Test Cases

Test Scenario ID: Order-1

- **Test Case ID**: Order-1A
- **Test Case Description**: Testing calculation of the total order amount with valid order items.
- **Test Priority**: High
- **Pre-Requisite**: Valid `order` object with items added.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	`order.calculateTotal()`	`product1` with price 10 and quantity 2, `product2` with price 20 and quantity 1	40		NA		
2	`order.calculateTotal()`	`product1` with price 99999 and quantity 1, `product2` with price 1 and quantity 1	100000		NA		Test with large total amount.

Test Scenario ID: Order-2

Sub-scenario: Add Order Item - Valid Item

- **Test Case ID**: Order-2A
- **Test Case Description**: Testing addition of a valid order item.
- **Test Priority**: High
- **Pre-Requisite**: Valid `order` object initialized.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	`order.addOrderItem()`	`product3` with id 'p3', quantity 1	`order.items` array to contain {productId: 'p1', quantity: 2}, {productId: 'p2', quantity: 1}, {productId: 'p3', quantity: 1}		NA		
2	`order.addOrderItem()`	`product4` with id 'p4', quantity 9999	`order.items` array to contain the new item and properly calculate the new total.		NA		Test with large quantity.

Sub-scenario: Add Order Item - Invalid Item Quantity

- **Test Case ID**: Order-2B
- **Test Case Description**: Testing addition of an order item with invalid quantity (0).
- **Test Priority**: High
- **Pre-Requisite**: Valid `order` object initialized.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	`order.addOrderItem()`	`product3` with id 'p3', quantity 0	Error: Quantity must be > 0		NA		
2	`order.addOrderItem()`	`product3` with id 'p3', quantity -1	Error: Quantity must be > 0		NA		Test with negative quantity.

Test Scenario ID: Order-3

- **Test Case ID**: Order-3A
- **Test Case Description**: Testing invalid order status transitions.
- **Test Priority**: High

- **Pre-Requisite**: Valid `order` object initialized.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	`order.transitionStatus()`	`invalidStatus`	Error: Invalid order status: invalidStatus		NA		
2	`order.transitionStatus()`	`shipped` (from `processing`)	Error: Invalid transition from 'processing' to 'shipped' without payment		NA		Test invalid status transition.

Test Scenario ID: Order-4

Sub-scenario: Concurrency - Simultaneous Order Modification

- **Test Case ID**: Order-4A
- **Test Case Description**: Testing concurrent modification of the same order from different sessions.
- **Test Priority**: High
- **Pre-Requisite**: Two sessions active for the same `order`.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	Session 1: `order.addOrderItem()`	`product5`, quantity 2	`order.items` updated with product5		NA		
2	Session 2: `order.addOrderItem()`	`product6`, quantity 3	`order.items` updated with product6		NA		
3	Session 1: `order.calculateTotal()`	NA	Correct total with both items added		NA		Simulate simultaneous modifications.

Test Scenario ID: Order-5

Sub-scenario: Performance Testing - Large Order

- **Test Case ID**: Order-5A
- **Test Case Description**: Testing system performance with a large number of order items.
- **Test Priority**: Medium
- **Pre-Requisite**: System should be able to handle large order sets.
- **Post-Requisite**: NA

S.No	Action	Inputs	Expected Output	Actual Output	Test Browser	Test Result	Test Comments
1	`order.addOrderItem()`	1000 items, each with quantity 1	Successful addition of 1000 items and correct total calculation		NA		Test for performance under load.