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	06 new_user FS 000002345\n	test_file	T1	06 new_user FS 000002345\n	test_file
4	06 new_user FS 000002345\n	test_file			
5	06 new_user FS 000002345\n	test_file			
6	06 new_user FS 000002345\n	test_file			

7	06 new_user FS 000002345\n	test_file			
8	06 new_user FS 000002345\n	test_file			
9	06 new_user FS 000002345\n	test_file			
10					
11	06 new_user FS 000002345\n	test_file			
12	06 new_user FS 000002345\n	test_file			
13	06 new_user FS 000002345\n	test_file			
14	06 new_user FS 000002345\n	test_file			
15	existing_user FS 000001234\n	test_file	T2	existing_user FS 000001234\n	test_file
16	existing_user FS 000001234\n	test_file			
17	06 new_user FS 000002345\n	test_file	T1		
18					
19	06 new_user FS 000002345\n	test_file			
20	06 new_user FS 000002345\n	test_file			
21	06 new_user FS 000002345\n	test_file			
22	06 new_user FS 000002345\n	test_file			
23	06 new_user FS 000002345\n	test_file			
24	06 new_user FS 000002345\n	test_file			

25	06 new_user FS 000002345\n	test_file			
26	06 new_user FS 000002345\n	test_file			
27	06 new_user FS 000002345\n	test_file			
28	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	delete user3	file_path	T1	delete user3	file_path
4					
5	delete user3	file_path			
6	delete user3	file_path			

7	delete user3	file_path			
8	delete user3	file_path			
9	delete user3	file_path			
10	delete user3	file_path			
11					
12					
13	delete user3	file_path			
14	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

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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	03 smallItem islam 043	file_path	T1	03 smallItem islam	file_path

	000003			043 000003	
5	03 smallItem islam 043 000003	file_path			
6	03 smallItem islam 043 000003	file_path			
7	03 smallItem islam 043 000003	file_path			
8					
9	03 smallItem islam 043 000003	file_path			
10					
11	03 smallItem islam 043 000003	file_path			
12	03 smallItem islam 043 000003	file_path			
13	03 smallItem islam 043 000003	file_path			
14	03 smallItem islam 043 000003	file_path			
15	03 smallItem islam 043 000003	file_path			
16					
17	03 smallItem islam 043 000003	file_path			
18					
19					

20					
21	03 smallItem islam 043 000003	file_path			
22					
23	03 smallItem islam 043 000003	file_path			
24	03 smallItem islam 043 000003	file_path			
25	03 smallItem islam 043 000003	file_path			
26	03 smallItem islam 043 000003	file_path			
27	item1 seller1 NONE 003 001000	file_path	T2	item1 seller1 NONE 003 001000	file_path
28	item1 seller1 NONE 003 001000	file_path			
29	03 smallItem islam 043 000003	file_path	T1		
30					
31					
32	03 smallItem islam 043 000003	file_path			
33	03 smallItem islam 043 000003	file_path			
34	03 smallItem islam 043	file_path			

	000003				
35	03 smallItem islam 043 000003	file_path			
36	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					
2					
3					
4	04 item6 seller6 bidder6 000100	temp_file	T1 (item not found)	04 item6 seller6 bidder6 000100	temp_file

5	04 item6 seller6 bidder6 000100	temp_file			
6	04 item6 seller6 bidder6 000100	temp_file			
7	04 item6 seller6 bidder6 000100	temp_file			
8	04 item6 seller6 bidder6 000100	temp_file			
9	04 item6 seller6 bidder6 000100	temp_file			
10	04 item6 seller6 bidder6 000100	temp_file			
11					
12	04 item6 seller6 bidder6 000100	temp_file			
13	04 item6 seller6 bidder6 000100	temp_file			
14	04 item6 seller6 bidder6 000100	temp_file			
15	04 item1 seller1 bidder1 000150	temp_file	T2 (Successful bid)	04 item1 seller1 bidder1 000150	temp_file
16	04 item1 seller1 bidder1 000150	temp_file			
17	04 item1 seller1 bidder1 000150	temp_file			

