POWWR Intern Technical Challenge

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Test Cases

Test Case ID	Test Case Description	Preconditions	Steps to execute	Expected Result	Actual Result	Status
TC001	The page loads correctly and displays main elements, title	1. Browser open.	1. Navigate to url "https://react-shopping-cart-67954.firebaseapp.com/". 2. Check HTTP Response 3. Check body, main existence and visibility 4. Check for title	• HTTP Response OK. • Body visible. • Main visible. • Title exists, contains "Shopping cart".		
TC002	Clicking the cart button opens the shopping cart.	1. Shop page loaded.	1. Click the cart button.	• The shopping cart is open.		
TC003	Clicking 'Add to cart' button for an item which is already in the cart increments the quantity of that item in the cart by one.	1. Shop page loaded. 2. Item exists in the cart with quantity >= 0.	1. Check the quantity of an arbitrary item in the cart. 2. Click 'Add to cart' button corresponding to that item. 3. Determine the difference between the	• The difference in the item quantity in the cart is 1.		

			new quantity in the cart and the original quantity.			
TC004	Clicking 'Add to cart' button for an item which is not in the cart adds a single instance of that item to the cart.	1. Shop page loaded. 2. Item exists in the shop which is not in the cart.	1. Determine a product in the shop which has not been added to the cart. 2. Click 'Add to cart' on this item.	• The item appears in the cart with quantity of 1.		
TC005	Cart persists on page refresh.	1. Shop page loaded. 2. Items exist in cart.	1. Record quantities of items currently in cart. 2. Refresh page. 3. Compare recorded quantities from cart with new quantities.	• Pre-refresh cart quantities are equal to post-refresh quantities.		
TC006	Pressing the '+' button on an item in the cart increments the quantity of that item in the cart by 1.	1. Shop page loaded. 2. Items exist in the cart. 3. Cart is open.	1. Record the quantity of an item in the cart. 2. Click the '+' button on that item in the cart. 3. Compare the new quantity with the recorded quantity.	• The difference in the item quantity is 1.		
TC007	Incrementing the quantity of an item in the cart increments the cart subtotal by the price displayed for that item in the shop.	1. Shop page loaded.	1. Record current cart subtotal. 2. Increment the quantity of an item in the cart by 'Add to cart' button or '+' button.	• The difference in the subtotal is equal to the price of the item added to cart		

			3. Determine the difference in subtotal pre and post increment			
TC008	Pressing the '-' button on an item in the cart decrements the quantity of that item in the cart by 1.	1. Shop page loaded. 2. Items exist in the cart. 3. Cart is open.	1. Record the quantity of an item in the cart. 2. Click the '-' button on that item in the cart. 3. Compare the new quantity with the recorded quantity.	• The difference in the item quantity is -1.		
TC009	Decrementing the quantity of an item in the cart decrements the cart subtotal by the price displayed for that item in the shop.	1. Shop page loaded. 2. Cart is open.	1. Record current cart subtotal. 2. Decrement the quantity of an item in the cart by '-' button. 3. Determine the difference in subtotal pre and post increment.	• The difference in the subtotal is equal to the negated price of the item added to cart.		
TC010	When an item is in the cart with a quantity of 1, clicking the '-' button removes the item from the cart entirely.	1. Shop page open. 2. Item exists in cart with a quantity of 1. 3. Cart is open.	1. Click '-' button on cart item with quantity of one.	• The item is no longer shown in the cart.		
TC011	'N Product(s) found' label matches the number of item panels in the shop	1. Shop page open.	1. Compare the count shown on the 'N Product(s) found' label to the number of item	• The label count is equal to the number of item panels shown.		

