**Low-Level Design (LLD) for Playwright Lab**

**1. Introduction**

The low-level design analyzes specific information that was briefly covered in the HLD document. Information such as functions, modules, inputs, outputs, and the expected behavior is reviewed to get clarity when writing tests in Playwright.

**2. Inventory Module   
2.1. Interactions with the fruit inventory**

* **Function:** test\_current\_quantity\_of\_fruits()
* **Input:** Get the current quantity for fruit items from the inventory.  
  locator.get\_attribute(check\_quantity)
* **Output:** The number of items in stock for a specific fruit item is listed.
* **Description:** This function tests to check the current quantity for the fruits available in the inventory.

**3. Cart Module   
3.1. Adding fruit to the cart**

* **Function:** test\_add\_fruit\_to\_cart()
* **Input:** Select a fruit item to add to the shopping cart
* **Output:** The fruit item should be present in the shopping cart
* **Description:** This function tests to check whether a fruit item has been added to the shopping cart

**3.2. Removing item from the cart**

* **Function:** test\_remove\_items\_from\_cart()
* **Input:** Select a fruit item that is already present in the cart to remove it
* **Output:** The fruit item should be removed and not present in the cart
* **Description:** This function tests to check whether fruit items are removed from the cart correctly.

**4.** **User Interface Module   
4.1. Interactions with the fruit stand web application**

* **Function:** test\_button\_clicks()
* **Input:** Click buttons such as add to cart, remove, submit, quantity, high-low, low-high, and checkout  
  clicking the button add to cart:  
  page.get\_by\_role(“button”, name = “add\_submit”).click()  
  clicking the button to remove from cart:  
  page.get\_by\_role(“button”, name = “remove\_submit”).click()
* **Output:** The button clicks should perform the appropriate actions on the web application.
* **Description:** This function tests to see if the button clicks on the application works as expected.

**4.2. Select drop down options in the application**

* **Function:** test\_select\_dropdown\_options()
* **Input:** Select options from the dropdown menu such as selecting an item to add or remove to cart and selecting an item to check for its quantity.   
    
  page.get\_by\_label(‘Select an item: ’).select\_option(‘Apple’)  
  page.get\_by\_label(‘Select an item: ‘).select\_option(‘Banana’)

page.get\_by\_label(‘Select an item: ‘).select\_option(‘Orange’)

* **Output:** The option from the dropdown menu is selected and performs the appropriate actions given the selected item.
* **Description:** This function tests to see if dropdown menu options work as expected for the web application.

**4.3. Typing user input**

* **Function:** test\_user\_input()
* **Input:** Use locator.fill() to fill out the form field for first name.   
  page.get\_by\_role(“text”).fill(“Johnny”)
* **Output:** The form field should be filled with a first name that uses A-Z as the only characters. The user’s name should appear on the cart’s page when submitting for checkout.
* **Description:** This function tests to see if the form field for first name works as expected and the user’s name appears on the cart page after submitting for checkout.

**4.4. Launching the receipt page**

* **Function:** test\_receipt\_page()
* **Input:** Navigate to the receipt page   
  await page.goto(‘[Fruit Stand](http://127.0.0.1:5000/receipt)’)
* **Output:** The user should be navigated to the receipt page after making a purchase.
* **Description:** This function tests to see if the receipt page launches as expected after the user makes a purchase.

**5.** **Conclusion**

The low-level design discusses instances of how features from the fruit stand web application can be tested using Playwright. The examples shown in red give insight on what code can be implemented when testing a specific feature. The LLD creates an understanding between developers and testers on how Playwright can enhance the testing process.