18	04 item1 seller1 bidder1 000150	temp_file			
19	04 item1 seller1 bidder1 000150	temp_file			
20	04 item1 seller1 bidder1 000150	temp_file			
21	04 item1 seller1 bidder1 000150	temp_file			
22	04 item1 seller1 bidder1 000150	temp_file			
23	04 item1 seller1 bidder1 000150	temp_file			
24	04 item1 seller1 bidder1 000150	temp_file			
25	04 item2 seller2 bidder2 000120	temp_file	T3 (Bid not greater)	04 item2 seller2 bidder2 000120	temp_file
26	04 item2 seller2 bidder2 000120	temp_file			
27	04 item2 seller2 bidder2 000120	temp_file			
28	04 item6 seller6 bidder6 000100	temp_file	T1 (item not found)		

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					
2					
3					
4	06 islam3 islam4 000002000	user_account_file	T1	06 islam3 islam4 000002000	user_account_file
5	06 islam3 islam4 000002000	user_account_file			
6	06 islam3 islam4 000002000	user_account_file			
7	06 islam3 islam4 000002000	user_account_file			
8					
9					
10	06 islam3 islam4 000002000	user_account_file			

11	06 islam3 islam4 000002000	user_account _file			
12	06 islam3 islam4 000002000	user_account _file			
13					
14					
15	06 islam3 islam4 000002000	user_account _file			
16	06 islam3 islam4 000002000	user_account _file			
17	06 islam3 islam4 000002000	user_account _file			
18	06 islam3 islam4 000002000	user_account _file			
19	06 islam3 islam4 000002000	user_account _file			
20	06 islam3 islam4 000002000	user_account _file			
21	06 islam3 islam4 000002000	user_account _file			
22	06 islam3 islam4 000002000	user_account _file			
23	06 islam3 islam4 000002000	user_account _file			
24	06 islam3 islam4 000002000	user_account _file			
25	06 islam3 islam4 000002000	user_account _file			
26	06 islam3 islam4 000002000	user_account _file			
27	06 islam3 islam4 000002000	user_account _file			
28					
29	06 islam3 islam4	user_account			

	000002000	_file			
30	06 islam3 islam4 000002000	user_account_file			
31	06 islam3 islam4 000002000	user_account_file			
32					
33					
34	06 islam3 islam4 000002000	user_account_file			
35	06 islam3 islam4 000002000	user_account_file			
36	06 islam3 islam4 000002000	user_account_file			
37	06 islam3 islam4 000002000	user_account_file			
38	06 islam3 islam4 000002000	user_account_file			
39	06 islam3 islam4 000002000	user_account_file			
40	06 islam3 islam4 000002000	user_account_file			
41	06 islam3 islam4 000002000	user_account_file			
42	06 islam3 islam4 000002000	user_account_file			
43	06 islam3 islam4 000002000	user_account_file			
44	06 islam3 islam4 000002000	user_account_file			
45	06 islam3 islam4 000002000	user_account_file			
46	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	06 bhargav FS 000000123	user_account_file	T1	06 bhargav FS 000000123	user_account_file
2	06 bhargav FS 000000123	user_account_file			
3	06 bhargav FS 000000123	user_account_file			
4	06 bhargav FS 000000123	user_account_file			
5	06 bhargav FS 000000123	user_account_file			
6	06 bhargav FS 000000123	user_account_file			
7	06 bhargav FS 000000123	user_account_file			
8	06 bhargav FS	user_account			

	000000123	_file			
9					
10					
11					
12					
13	06 bhargav FS 000000123	user_account _file			
14					
15	06 bhargav FS 000000123	user_account _file			
16					
17					
18	06 bhargav FS 000000123	user_account _file			
19	06 bhargav FS 000000123	user_account _file			
20	06 bhargav FS 000000123	user_account _file			
21	06 bhargav FS 000000123	user_account _file			
22	06 bhargav FS 000000123	user_account _file			
23					
24					
25	06 bhargav FS 000000123	user_account _file			
26	06 bhargav FS 000000123	user_account _file			
27	06 bhargav FS 000000123	user_account _file			
28	06 bhargav FS 000000123	user_account _file			

29	06 bhargav FS 000000123	user_account_file			
30					
31					
32	06 jane2 AA 000002500	user_account_file	T2	06 jane2 AA 000002500	user_account_file
33	jane2 AA 000002500	user_account_file			
34					
35					
36	06 bhargav FS 000000123	06 bhargav FS 000000123	T1		
37	06 bhargav FS 000000123	06 bhargav FS 000000123			

Notes:

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