Test Driven Development (TDD) – SRS

1. Introduction – This document will detail the requirements for the development of a fruit stand web application using the Test-Driven Development approach utilizing Python.  
   1. Scope – The tests developed in this lab will create the features of a ‘Fruit Stand’ web application such as adding fruit to a cart, removing fruit from the cart and completing a purchase that empties the cart.
2. Functional Requirements
   1. Adding Products to cart
      1. Users should be able to add items into their cart.
      2. Inputs required are product name and product price.
      3. Outputs
         1. A success or failure message to confirm the fruit addition.
      4. Test Cases to verify
         1. Add valid product to the cart.
         2. Add an invalid product to the cart.
   2. Removing Product from the cart
      1. Users should be able to remove items from their cart.
      2. Inputs required would be product name.
      3. Outputs
         1. A success or failure message after product removal
      4. Test Case to verify
         1. Remove a product in the cart that exists.
         2. Attempt to remove a product in the cart that does not exist.
   3. Completing a purchase with items in the cart
      1. Users should be able to complete their purchase and have all items removed from the cart.
      2. Outputs
         1. Success message confirming their purchase.
         2. “Cart is empty!” message if there are no items in cart.
         3. “Invalid name” message if user’s name does not only contain A-Z characters
      3. Test cases to verify
         1. Cart empties after completed purchase.
         2. Purchase failure if there is no product in cart.
         3. Totals and subtotals reset to zero after purchase.
3. Non-Functional Requirements
   1. Performance – The system should respond to user inputs within a satisfactory time limit.
   2. Usability – The user interface should be easy to understand and be relatively user friendly.
4. Environments
   1. Preferred IDE
   2. Python 3.8 or newer.
   3. Python testing framework (pytest, unitest, etc) for writing and performing tests.
5. Conclusion – This Software Requirements Specification outlines the functional and non-functional requirements for the use of the Test-Driven Development (TDD) programming style to create the basic functionalities of a ‘Fruit Stand’ web application and understand the basic ideas behind the TDD approach to programming.