

Software Quality

Assignment 5

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Methodology

In order to create the tests it was necessary to make sure that appropriate statement coverage for all the methods and classes in the program. This was done in part by using an eclipse plugin called EcEmma. Tests were first created to simulate a successful run of the individual methods. Since this was the easiest to implement it was the logical place to start. To create a successful run of each method test cases were taken from the previous phase's tests. These tests were known to work and were incorporated into this phase's testing suite. The next step was to provide coverage for the different branches of a success run. An example of multiple branches in a successful run of a method is the buy method where coverage had to be provide for a successful buy when the person buys the last ticket because in this case the event was removed from the system. Also, coverage was provided for a successful buy in which the last ticket was not purchased, in this case the number of tickets remaining is reduced and the event remains in the system. The last step was to cover all of the possible ways each method could fail this took a little more time since there was more ways that the method could fail then it could succeed. To provide coverage for a failure, it was necessary to establish how the method failed so that it could be recreate with the necessary 'invalid' inputs.

Unit tests results

During the testing process, failures were encountered in the TicketTest and BackendTest test classes. In TicketTest, the test for the getTicketEntry() method failed because the ticket price was incorrectly formatted in the program; more specifically, it was missing leading zeros. The formatting was corrected and the test now runs successfully. In BackendTest, the test failed for the mainInputSuccess() method. There was a problem iterating through the transaction list stemmed from the starting index not being set to the index following the previous logout. This error was not found until laters since it relied on having multiple users logout of the system. This error was fixed by setting the index equal to the index of the line after the previous logout.