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CLASS	622-A

- Full Stack PRACTICE 7.2
- CODE

  cartSlice.js :::

```
// src/cartSlice.js
import { createSlice } from '@reduxjs/toolkit';

const cartSlice = createSlice({
  name: 'cart',
  initialState: {
    items: [], // [{ id, name, price, quantity }]
  },
  reducers: {
    // Action to add an item or increase quantity
    addItem: (state, action) => {
      const newItem = action.payload; // { id, name, price }
      const existingItem = state.items.find(item => item.id === newItem.id);

      if (existingItem) {
        existingItem.quantity += 1;
      } else {
        state.items.push({ ...newItem, quantity: 1 });
      }
    },

    // Action to remove an item entirely from the cart
    removeItem: (state, action) => {
      const itemId = action.payload;
      state.items = state.items.filter(item => item.id !== itemId);
    },

    // Action to update quantity (used for input field changes)
    updateQuantity: (state, action) => {
      const { id, quantity } = action.payload;
      const itemToUpdate = state.items.find(item => item.id === id);

      if (itemToUpdate) {
        const newQuantity = parseInt(quantity);
        if (newQuantity > 0) {
          itemToUpdate.quantity = newQuantity;
        } else {
          // If quantity is set to 0 or less, remove the item
          state.items = state.items.filter(item => item.id !== id);
        }
      }
    },
  },
});

export const { addItem, removeItem, updateQuantity } = cartSlice.actions;

// Selector to get the entire cart state
export const selectCartItems = (state) => state.cart.items;

export default cartSlice.reducer;
```

Store.js ::::

```
// src/store.js
import { configureStore } from '@reduxjs/toolkit';
import cartReducer from './cartSlice';

export const store = configureStore({
  reducer: {
    cart: cartReducer, // The key 'cart' is what you use in useSelector
(state.cart)
  },
});
```

index.js :::

```
// src/index.js (or equivalent entry file)
import React from 'react';
import ReactDOM from 'react-dom/client';
import { Provider } from 'react-redux';
import { store } from './store';
import App from './App';
import './index.css';

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>
    <Provider store={store}>
      <App />
    </Provider>
  </React.StrictMode>
);
```

App.js:

```
// src/App.js
import React from 'react';
import ProductList from './ProductList';
import ShoppingCart from './ShoppingCart';
import './App.css'; // For basic styling

const PRODUCTS = [
    { id: 1, name: 'Laptop', price: 1200 },
    { id: 2, name: 'Mouse', price: 25 },
    { id: 3, name: 'Keyboard', price: 45 },
];

function App() {
  return (
    <div className="container">
      <h1 className="main-title">My Shop</h1>

      <h2>Products</h2>
      <ProductList products={PRODUCTS} />

      <h2>Shopping Cart</h2>
      <ShoppingCart />
    </div>
  );
}

export default App;
```

ProductList.js :::

```
// src/ProductList.js
import React from 'react';
import { useDispatch } from 'react-redux';
import { addItem } from './cartSlice';

const ProductCard = ({ product }) => {
  const dispatch = useDispatch();

  const handleAddToCart = () => {
    // Dispatch the addItem action with the product details
    dispatch(addItem({
      id: product.id,
      name: product.name,
      price: product.price,
    }));
  };

  return (
    <div className="product-card">
      <h3>{product.name}</h3>
      <p>${product.price}</p>
      <button onClick={handleAddToCart}>Add to Cart</button>
    </div>
  );
};

const ProductList = ({ products }) => {
  return (
    <div className="product-grid">
      {products.map(product => (
        <ProductCard key={product.id} product={product} />
      ))}
    </div>
  );
};

export default ProductList;
```

ShoppingCart.js :::

