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

**1. Introduction**

The low-level design delves into specific information that was highlighted in the HLD. Information such as functions or modules will be reviewed to get a deeper understanding of TDD.

**2. Inventory Module   
2.1. Management of the quantity in fruit stand inventory**

* **Function:** test\_fruitquantity()
* **Input:** Get the quantity for the specific fruit item. For instance, banana or apple.
* **Output:** The current quantity of the fruit item in the inventory
* **Description:** This function tests to check the current quantity of a fruit item.

**2.2. Empty Inventory**

* **Function:** test\_emptyinventory()
* **Input:** Get the quantity for the specific fruit item.
* **Output:** The output should be 0 since the inventory is empty.
* **Description:** This function tests to see if the inventory is empty for a specific fruit item.

**2.3. Fruit item that is not present in inventory**

* **Function:** test\_fruitnotpresent()
* **Input:** Get the quantity for the specific fruit item. For instance, pears or grapes.
* **Output:** The output should be 0 since the fruit item is not present in the inventory.
* **Description:** This function tests to see if a specific fruit item is present in the inventory or not.

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

* **Function:** test\_addfruittocart()
* **Input:** Select a fruit item to add to the shopping cart.
* **Output:** The fruit item should be added to the shopping cart.
* **Description:** This function tests to see if a fruit item has been added to the shopping cart.

**3.2. Removing fruit from cart**

* **Function:** test\_removefruit\_fromcart()
* **Input:** Select the fruit item you would like to remove from the shopping cart.
* **Output:** The fruit item should not be present in the shopping cart since it has been removed.
* **Description:** This function tests to see if a fruit item has been removed from the shopping cart.

**4. User Interface Module   
4.1. Button clicks in the application**

* **Function:** test\_button\_clicks()
* **Input:** Click buttons such as add to cart, remove, quantity, or the sorting buttons “low-to high” “high to low”
* **Output:** The button click events should be simulated and verify the expected result from the given buttons on the fruit stand application.
* **Description:** This function tests to see if the button click events on the application works as expected and verifies the accurate outcome from the events.

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

* **Function:** test\_select\_dropdown\_options()
* **Input:** Select options from the dropdown menu such as selecting a fruit item to add to cart, selecting a fruit item to remove from the cart, or selecting a fruit item to check how many are in stock for that specific fruit item.
* **Output:** The option from the drop-down menu is selected and performs the expected results such as selecting the specific fruit to add to cart. The expected result is that the specific fruit is added to the cart and the select drop down option works correctly.
* **Description:** This function tests to see if the select drop down options work as expected to perform the necessary actions for the user interface of the application.

**5. Conclusion**

The low-level design gets into detail about the significant modules that could be potentially used to help with testing with TDD. Information about specific functions is detailed along with its inputs, outputs, and descriptions to create an understanding of what to write for test cases using the TDD approach.