

Assignment 4

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1.

Total Test Cases = 20 (Level 1) \times 3 (Level 2) \times 2 (Level 3) = **120 Test Cases**

Testing Plan: Menu-Hamburger-Button (BestBuy Homepage) - 120 Test Cases

1. Level 1 Menu Items: 20 Test Cases
 - Test each Level 1 menu item's visibility and accessibility.
 - Verify that clicking on each item opens the corresponding Level 2 sub-menu.
2. Level 2 Sub-Menus: 60 Test Cases
 - For each Level 1 menu item
 - Navigate to the corresponding Level 2 sub-menu.
 - Test each Level 2 sub-menu's visibility and accessibility.
 - Verify that clicking on each item within Level 2 sub-menu opens the corresponding Level 3 sub-menu or page.
3. Level 3 Sub-Menus: 120 Test Cases
 - For each Level 1 menu item.
 - Navigate to the corresponding Level 2 sub-menu.
 - Navigate to the corresponding Level 3 sub-menu.
 - Test each Level 3 sub-menu's visibility and accessibility.
 - Verify that clicking on each item within Level 3 sub-menu performs the expected action (e.g., redirects to a page).

The test procedure for the Menu-Hamburger-Button on Best Buy's homepage includes navigating to the site, accessing the menu, and engaging with the specified items to validate their functionality. Each test case is deemed successful if the menu operates correctly, expanding, collapsing, or redirecting without issues. Testing should cover a variety of web browsers and devices to ensure broad compatibility. Menu items inaccessible via the Hamburger Menu fall outside the test scope. The plan assumes all menu elements are operational; website alterations could impact outcomes. Required test data and user accounts must be set up beforehand. Deliverables comprise a detailed execution report and any defect documentation.

2.

Level	Priority	Element	Reasoning
1	10	Appliances	Given the wide variety of products and their importance in daily use, frequent updates and high sales potential may lead to a higher risk of issues.
1	9	TV & Home Theater	High-value items with detailed specifications, likely a high-traffic area.
1	10	Computers & Tablets	Primary category, major traffic, and sales driver due to their essential nature in both personal and professional settings.
2	9	Major Kitchen Appliances	High traffic expected, significant impact on revenue, especially with big-ticket items.
2	7	Small Kitchen Appliances	High value but lower traffic, targeting a niche market compared to standard kitchen items.
2	7	Luxury Kitchen Appliances	Like Premium Kitchen Gear, high value but likely targeting a niche market.
2	9	TVs by Size	TV size is a critical decision factor for customers, influencing both experience and sales.
2	8	TVs by Type	Variety influences customer choice, with different technologies in play.
2	10	TVs by Brand	Brand loyalty is substantial, with certain brands dominating the market.
3	10	Top TV Deals	High impact on traffic and sales, testing is imperative during promotional events.
3	8	85-Inch or Larger TVs	A niche but high-value category that can significantly affect revenue.
3	9	75-Inch TVs	Popular size, likely to affect a substantial customer base.
3	10	Samsung TVs	Strong sales and customer interest, especially for new releases.
3	10	LG TVs	Brand-specific loyalty and technology advancements make this a high-traffic category.
3	10	Sony TVs	As with other brands, loyalty and innovation drive high traffic and sales, necessitating thorough testing.

This scoring considers the reasoning of factors such as traffic, sales potential, frequency of updates, and the importance of the category to the customer experience.

