

Statement coverage - transfer method

Test Case ID	is_admin	amount	account_num_from	account_num_to	Expected output
TC1	True	200	00001	12345	Should succeed (despite 12345 being disabled – depends on logic)
TC2	True	1500	00001	12345	Fails: logs “Balance Violation Error”
TC3	True	500	999	12345	Fails: logs “Account does not exist”
TC4	False	1500	00001	12345	Fails: logs “Transfer Limit Violation”
TC5	False	1300	00001	12345	Fails: logs “Balance Violation Error”
TC6	False	300	00001	12345	Should succeed
TC7	False	500	999	00001	Fails: logs “Account does not exist”

Failure Table - Transfer Method (Statement coverage)

Test Case ID	Expected Output	Actual Output	Issues Description	Fix
TC1	Succeed	Succeed	N/A	N/A
TC2	Fails: logs "ERROR: Balance Violation Error: Insufficient balance"	Logs "ERROR: Balance Violation Error: Insufficient balance"	N/A	N/A
TC3	Fails: logs "ERROR: Account Violation Error: Account does not exist"	Logged : "ERROR: Account Violation Error: Account does not exist" multiple times	Method loops through all accounts and logs an error for each account that does not match.	Fixed code so it only logs once if an account is not present.
TC4	Fails: logs "Transfer Limit Violation"	[Nothing]	Error in code logic preventing standard transfer from running.	Fixed code error, and successfully have it doing what is intended.
TC5	Fails: logs "Balance Violation Error"	Logged: "ERROR: Transfer Limit Violation: Standard user cannot	N/A	N/A

		transfer above \$1000"		
TC6	Succeed	Succeed	N/A	N/A
TC7	Fails: logs "ERROR: Account Violation Error: Account does not exist"	Fails: logs "ERROR: Account Violation Error: Account does not exist"	N/A	N/A

Loop coverage - Withdrawal method

Test ID case	How many times loop runs	account_num	Expected output
LC1	0	_____	Nothing is happening because no account was provided
LC2	1	00001	Loop runs once when the first account in txt file matches
LC3	2	12345	Loop runs once when the twice account in txt file matches
LC4	3	00002	Loop runs many times when account in txt file matches

Decision coverage - Withdrawal method

DC1 – if self.is_admin

Test Case ID	amount	account_num	is_admin	Expected Result
DC1-True	100	00001	True	Admin path taken → success
DC1-False	100	00001	False	Standard path taken → success

DC2 – if int(x['account_number']) == self.account_num

Test Case ID	amount	account_num	is_admin	Expected Result
DC2-True	100	00001	True	Account found → withdrawal allowed
DC2-False	100	999	True	Account not found → logs “Account does not exist”

DC3 – if int(x['account_number']) == self.account_num

Test Case ID	amount	account_num	is_admin	Expected Result
DC3-True	100	00001	False	Account found → withdrawal allowed
DC3-False	100	999	False	Account not found → logs “Account does not exist”

DC4 – if self.amount > 1000

Test Case ID	amount	account_num	is_admin	Expected Result
DC4-True	1500	00001	False	Logs "Withdrawal Limit Violation"
DC4-False	500	0001	False	Under limit → continue

DC5 – if self.amount > balance

Test Case ID	amount	account_num	is_admin	Expected Result
DC5-True	1500	00001	True	Logs "Balance Violation Error"
DC5-False	300	00001	True	Sufficient balance → withdrawal allowed

Failure Table - Withdrawal Method (Decision and loop coverage)

Test Case ID	Expected Output	Actual Output	Issues Description	Fix
LC1	Logs "Account Violation Error: Account does not exist" (no matching account)	Logs "ERROR: Account Violation Error: Account does not exist"	The loop logs an error multiple times if there is no match for the account number.	Fix code to ensure the error logs only once, not for each iteration. Add a break statement once an

				account is not found.
DC1	Succeed (withdrawal allowed, sufficient balance)	Succeed (withdrawal processed successfully)	N/A	N/A
DC2	Logs "Balance Violation Error: Insufficient balance" if balance is low	Logs "ERROR: Balance Violation Error: Insufficient balance"	N/A	N/A
DC3	Logs "Withdrawal Limit Violation: Standard user cannot withdraw above \$1000"	Logs "ERROR: Withdrawal Limit Violation: Standard user cannot withdraw above \$1000"	N/A	N/A
LC2	Succeed (standard user withdrawal within limit)	Succeed (withdrawal processed successfully)	N/A	N/A
DC4	Logs "Account Violation Error: Account does not exist" (if account is missing for a standard user)	Logs "ERROR: Account Violation Error: Account does not exist"	N/A	N/A