			panels shown in the shop.			
TC012	When 'CHECKOUT' button pressed with items in the cart, the subtotal shown in the resulting box matches the subtotal shown in the cart.	1. Shop page open. 2. Items exist in the cart. 3. Cart is open.	1. Press 'CHECKOUT' button. 2. Compare the subtotal shown in the resulting box to the subtotal shown in the cart.	• The 'CHECKOUT' box subtotal is equal to the cart subtotal.		
TC013	Clicking the 'X' button on the cart closes the cart display.	1. Shop page open. 2. Cart is open.	1. Click the 'X' button	• The cart box is no longer visible		
TC014	The item quantity label attached to the trolley (cart) icon matches the sum of the quantities of all items in the cart.	1. Shop page open. 2. Items exist in the cart.	1. Record the quantity on the cart label. 2. Sum the quantities of all items in the cart. 3. Compare recorded quantity to the sum found in Step 2.	• The trolley icon label count is equal to the sum quantity of items in the cart.	The trolley icon label count is equal to the sum quantity of items in the cart.	PASS
TC015	Clicking size filter buttons applies filter function	1. Shop page open. 2. No filters applied.	1. Record the number of items shown. 2. Click an arbitrary filter button. 3. Compare the recorded item count with the current item count.	• Clicked filter button shaded. • Pre-filter item count is greater than post-filter item count.		

TC016	Size symbol shown in cart for an added item corresponds to the selected filter.	1. Shop page open. 2. No filters applied.	1. For each available filter, do Step 2 to Step 7.. 2. Click filter button. 3. For each item shown, do Step 4 to Step 6. 4. Add item to cart. 5. Open cart menu. 6. Compare size symbol shown in cart with currently applied filter. 7. Clear cart and filter.	• Cart size symbol matches singular applied filter for all iterations.		
TC017	Hover over an item image in the shop causes and alternative image to be displayed.	1. Shop page open. 2. Not currently hovering over a shop item image.	1. Record the value of the image of an item in the shop. 2. Hover over that image. 3. Compare the recorded image to the currently displayed image.	• An image remains displayed while hovering. • The pre-hover image is not equal to the post-hover image.		
TC018	The list of results with no filters applied matches the list of results with all filters applied.	1. Shop page open. 2. No filters are applied.	1. Record the list of shop items shown 2. Click all filter buttons 3. Compare the recorded list of shop items with the currently displayed list	• The pre-filter shop item list is equal to the post-filter list.		
TC019	The subtotal shown in the cart approximately matches the total	1. Shop page open. 2. Items exist in cart. 3. Cart is open.	1. Calculate the total instalment payment 'months * monthly payment' shown in cart.	• Absolute value of difference between instalment total and subtotal is less than 'months' cents.		

	instalment payments listed		2. Compare instalment total with subtotal			
TC020	'Remove from cart' button visible	1. Shop page open 2. Items exist in cart	1. Check for visibility of the remove cart button.	• Remove cart button is visible		
TC021	'Remove from cart' X button click causes total quantity of that item to be removed from cart	1. Shop page open 2. Items exist in cart.	1. Click X button on item in cart	• Item no longer in cart		

Assumptions

A number of assumptions have been made in formulating the tests above. Some of these are due to lack of knowledge over requirements, which could be rectified through liason with the client.

- It is assumed that paging is not an implemented feature on this site. This negates the need to test for paging related functionality, but also allows simple validation of values such as the 'Products found' count tested in **TC011.**
- It is assumed that shipping costs are not a consideration when testing functionality related to prices.
- It is assumed that element classes will remain consistent, and can be seen as non-flaky '`data-testid`' alternative.
- It is assumed that no authorisation or special permissions are required to access the listed functionality.
- It is assumed that the page will be run in a standard, modern browser with default features enabled.
- It is assumed that, in line with standard practice, the cart should persist across a refresh of the page. **TC005** dependent on this assumption.
- It is assumed that the total price of paying via instalments should be approximately equal to the retail price. **TC019** is dependent on this assumption.

Potential bugs found

- '-' button on cart items disabled when quantity = 1
- Found X button to remove item from cart, but it is invisible.
- Filtered items often don't match the size shown in the shopping cart when added.

Further Testing

- Run existing tests with a variety of inputs. EG where step indicates to choose an arbitrary element, iterate through the collection of elements.
- Responsiveness
    - Test that elements remain visible and site usability exists across a variety of displays, dimensions and devices.
- Unit testing of server and client-side code
- High volume queries – speed and availability tests