

Test Users

Name	Account Number: Starting Balance	Misc information
John Doe	00001: 250.00	
Rich	00002: 500,000.00	
Max	00003: 999,999.99	
Broke	00004: 0.00	
Poor	00005: 30.00	
Withdrawal1	00006: 250.00	
Withdrawal2	00007: 500.00	
Withdrawal3	00008: 500.00	

Tests

Transaction	Test Name	Intention
Unprivileged Login	StandardLogin1	A valid account name is given, and the frontend should be able to fetch account details for the given account
	StandardLogin2	The account name given is not in the current bank accounts file
	StandardLogin3	Attempting to log in after first login without a prior logout
	StandardLogin4	Attempting to log in to a deleted/disabled account should fail
	Login1	Standard or admin login is not selected before trying to log in
	Login2	Transactions are attempted before a user is logged in (both before first login and after logout)
	AdminLogin1	A valid admin login occurs. Frontend should register that this is a privileged session
Logout	Logout1	Verify logout only works when in a logged in state
Unprivileged Withdrawal	StandardWithdrawal1	Attempt to remove an amount less than the amount in the account (e.g. \$100 from a \$500 account). Transaction should be successful

	StandardWithdrawal2	Attempt to remove an amount greater than the amount in the account (e.g. \$500 from a \$100 account). Transaction should fail
	StandardWithdrawal3	Attempt to withdraw an amount equal to the amount in the account (e.g. \$100 from a \$100 account). Transaction should succeed
	StandardWithdrawal4	Attempt to withdraw a massive amount from the account, far exceeding the amount in the account (e.g. 2^{128} , basically test for overflow/underflow)
	StandardWithdrawal5	Attempt to withdraw a nearly equal amount in the account, using a decimal point to make it slightly off (e.g. \$100.00001 from \$100 account). Test for floating point error (though we should not use floating point to keep track internally)
	StandardWithdrawal6	Attempt to withdraw \$500. Transaction should succeed
	StandardWithdrawal7	Attempt to withdraw \$0. Transaction should fail
	StandardWithdrawal8	Attempt to withdraw a negative amount of money . Transaction should fail
	StandardWithdrawal9	Attempt to withdraw from an account that does not exist. Transaction should fail
	StandardWithdrawal10	Attempt to withdraw a non numeric amount (e.g. withdraw "ABC") transaction should fail
	StandardWithdrawal11	Attempt to withdraw > \$500 (e.g. \$600). Transaction should fail
	StandardWithdrawal12	Attempt to withdraw > \$500 over several transactions (e.g. withdrawing \$250 three times). Any transactions that would put the total above \$500 should fail.
Privileged Withdrawal	AdminWithdrawal1-12	Repeat StandardWithdrawal1-12 in a privileged session
	AdminWithdrawal13	Attempt to withdraw from an invalid account (e.g. give invalid account holder name)
transfer	StandardTransfer1	Attempting to transfer an amount less than the account balance should succeed (e.g. transfer \$100 out of a \$1000 account)
	StandardTransfer2	Attempting to transfer an amount greater than the

		account balance should fail (e.g. transfer \$1000 out of a \$100 account)
	StandardTransfer3	Attempt to transfer all the money in an account out of it
	StandardTransfer4	Attempt to transfer a massive amount of money out of the account (test against integer overflow)
	StandardTransfer5	Attempt to transfer a nearly equal amount to of money in the account out of it (e.g. \$500.0001 out of \$500 account)
	StandardTransfer6	Attempt to transfer \$1000
	StandardTransfer7	Attempt to transfer \$0
	StandardTransfer8	Attempt to transfer a negative amount
	StandardTransfer9	Attempt to transfer from an account that does not exist
	StandardTransfer10	Attempt to transfer to an account that does not exist
	StandardTransfer11	Attempt to transfer a non-numeric account
	StandardTransfer12	Attempt to transfer money into an account that would put it over the 999,999.99 limit trackable in the bank account file
	StandardTransfer13	Attempt to transfer > \$1000 over several transactions
	StandardTransfer14	Attempt to transfer > \$1000 in one transaction
	AdminTransfer1-14	Do Standard Transfer1-14 in a privileged session
	AdminTransfer15	Attempt to transfer from an invalid account (e.g. invalid name)
	AdminTransfer16	Attempt to transfer money into a disabled account
	AdminTransfer17	Attempt to transfer money into a deleted account
paybill	StandardPaybill1	Attempting to pay a bill with insufficient funds should fail (minimum account balance of \$0.00 after payment)
	StandardPaybill 2	Attempt to paybill with amount greater than \$2000
	StandardPaybill 3	Attempt to exceed \$2000 in multiple transactions

