User Story: Shopping Cart

Requirements Overview

Section	Details
Core Requirements (Must Have)	**As a customer**, I want to add products to my shopping cart, so I can review my items and see the total price before checkout. **Acceptance Criteria:** • The user can add a product by id and quantity. • If the product does not exist → show *"Product not found"*. • Reject if quantity ≤ 0. • If quantity exceeds available stock → adjust to stock limit. • If the same product is added multiple times → merge quantities and update line total. • Show each product line with **name**, **unit price**, **quantity**, and **total**. • Show **subtotal** and **overall total**. • Display results in the DOM (element with id="cart"). • Add **Tax (14%)** and **Shipping (50)**, with free shipping if subtotal ≥ 1000. • Support coupon SAVE10 (10% discount if subtotal ≥ 500).
Bonus (Advanced Challenge)	**As a power user**, I want advanced deals and grouping for a more realistic shopping experience. **Acceptance Criteria:** • **Tiered Discounts:** subtotal ≥ 500 → 5%, ≥ 1000 → 10%, ≥ 2000 → 15%. • **Special Deal:** Buy 2 Get 1 Free (e.g., on Mouse). • **Stock validation after merge:** prevent total cart quantity > product stock. • **Remove items:** allow removing a product by entering a negative id. • **Group by category** and show subtotals (if products include a category field).
Example Input	```\nProducts = [\n { id: 1, name: "Laptop", price: 1000, stock: 3, category: "Computers" },\n { id: 2, name: "Mouse", price: 50, stock: 10, category: "Accessories" },\n { id: 3, name: "Keyboard", price: 80, stock: 5, category: "Accessories" }\n];\n\n// User adds:\n(2, 3) // Mouse x3\n(1, 1) // Laptop x1\n(2, 2) // Mouse total x5\n// Apply coupon:\nSAVE10\n```
Expected Output	```\nCart:\n- Mouse x5 = 250\n- Laptop x1 = 1000\nSubtotal = 1250\nDiscount (10%) = 125\nTax (14%) = 157.5\nShipping = 0\nTotal = 1282.5\n```