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Aim: To implement Redux for managing state in a React-based shopping cart application.

CODE:

Redux Slice (features/cartSlice.js):

```
import { createSlice } from '@reduxjs/toolkit';
```

```
const cartSlice = createSlice({
```

```
  name: 'cart',
```

```
  initialState: [],
```

```
  reducers: {
```

```
    addToCart: (state, action) => {
```

```
      const item = action.payload;
```

```
      const existing = state.find(i => i.id === item.id);
```

```
      if (existing) existing.quantity += 1;
```

```
      else state.push({ ...item, quantity: 1 });
```

```
        },  
  
        removeFromCart: (state, action) => {  
  
            return state.filter(item => item.id !== action.payload);  
  
        },  
  
        updateQuantity: (state, action) => {  
  
            const { id, quantity } = action.payload;  
  
            const item = state.find(i => i.id === id);  
  
            if (item) item.quantity = quantity;  
  
        }  
  
    }  
  
});  
  
export const { addToCart, removeFromCart,  
    updateQuantity } = cartSlice.actions;  
  
export default cartSlice.reducer;  
  
Store (app/store.js):  
  
import { configureStore } from '@reduxjs/toolkit';  
  
import cartReducer from './features/cartSlice';
```

```
const store = configureStore({
```

```
    reducer: {
```

```
        cart: cartReducer
```

```
    }
```

```
});
```

```
export default store;
```