SOFE 3980 Assignment 1
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Test Cases
DISCLAIMER: States labeled as "logged in as admin/standard", etc. indicate that the test will be run twice, once as an administrator, and once as a standard account

Case	State	Purpose
LOGIN		
invalid input	Initial	to ensure that the program returns to the first level upon invalid (or gibberish) input
valid input	Initial	to ensure that the login command prompts for a login state (standard/admin)
non-login commands	Initial	to ensure that no other commands can be executed until a valid login
invalid names	Initial	to ensure that a login with an invalid name rejects the attempt
special characters	Initial	to ensure that the login sanitizes input, and will not accept special characters
login after already logged in	Logged in as admin/standard	ensure program does not allow two consecutive login attempts
admin unlimited transaction	Logged in as standard/admin	to ensure that administrators are allowed all transactions
standard unprivileged transaction	Logged in as standard/admin	to ensure that privileged transactions are accepted
standard login	Initial	to ensure valid standard login is accepted
admin login	Initial	to ensure that valid admin login is accepted
LOGOUT		
log out when not logged in	Initial	to ensure program does not

		allow [null] to log out
log out when logged in	Logged in as admin/standard	to ensure program allows logged in user to log out
attempt transaction after logout	Logged out (end of session)	to ensure that transactions are not permitted after logout.
invalid input	logged in as standard/admin	to ensure that invalid input ends the session
valid input	logged in as standard/admin	to ensure entering the logout command actually logs out
WITHDRAWAL		
invalid input	logged in as standard/admin	to ensure that invalid input returns the program to the logged out state
valid input (admin)	logged in as admin	to ensure the withdrawal command is accepted, and prompts for a name
valid input (standard)	logged in as standard	to ensure the withdrawal command is accepted, and prompts for an account number
invalid admin name	logged in as admin, withdrawal state (waiting for name)	to ensure that the program kills the withdrawal query upon invalid name
invalid account number	logged in as standard/admin, withdrawal state (waiting for account number)	to ensure that the program kills the withdrawal query upon invalid number
invalid withdraw amount (too high)	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program tells user the withdraw amount is too high, and asks for another value.
invalid withdraw amount (not enough funds)	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program tells user the withdraw amount is more than available, and asks for another value.
invalid withdraw amount	logged in as	to ensure that the program

(incorrect floating point)	standard/admin, withdrawal state (waiting for amount)	tells user the withdraw amount is invalid, and asks for another value.
invalid withdraw amount (too low)	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program tells user the withdraw amount is too low, and asks for another value.
invalid withdraw amount (not a number)	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program tells user the withdraw amount is invalid, and asks for another value.
invalid withdraw amount (value is not a multiple of 5)	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program will only dispense an amount that can be made up of minimum five dollar bills.
valid withdraw amount	logged in as standard/admin, withdrawal state (waiting for amount)	to ensure that the program completes the transaction if all entered data is valid.
valid admin name	logged in as admin, withdrawal state (waiting for name)	to ensure that the program accepts the name continues on to a prompt for account number
valid account number	logged in as standard/admin, withdrawal state (waiting for account number)	to ensure that the program accepts the account number, and continues on to the prompt for amount
TRANSFER		
invalid input	logged in as standard/admin	to ensure session is terminated upon invalid input
valid input (admin)	logged in as admin	to ensure that the transfer command is accepted, and asks for name if in admin mode
valid input (standard)	logged in as standard	to ensure that the transfer command prompts for the from account number if in standard mode
invalid admin name	logged in as admin, transfer state (waiting for name)	to ensure that the program kills the transfer query upon

