E-Commerce Fullstack Web Development Project

Project Overview

This is a fullstack web development project for an E-Commerce application built using the MERN stack:
- MongoDB for the database
- Express.js and Node.js for the backend
- React.js for the frontend

Key features include product listing, product detail pages, and backend product API setup.

Backend Entry (server/index.js)

```
const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors');
require('dotenv').config();

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

mongoose.connect(process.env.MONGO_URI, { useNewUrlParser: true, useUnifiedTopology: true })
  .then(() => console.log('MongoDB connected'))
  .catch(err => console.error(err));

app.use('/api/products', require('./routes/productRoutes'));
app.use('/api/users', require('./routes/userRoutes'));

const PORT = process.env.PORT || 5000;
app.listen(PORT, () => console.log(`Server running on port ${PORT}`));
```

MongoDB Product Model (server/models/Product.js)

```
const mongoose = require('mongoose');

const productSchema = new mongoose.Schema({
  name: String,
  price: Number,
  description: String,
  image: String,
  countInStock: Number
});

module.exports = mongoose.model('Product', productSchema);
```

React App Router (client/src/App.js)

```
import React from 'react';
import { BrowserRouter as Router, Route, Routes } from 'react-router-dom';
import HomePage from './pages/HomePage';
import ProductPage from './pages/ProductPage';

function App() {
  return (
```

```
    <Router>
      <Routes>
        <Route path='/' element={<HomePage />} />
        <Route path='/product/:id' element={<ProductPage />} />
      </Routes>
    </Router>
  );
}


export default App;
```

Product Listing Page (client/src/pages/HomePage.js)

```
import React, { useEffect, useState } from 'react';
import axios from 'axios';
import { Link } from 'react-router-dom';

function HomePage() {
  const [products, setProducts] = useState([]);

  useEffect(() => {
    axios.get('/api/products')
      .then(res => setProducts(res.data))
      .catch(err => console.error(err));
  }, []);

  return (
    <div>
      <h1>All Products</h1>
      {products.map(product => (
        <div key={product._id}>
          <Link to={`/product/${product._id}`}>
            <img src={product.image} alt={product.name} width="100" />
            <h3>{product.name}</h3>
            <p>${product.price}</p>
          </Link>
        </div>
      ))}
    </div>
  );
}


export default HomePage;
```