CSCI 3060U - Statement Code Coverage /Test Report / Failure Log (Phase 5)

Test Code Basis:

- Test codes have been partitioned to handle each method created. They are located in the backend folder
- General template of the test consists of creation of a temporary file (either items or users) along with a simulated transaction line.
- Test is successful upon completion and assertion in either user or items without issues.

Create - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	Successful user creation	File not written	Code fixes (particularly in file pathing)	Pass
T2	User already exists	User overlap, ignores restrictions	Fixed restrictions	Pass

Create - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1					
2					
3 - 14	06 new_user FS 000002345	test_file	T1	06 new_user FS 000002345	test_file
15 - 16	existing_user FS 000001234\n	test_file	T2	existing_user FS 000001234\n	test_file
17 - 28	06 new_user FS 000002345\n	test_file	T1	06 new_user FS 000002345\n	test_file

Notes:
- Two test cases needed to cover the test. Only one if statement is in the process so two test cases are needed to satisfy statement coverage (a test case where it explores the if statement).

Delete - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	Successful user deletion	User not deleted	Code fixes (particularly in file pathing), misc. Due to the nature of the code, it has error handling.	Pass

Delete - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1					
2					
3 - 14	delete user3	file_path	T1	delete user3	file_path

Notes:
- Delete code is written out in the way where it searches the file line by line (line 9), so a single test case is possible to cover the entire code coverage

Advertise - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	Item creation successful	N/A		Pass
T2	Item exists	Code exists, testing absent		Unproven

Advertise - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1					
2					
3					

4 - 26	03 smallItem
	islam 043
	000003
		file_path	T1	03 smallItem
				          islam
				          043 000003
					file_path

27 - 28	item1 seller1 NONE 003 001000	file_path	T2	item1 seller1 NONE 003 001000	file_path

29 - 36	03 smallItem
	islam 043
	000003
		file_path	T1	03 smallItem
				          islam
				          043 000003
					file_path

Notes:
- Similar implementation with create, using only one if statement as it traverses for duplicates. Two test cases required.

NOTE: Bid has path coverage

Bid - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	Successful Bid	N/A	N/A	Pass
T2	Item not found	N/A	N/A	Pass
T3	Seller not found	N/A	N/A	Pass
T4	Unsuccessful Bid	N/A	N/A	Pass

Bid - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1 -3					
4 - 14	04 item6 seller6 bidder6 000100	temp_file	T1 (item not found)	04 item6 seller6 bidder6 000100	temp_file
15 - 24	04 item1 seller1 bidder1 000150	temp_file	T2 (Successful bid)	04 item1 seller1 bidder1 000150	temp_file
25 - 27	04 item2 seller2 bidder2 000120	temp_file	T3 (Bid not greater)	04 item2 seller2 bidder2 000120	temp_file
28	04 item6 seller6 bidder6 000100	temp_file	T1 (item not found)	04 item6 seller6 bidder6 000100	temp_file

Notes:
- Initially a massive function covering all, has been partitioned based on if conditions to promote modularity and maintainability.
- Similar structure to previous tests, but with more variations due to more factors coming into play (seller, item, bid amount conditionals)

Refund - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	Refund successful	N/A		Pass
T2	Refund unsuccessful (no credits)	No code handling credits being checked as valid		Unproven

Refund - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1 - 3					
4 - 46	06 islam3　　islam4　　000002000	user_account_file	T1	06 islam3 islam4 000002000	user_account_file

Notes:
- At current state, refund is executed regardless of account value. However, it does perform both users' credit checks.
- The test assumes that the transaction is valid.
- Test is successful upon valid calculation of refund between the sender and receiver.

AddCredit - Failure Log

Test Case No.	Testing Objective	Nature of the failure	Actions Taken	Pass / Fail
T1	AddCredit successful	N/A	N/A	Pass
T2	Target user not found	N/A	N/A	Pass

AddCredit - Statement Coverage

Statement	Line input	User Account File Input	Test	Test Line Input	Test User Account File Input
1 - 31	06 bhargav　　FS　000000123	user_account_file	T1	06 bhargav　　FS 000000123	user_account_file
32 - 35	06 jane2　　AA　000002500	user_account_file	T2	06 jane2　　AA 000002500	user_account_file
36 -37	06 bhargav　　FS　000000123	user_account_file	T1	06 bhargav　　FS 000000123	user_account_file

Notes:
- Add credit supports an error where the user is not found