**Classroom Activity: Create an E-commerce React Application with Redux**

Navigate to the project directory and run the command: Install Redux and React-Redux:

#### **Create Redux Store**

1. Create a folder named store inside the src folder.
2. Inside the store folder, create a file named store.js and a folder named reducers.
3. Create a file named index.js inside the reducers folder.
4. Write the code for the store and reducers:

Create a store.js file in the src directory:

**// src/store.js Code :**

|  |
| --- |
| // src/store.js  import { createStore } from 'redux';  import { Provider } from 'react-redux';  const initialState = {  products: [  { id: 1, name: 'Product 1', price: 100 },  { id: 2, name: 'Product 2', price: 200 },  ],  cart: [],  };  const reducer = (state = initialState, action) => {  switch (action.type) {  case 'ADD\_TO\_CART':  return {  ...state,  cart: [...state.cart, action.payload],  };  default:  return state;  }  };  const store = createStore(reducer);  export default store; |

### **// src/index.js Code :**

|  |
| --- |
| // src/index.js  import React from 'react';  import ReactDOM from 'react-dom';  import './index.css';  import App from './App';  import store from './store';  import { Provider } from 'react-redux';  ReactDOM.render(  <Provider store={store}>  <App />  </Provider>,  document.getElementById('root')  ); |

### **// src/Product.js Code:**

|  |
| --- |
| // src/Product.js  import React from 'react';  import { useDispatch } from 'react-redux';  const Product = ({ product }) => {  const dispatch = useDispatch();  const addToCart = () => {  dispatch({ type: 'ADD\_TO\_CART', payload: product });  };  return (  <div className="product">  <h3>{product.name}</h3>  <p>Price: ${product.price}</p>  <button onClick={addToCart}>Add to Cart</button>  </div>  );  };  export default Product; |

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#### **// src/Cart.js Code ;**

|  |
| --- |
| // src/Cart.js  import React from 'react';  import { useSelector } from 'react-redux';  const Cart = () => {  const cart = useSelector((state) => state.cart);  return (  <div className="cart">  <h2>Cart</h2>  {cart.length === 0 ? (  <p>Your cart is empty</p>  ) : (  cart.map((item, index) => (  <div key={index} className="cart-item">  <p>{item.name}</p>  <p>Price: ${item.price}</p>  </div>  ))  )}  </div>  );  };  export default Cart; |

Modify App.js to include the Product and Cart components:

**// src/App.js Code:**

|  |
| --- |
| // src/App.js  import React from 'react';  import { useSelector } from 'react-redux';  import Product from './Product';  import Cart from './Cart';  const App = () => {  const products = useSelector((state) => state.products);  return (  <div>  <h1>E-commerce App</h1>  <div>  <h2>Products</h2>  {products.map((product) => (  <Product key={product.id} product={product} />  ))}  </div>  <Cart />  </div>  );  };  export default App; |

First, let's define some global styles and a simple layout in index.css:

|  |
| --- |
| /\* src/index.css \*/  body {  font-family: Arial, sans-serif;  margin: 0;  padding: 0;  background-color: #f5f5f5;  }  header {  background-color: #4CAF50;  color: white;  text-align: center;  padding: 1rem 0;  margin-bottom: 2rem;  }  .container {  display: flex;  justify-content: space-around;  padding: 1rem;  }  .products, .cart {  background-color: white;  padding: 1rem;  border-radius: 8px;  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);  width: 45%;  }  .products h2, .cart h2 {  border-bottom: 2px solid #4CAF50;  padding-bottom: 0.5rem;  }  .product, .cart-item {  border-bottom: 1px solid #ddd;  padding: 1rem 0;  }  .product:last-child, .cart-item:last-child {  border-bottom: none;  }  button {  background-color: #4CAF50;  color: white;  border: none;  padding: 0.5rem 1rem;  border-radius: 4px;  cursor: pointer;  transition: background-color 0.3s;  }  button:hover {  background-color: #45a049;  } |

#### **Execution Steps**

1. **Create Redux Store**
   * Navigate to the project directory.
   * Install Redux and React-Redux.
   * Create a folder named store inside the src folder.
   * Inside the store folder, create a file named store.js and a folder named reducers.
   * Create a file named index.js inside the reducers folder.
   * Write the code for the store and reducers.
2. **Update index.js to Use Redux Store**
   * Update the src/index.js file to include the Redux store.
3. **Create Components**
   * Navigate to the src folder in your project directory.
   * Create a components folder inside the src folder.
   * Create the following files inside the components folder:
     + Product.js
     + Cart.js
4. **Write Code for Components**
   * Write the code for each component as per the requirements.
5. **Modify App.js**
   * Update the src/App.js file to include the Product and Cart components.
6. **Add CSS Styling**
   * Create a file named index.css in the src folder.
   * Write the CSS styles to make the website look like an e-commerce site.
7. **Save the Files**
   * Ensure that all the files are saved after making the changes.
8. **Run Your React App**
   * Open your terminal.
   * Navigate to the project directory and run the command: npm start.
9. **View the Output**
   * Open your browser and go to http://localhost:3000.
   * You should see the e-commerce website with Redux functionality.