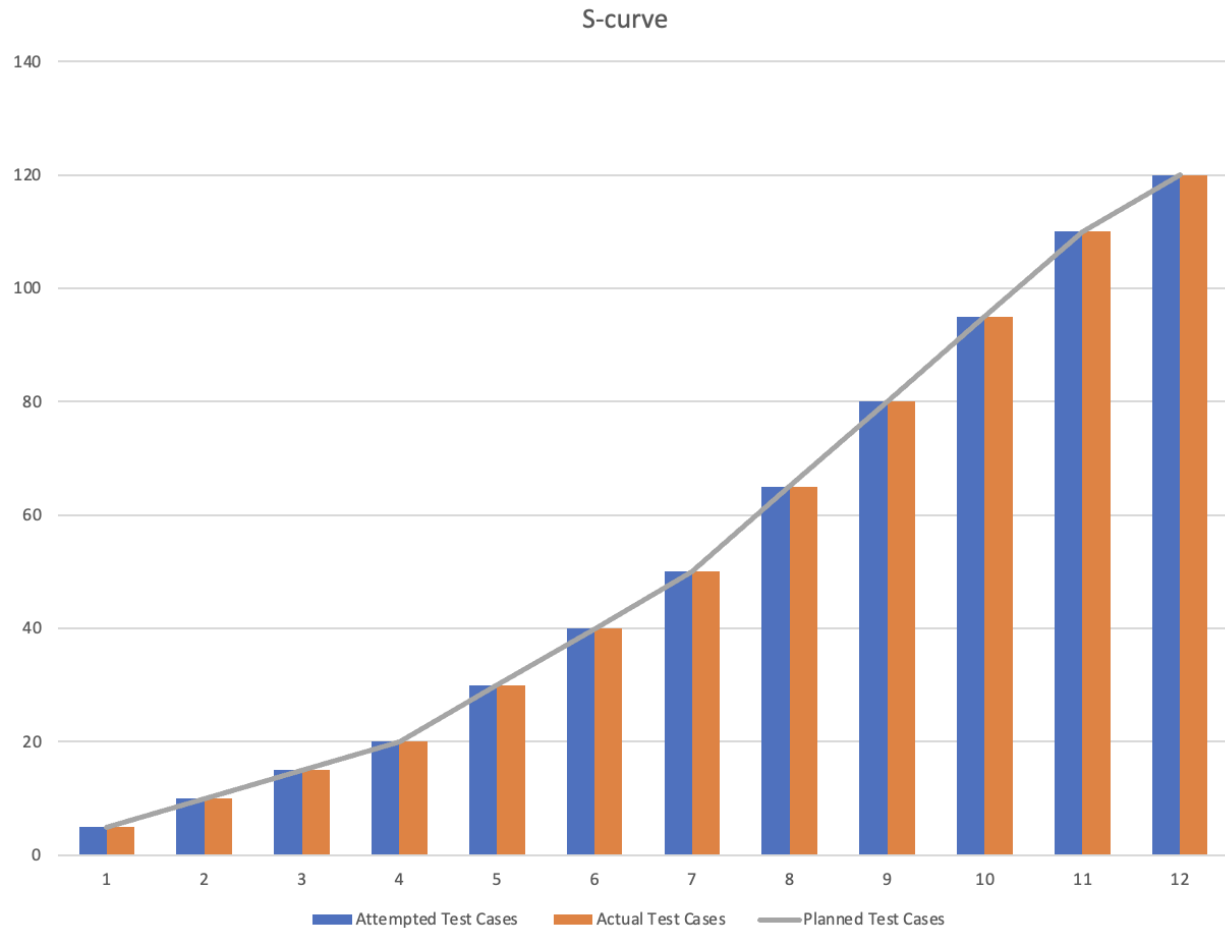
3.

The S-Curve chart for test progress is now depicted with bar graphs representing the cumulative planned, attempted, and actual test cases over a hypothetical 12-day testing period. The bars illustrate:

- Grey line represents the Planned Test Cases, showing a linear progression of planned test activities over time.
- Blue bars represent the Attempted Test Cases, which vary day by day to represent the real-world challenges and progress in testing.
- Orange bars represent the Actual Test Cases, showing the actual completion of test activities which, in this hypothetical scenario, track closely with the attempted test cases but with some variations to reflect typical project fluctuations.

This visual can help in project management by tracking the actual progress against the plan and identifying potential delays or advancements in the testing schedule.

Day	Attempted Test Cases	Actual Test Cases	Planned Test Cases
1	5	5	5
2	10	10	10
3	15	15	15
4	20	20	20
5	30	30	30
6	40	40	40
7	50	50	50
8	65	65	65
9	80	80	80
10	95	95	95
11	110	110	110
12	120	120	120



4.