		invalid admin name entry
invalid from account number	logged in as standard/admin (waiting for from account number)	to ensure that the program kills the transfer query upon and invalid from account
invalid to account number	logged in as standard/admin (waiting for to account number)	to ensure that the program kills the transfer query upon and invalid to account
valid transfer amount	logged in as standard/admin (waiting for amount)	to ensure that the program completes the transaction upon valid transfer amount
invalid transfer amount (not enough funds)	logged in as standard/admin (waiting for amount)	to ensure that the program tells the user they don't have enough funds for the specified transfer amount, and then prompt for another value
invalid transfer amount (too high)	logged in as standard/admin (waiting for amount)	to ensure that the program tells the user that the specified transfer amount is too high, and then prompt for another value
invalid transfer amount (too low)	logged in as standard/admin (waiting for amount)	to ensure that the program tells the user that the specified transfer amount is too low, and then prompt for another value
invalid transfer amount (not a number)	logged in as standard/admin (waiting for amount)	to ensure that the program tells the user that the specified transfer is not a number, and then prompt for another value
invalid transfer amount (incorrect floating point)	logged in as standard/admin (waiting for amount)	to ensure that the program tells the user that the specified transfer amount has incorrect precision, and then prompt for another value
valid from account	logged in as standard/admin (waiting for from account number)	to ensure that the program accepts a valid number, and then prompts for a to account
valid to account	logged in as standard/admin	to ensure that the program

	(waiting for to account number)	accepts a valid number prompts for a amount to transfer
valid admin name	logged in as admin (waiting for admin name)	to ensure that a valid admin name is taken and the program prompts for a from account number.
PAYBILL		
invalid input	logged in as standard/admin	Function should be able to handle garbage arguments without crashing and just return to main options menu.
invalid account name	logged in as admin (waiting for account name input)	If the admin is creating a paybill transaction for a user, the standard user must exist in the system. It should not be possible to pay for a user's bill if the user doesn't exist.
valid account name	logged in as admin (waiting for account name input)	If the admin is creating a paybill transaction for a user, the standard user must exist in the system.
invalid account number	logged in as standard/admin (waiting for account number input)	The inputted account number must match the account number of the account holder's name (previous input). The bank account must be a valid account for the account holder currently logged in.
valid account number	logged in as standard/admin (waiting for account number input)	The inputted account number must match the account number of the account holder's name (previous input). The bank account must be a valid account for the account holder currently logged in.
invalid company name	logged in as standard/admin	The company to whom the bill is being paid must be

		"The Bright Light Electric Company (EC)", "Credit Card Company Q (CQ)" or "Low Definition TV, Inc. (TV)"
valid company name	logged in as standard/admin	The company to whom the bill is being paid must be "The Bright Light Electric Company (EC)", "Credit Card Company Q (CQ)" or "Low Definition TV, Inc. (TV)"
valid amount to pay	logged in as standard/admin	Maximum amount that can be paid to a bill holder in current session is $2000.00 in standard mode. Account balance must be at least $0.00 after bill is paid.
amount to pay too high	logged in as standard/admin	Maximum amount that can be paid to a bill holder in current session is $2000.00 in standard mode. Account balance must be at least $0.00 after bill is paid.
amount to pay too low	logged in as standard/admin	Maximum amount that can be paid to a bill holder in current session is $2000.00 in standard mode. Account balance must be at least $0.00 after bill is paid
amount exceeds balance	logged in as standard/admin	Account balance must be at least $0.00 after bill is paid.
DEPOSIT		
invalid input	logged in as standard/admin	Function should be able to handle garbage arguments without crashing and just return to main options menu.
invalid account name	logged in as admin	Account name must exist in the system.
valid account name	logged in as admin	Account name must exist in the system.

invalid account number	logged in as standard/admin	Inputted account number must match the account number of the account name previously entered.
valid account number	logged in as standard/admin	Inputted account number must match the account number of the account name previously entered.
valid amount to pay	logged in as standard/admin	The value to deposit must be a valid datatype. Cannot be a negative value.
check that balance is not available	logged in as standard/admin	Deposited funds are not available for withdrawal or bill-paying this session.
invalid amount to deposit	logged in as standard/admin	Deposit input must be a valid datatype and be a non-zero value.
CREATE		
invalid input	logged in as standard/admin	Function should be able to handle garbage arguments without crashing and just return to main options menu.
invalid balance	logged in as admin	Must be an accepted datatype and have a non-negative value. Cannot exceed $99999.99
valid balance	logged in as admin	Must be an accepted datatype and have a non-negative value. Cannot exceed $99999.99
special character sanitization	logged in as admin	Account name is limited to at most 20 characters and cannot contain special symbols or characters.
name too long	logged in as admin	Account name is limited to at most 20 characters.
Account name valid	logged in as admin	Account name is limited to at most 20 characters.
attempt transaction	logged in as admin	The account should not be

