1. Did you find more test cases via black box or white box techniques? Do you believe adequate testing could be done with just one of the techniques? Was it easier to develop black box or white box tests? Why is one faster than the other?

Answer: I have done many tests on this assignment. I have checked the testing through Blackbox techniques. On my side, from a user point of view, I have focused on how the code functions by evaluating input and expecting outputs. On the other hand, in the whitebox test, I looked into the code myself. The black box testing was easy for me because I didn’t have to know what was happening inside the system; I only had to input and expect an output. The white box testing was difficult for me because I had to look down on the code itself and check the logical code mechanism. In the black box, it is faster than in the white box because a user does not need proper knowledge of code functions so they can execute tests and requirements easily, but in white box testing, the user has to have deep knowledge of the function inside and dive into the inside. I do not think the testing could be done with just one technique because they cover different aspects of software quality. Blackbox testing focuses on functionality and user experience, while whitebox testing ensures code correctness and performance.

1. Consider how you would set up integration tests for the functions above. What would be your general approach to creating integration tests? Do you need to create additional code to set up and run the test? How will you write code to compare the results to ensure they are correct? How much additional time do you think writing the additional code will take?

Answer To set up test integration for functions, at first, we have to create test scenarios and cover edge cases. I have to write a test code to compare the actual output and result. This includes creating test harnesses, installing components, sequencing tasks, and comparing the results with anticipated outcomes. This test will provide specifics and descriptions of the expected results. This process needs additional setup and typically takes several weeks, taking a few hours each day.

1. Create one integration test for the combination of two functions above. Show the code you created to set up the test, execute the test and compare the result to the expected result. You only need to demonstrate one set of test data, but it should be obvious how to add more tests easily. Comment your code to point out the set up, execution, and comparison parts of the code.

Answer: If we consider scenarios with “ find string “ and “add2cart” combining operations, it is necessary to replicate a real-time scenario where these applications collaborate. The main objective is to “find string” to successfully add items and “add2cart” to successfully add an item. These functions in my tests were interconnected with each other.