It consists of various WebElements/Sector like 3 dropdown lists/menus, and featured sections, followed by flyout list items below. The structural components within the Hamburger-Button menu are as follows:

The web components of the menu is under Menu-Container, which takes to the level 2 menu/submenu which is Flyout-SideCar-List, and thereafter to the level 3 menu.

Main Menu Sections:

1. Deals
2. Support & Services
3. Brands
4. Shop by Department

Sub-sections under 'Shop by Department':

1. Appliances
2. TV & Home Theater
3. Computers & Tablets

4. Cell Phones
5. Audio
6. Video Games
7. Cameras, Camcorders & Drones
8. Home, Furniture & Office
9. Smart Home, Security & Wi-Fi
10. Car Electronics & GPS
11. Movies & Music
12. Wearable Technology
13. Health, Wellness & Fitness
14. Outdoor Living
15. Toys, Games & Collectibles
16. Electric Transportation
17. New & Featured

Actionable Element:

- Close (to exit the menu)

These elements represent the interactive sections within the hamburger menu that users can click to navigate to different areas of the Best Buy site. Each main section potentially expands into further sub-categories, offering a detailed navigation experience.

5.

Element to Locate	Method	Description	Example Usage
Menu Hamburger Button	ID	Use when the button has a unique ID.	<code>By.id("unique-button-id")</code>
	Class Name	Suitable if the button has an exclusive class.	<code>By.className("menu-icon")</code>
	CSS Selector	Preferred when the button has specific class attributes or is among other elements.	<code>By.cssSelector("nav.menu-icon > button")</code>
	XPath	Best for complex document navigation or when other identifiers are not distinct.	<code>By.xpath("//nav[contains(@class, 'menu-button')]/button")</code>
Main Menu Container	Class Name	When the container has a singular class.	<code>By.className("navigation-menu")</code>
	CSS Selector	For precise targeting within the site's structure.	<code>By.cssSelector("section.navigation-container")</code>
Individual Menu Sections	Class Name	When unique classes distinguish each section.	<code>By.className("menu-deals"), By.className("menu-support"), By.className("menu-brands")</code>

Deals, Support & Services, Brands	CSS Selector	Crucial when classes are common or identical.	By.cssSelector(".navigation-item.deals")
	XPath	For exact selection of elements or when searching by text content.	By.xpath("//section[contains(@class,'menu-category')][contains(text(),'Deals')]")
Sub-Menu Items	Tag Name	Useful when items follow a consistent tag pattern.	By.tagName("li")
	CSS Selector	For precise location of items within a sub-menu.	By.cssSelector("list.sub-menu-items > li.item")
	XPath	Ideal for detailed relationships or text-based searches in a sub-menu.	By.xpath("//list[contains(@class,'sub-navigation')]/li[contains(text(),'Specific Item')]")
Clickable Links	Link Text	Straightforward method using the text of the links.	By.linkText("See All Deals")
	CSS Selector	For links with specific class attributes or within particular sections.	By.cssSelector("a.deal-navigation-link")

6.

In the context of web automation testing, when you interact with a website's hamburger menu like the one on Best Buy's homepage, certain web elements may require waiting for user interaction due to their dynamic loading behavior.

1. Menu Hamburger-Button: This interface element triggers the display of the menu. Interaction may be delayed until the element is fully interactive.
2. Main Menu Container: This is the main framework that encompasses the entirety of the menu options. Its content might require a brief loading period before it becomes fully operational.
3. Individual Menu Sections: Various segments within the menu, like "Deals," "Support & Services," and "Brands," might populate with content asynchronously. It's advisable to confirm their full display before attempting any interaction.
4. Sub-Menu: Within each primary menu category, there are additional items that become available upon selecting a main section. Visibility of these elements should be confirmed subsequent to their selection.
5. Clickable Links: Links within the menu, such as those leading to particular promotions or product categories, should be accessible before engagement, ensuring they are ready for user interaction.

For each of these menu items, an automated test would typically use explicit waits (like `WebDriverWait` in Selenium) to ensure that any asynchronous operations are completed before

trying to interact with the elements. This approach helps prevent flaky tests due to elements not being present or fully loaded at the time of interaction.