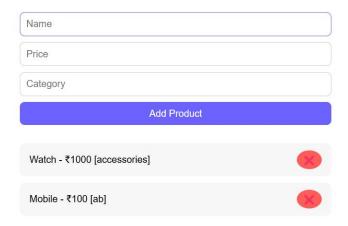
OUTPUT

Product Management

Name	
Price	
Category	
Add Product	

Watch - ₹1000 [accessories]	❌
Mobile - ₹100 [ab]	❌

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