	StandardPaybill4	Invalid account number should fail
	StandardPaybill5	Pay maximum amount of bill (\$2000)
Privileged Paybill	AdminPaybill1	Attempting to pay a bill with insufficient funds should fail (minimum account balance of \$0.00 after payment)
	AdminPaybill2	Pay bill with amount greater than \$2000
	AdminPaybill3	Attempt to paybill from an invalid account (e.g. give invalid account holder name)
Deposit	StandardDeposit1	Invalid deposit if deposit is \$0
	StandardDeposit2	Attempt to deposit with invalid account number should fail
	StandardDeposit3	Deposit a valid amount
	StandardDeposit4	Deposit to a disabled account should fail
	StandardDeposit5	Deposited amount in current session cannot be used in current session
	StandardDeposit6	Depositing a negative amount should fail
	StandardDeposit7	Deposit that will make account exceed \$999,999.99 should fail
Privileged Deposit	AdminDeposit1-7	Repeat StandardDeposit1-7 in a privileged session
	AdminDeposit8	Attempt to deposit from an invalid account (e.g. give invalid account holder name)
create	Create1	Admin can successfully create a new account with a valid name (≤ 20 characters) and an initial balance within the allowed range.
	Create2	Account can be created with the maximum balance of \$999,999.99
	Create3	Account created with a name of exactly 20 characters long.
	Create4	Verify that accounts with the same name and number cannot be created
	Create5	Try creating an account in user mode, the system should return an appropriate error message

	Create6	Try creating an account with the account holder name exceeding 20 characters. The system should return an appropriate error message.
	Create7	Verify that the system rejects an account creation if the initial balance is more than \$999,999.99 with an error message.
	Create8	Verify that after creating an account, it is not accessible for other transactions (like withdraw or transfer) within the same session.
	Create9	Verify that an account can be created with a balance of \$0.00.
	Create10	Verify that the system does not handle special characters (exclamation marks, apostrophes) in the account holders name.
	Create11	Verify that the system correctly trims leading / trailing spaces in the account holders name after it has been inserted.
	Create 12	Verify that the system rejects an account creation request with a negative initial balance.
delete	Delete1	Try deleting an account in an unprivileged session
	Delete2	Try deleting an account that doesn't exist (invalid name)
	Delete3	Try deleting an account that doesn't exist (valid name, invalid number)
	Delete4	Try deleting an account that exists
	Delete5	Try making transactions on a deleted account
disable	Disable1	Try disabling an account in an unprivileged session (user mode)
	Disable2	Try disabling an account that doesn't exist (invalid name)
	Disable3	Try disabling an account that doesn't exist (valid name, invalid number)
	Disable4	Try disabling an account that exists successfully within admin session.
	Disable5	Try making transactions on a disabled account. It should return an appropriate error.

	Disable6	Try deleting an account that has already been disabled.
	Disable7	Try deleting an account that is already marked as inactive for other reasons.
Changeplan	Changeplan1	Verify that an admin can successfully change an account's payment plan from student to non-student when a valid account holder name and account number are provided.
	Changeplan2	Verify that the system correctly handles case sensitivity when matching the account holders name. First letter should be capitalized.
	Changeplan3	Verify that the system handles leading / trailing spaces in the account holder's name appropriately.
	Changeplan4	Verify that the system handles special characters when matching the account holder's name. It should return an appropriate error message.
	Changeplan5	Verify that a standard user can not change the payment plan and the system returns an appropriate error message.
	Changeplan6	Verify that the system rejects the request if the provided account holder name does not match any existing account, with an appropriate error message.
	Changeplan7	Verify that an incorrect account number for a given account name is rejected.
	ChangePlan8	Verify that the system handles attempts to change the plan of an account that is already on the non-student plan, by an error message indicating that no change is needed.
	ChangePlan9	Verify that the system rejects account holder names or account numbers that consist only of whitespace characters.
	ChangePlan10	Verify that the system rejects requests to change the plan of an account that has been marked as deleted or inactive.
Miscellaneous	Miscellaneous1	Verify correct handling of unknown commands