		available for other transactions this session.
privileged access	logged in as admin	Standard users should not have access to this method.
unprivileged access	logged in as standard user	Standard users should not have access to this method.
Valid account number	logged in as admin	Account number must be unique, have the correct format and length.
Invalid account number	logged in as admin	Account number must be unique, and have the correct format and length.
DELETE		
invalid input	Logged in as admin	To ensure input is correct for either account holder name or account number, for account number exclusive to numbers, for name exclusive to letters
valid name	Logged in as admin	Account holder name is found in records
invalid name	Logged in as admin	Account Holder name is not found in records or account holder name has invalid characters
valid account number	Logged in as admin	Account number is found in records, follows valid input criteria for account number and belongs to the account holder name that was given.
invalid account number	Logged in as admin	Account number is not found in records, or account number input does not follow valid input criteria for number. Or Account Number does not belong to the account holder name that was accepted.
privileged access	Logged in as admin	If Logged in as an administrator, if all input procedure is accepted in

		terms of account holder name and number, account will proceed to deletion
unprivileged access	Not logged in as admin	If not logged in as an administrator, user will not be able to access deletion option.
DISABLE		
invalid input	Logged in as admin	To ensure input is correct for either account holder name or account number, for account number exclusive to numbers, for name exclusive to letters
valid name	Logged in as admin	Account holder name is found in records and name is of valid input criteria for name.
invalid name	Logged in as admin	Account holder name is not found in records or account holder name input does not follow input criteria for name
valid account number	Logged in as admin	Account number is found in records, follows valid input criteria for account number and belongs to the account holder name that was given.
invalid account number	Logged in as admin	Account number is not found in records, or account number input does not follow valid input criteria for number. Or Account Number does not belong to the account holder name that was accepted.
privileged access	Logged in as admin	If logged in as an admin, account will be disabled and will be written to logfile for account number
unprivileged access	Not Logged in as admin	This screen will not be visible to a standard user
attempt transaction	Logged in as	If a transaction is attempted

	admin/standard	when an account is disabled, the process will not be accepted. If an account is already disabled, admin will be notified.
	CHANGEPLAN	
invalid input	Logged in as admin	To ensure input is correct for either account holder name or account number, for account number exclusive to numbers, for name exclusive to letters
valid name	Logged in as admin	Account Holder Name is found in records and follows input criteria for name
invalid name	Logged in as admin	Account holder name is not found in records, or name does not follow the valid criteria for name.
valid account number	Logged in as admin	Account number is found in records, follows valid input criteria for account number and belongs to the account holder name that was given.
invalid account number	Logged in as admin	Account number is not found in records, or account number input does not follow valid input criteria for number. Or Account Number does not belong to the account holder name that was accepted.
privileged access	Logged in as admin	If logged in as an admin, if an account is already not a student account nothing will happen in the logfile, if an account is a student account then the account will be changed to a standard account.
unprivileged access	Not Logged in as admin	A standard user will not be able to see this view.
	ENABLE	

invalid input	Logged in as admin	To ensure input is correct for either account holder name or account number, for account number exclusive to numbers, for name exclusive to letters
valid name	Logged in as admin	Account Holder Name is found in records and follows input criteria for name
invalid name	Logged in as admin	Account holder name is not found in records, or name does not follow the valid criteria for name.
valid account number	Logged in as admin	Account number is found in records, follows valid input criteria for account number and belongs to the account holder name that was given.
invalid account number	Logged in as admin	Account number is not found in records, or account number input does not follow valid input criteria for number. Or Account Number does not belong to the account holder name that was accepted.
privileged access	Logged in as admin	If logged in as an admin, if an account is already enabled nothing will happen in the logfile. If an account is disabled the account will be re-enabled and the logfile will be updated.
unprivileged access	Not Logged in as admin	A standard user will not be able to see this view.
Transaction Attempt after update	Logged in as Admin/Standard User	If the account has been re-enabled the transaction will be accepted.