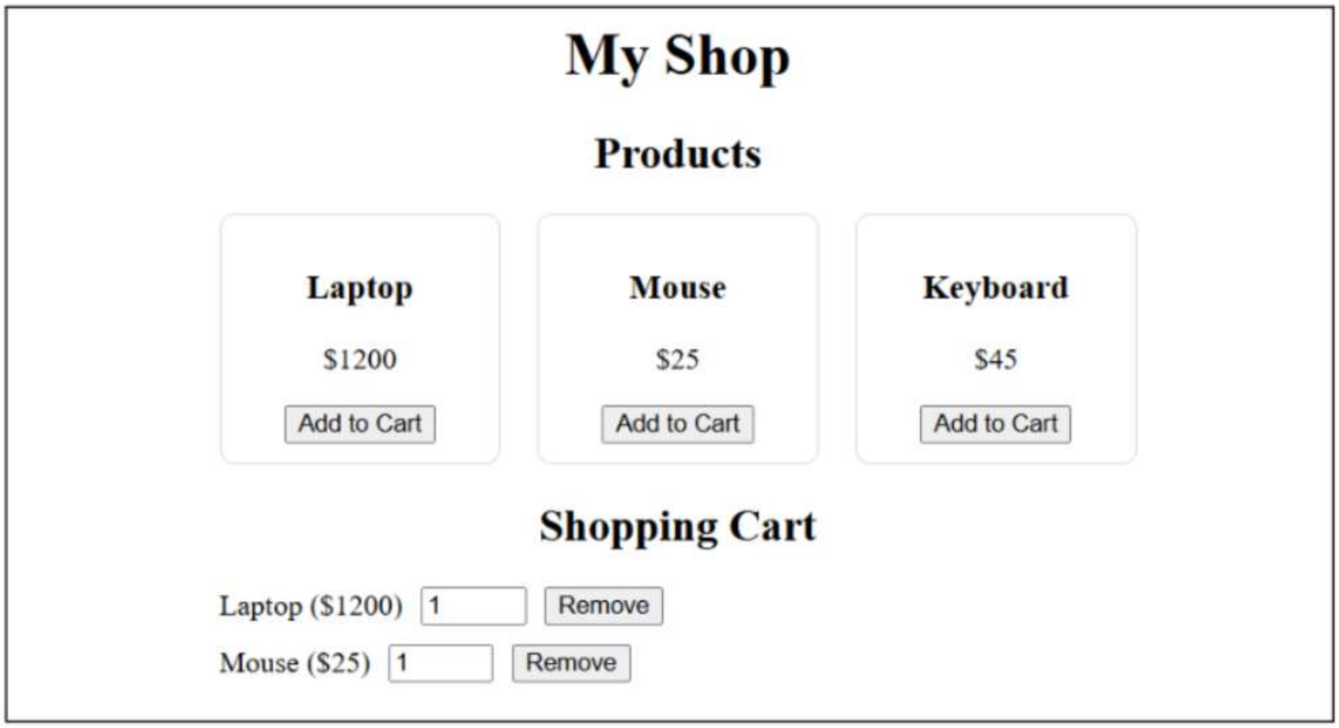
```
// src/ShoppingCart.js
import React from 'react';
import { useSelector, useDispatch } from 'react-redux';
import { selectCartItems, updateQuantity, removeItem } from './cartSlice';

const CartItem = ({ item }) => {
  const dispatch = useDispatch();

  const handleQuantityChange = (e) => {
    const quantity = e.target.value;
    // Dispatch updateQuantity action
    dispatch(updateQuantity({ id: item.id, quantity }));
  };

  const handleRemove = () => {
    // Dispatch removeItem action
    dispatch(removeItem(item.id));
  };

  return (
    <div className="cart-item">
      <span className="item-details">
        {item.name} (${item.price})
      </span>
      <input
        type="number"
        value={item.quantity}
        min="1"
        onChange={handleQuantityChange}
        className="quantity-input"
      />
      <button onClick={handleRemove} className="remove-button">
        Remove
      </button>
    </div>
  );
};

const ShoppingCart = () => {
  // Use useSelector to subscribe to the cart state
  const cartItems = useSelector(selectCartItems);

  if (cartItems.length === 0) {
    return <p className="empty-cart-message">Your cart is empty.</p>;
  }

  return (
    <div className="cart-list">
      {cartItems.map(item => (
        <CartItem key={item.id} item={item} />
      ))}
      {/* Optional: Add a total calculation here */}
      <div className="cart-total">
        Total Items: {cartItems.reduce((acc, item) => acc + item.quantity, 0)}
      </div>
    </div>
  );
};

export default ShoppingCart;
```

App.css :::

```
/* src/App.css */
.container {
  max-width: 800px;
  margin: 0 auto;
  padding: 20px;
  font-family: sans-serif;
  text-align: center;
}

.main-title, h2 {
  margin-bottom: 20px;
}

/* Product Grid */
.product-grid {
  display: flex;
  justify-content: center;
  gap: 20px;
  margin-bottom: 40px;
}

/* Product Card */
.product-card {
  border: 1px solid #ccc;
```

```css
  border-radius: 8px;
  padding: 20px;
  width: 150px;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
  text-align: center;
  display: flex;
  flex-direction: column;
  justify-content: space-between;
  align-items: center;
}

.product-card button {
  padding: 8px 15px;
  cursor: pointer;
  border: 1px solid #000;
  background-color: #fff;
  border-radius: 4px;
  margin-top: 10px;
}

/* Shopping Cart */
.cart-list {
  display: flex;
  flex-direction: column;
  gap: 15px;
  align-items: center;
}

.cart-item {
  display: flex;
  align-items: center;
  gap: 10px;
  width: 90%;
  max-width: 500px;
  justify-content: space-between;
  padding: 5px 0;
}

.item-details {
    flex-grow: 1;
    text-align: left;
}

.quantity-input {
  width: 40px;
  padding: 5px;
  text-align: center;
  border: 1px solid #ccc;
  border-radius: 4px;
}

.remove-button {
  padding: 5px 10px;
  background-color: #f4f4f4;
  border: 1px solid #ccc;
  cursor: pointer;
  border-radius: 4px;
}

.empty-cart-message {
    color: #888;
}

.cart-total {
    margin-top: 20px;
    font-weight: bold;
    border-top: 1px solid #eee;
    padding-top: 10px;
}
```

OUTPUT:


My Shop

Products

Laptop

$1200

Mouse

$25

Keyboard

$45

Shopping Cart

Laptop ($1200) 1

Mouse ($25) 1