

Front-End Requirements

CISC 327 Assignment 1

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Document Summary

This document provides three items in accordance with the CISC 327 Assignment 1 Description:

1. A table of the test cases we are using to prove each of Quinterac's transaction requirements along with intentions for each test case
2. A folder included with this document called 'test_files' which contains the actual input and output files used for each test case in the table, sorted by transaction code then requirement number. This is explained in further depth in the document body
3. A test plan document explaining how the test files are organized (transaction -> requirement # -> testfile#.txt), how we intend the user to run the tests, how the input is validated, and how results are stored and organized for comparison with future runs

Document Layout

1. Test Case Table
2. Test Plan Document

Test Case Table

The following test cases use the template described by Professor Ding in Lecture 9's notes. For clarification, 'Test Name' in the table follows the format <CURRENT STATE> <INTENDED ACTION>. In the first example, we have not done anything except loaded the script so we are in 'idle' as our first state. The intended action we are testing is 'logout', and so the test name is 'idle logout'.

Transaction Code - **login**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
No transactions before login	R1T1	idle logout	Can't logout before logging in	input.txt: logout	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions
	R1T2	idle createacct	Can't create an account before logging in	input.txt: createacct	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions
	R1T3	idle deleteacct	Can't delete an account before logging in	input.txt: deleteacct	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions
	R1T4	idle deposit	Can't deposit before logging in	input.txt: deposit	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions
	R1T5	idle withdraw	Can't withdraw before logging in	input.txt: withdraw	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions

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	R1T6	idle transfer	Can't transfer before logging in	input.txt: transfer	Valid accounts file with no accounts	output.txt: Error prompt for user to log in	Transaction summary file with no transactions
No subsequent login accepted after login (until after logout)	R2T1	login login	Can't login again after already logging in	input.txt: login	Valid accounts file with no accounts	output.txt: Error prompt saying already logged in	Transaction summary file with no transactions
After an ATM login, only ATM transactions and logout are accepted	R3T1	ATM login	Can't login, already logged in as ATM mode	input.txt login machine	Valid accounts file with no accounts	output.txt: Error prompt saying already logged in as ATM mode	Transaction summary file with no transactions
	R3T2	ATM createacct	Can't create an account unless agent	input.txt createacct	Valid accounts file with no accounts	output.txt: Error prompt saying only agent logins can create accounts	Transaction summary file with no transactions
	R3T3	ATM deleteacct	Can't delete an account unless agent	input.txt: deleteacct	Valid accounts file with no accounts	output.txt: Error prompt saying only agent logins can create accounts	Transaction summary file with no transactions
After an agent login, all transactions are accepted	R4T1	agent login	Can't login, already logged in as agent mode	input.txt: login	Valid accounts file with no accounts	output.txt: Error prompt saying already logged in as agent mode	Transaction summary file with no transactions
Start a front-end session (processing day)	R5T1	idle login	Start a front-end session by logging into Quinterac	input.txt: login	Valid accounts file with no accounts	output.txt: Thank you for logging into Quinterac. Please choose a mode.	Transaction summary file with no transactions
Ask for a type of session, either machine, agent or logout	R6T1	login machine	Begin the session as an ATM user	input.txt: login machine	Valid accounts file with no accounts	output.txt: ATM mode selected.	Transaction summary file with no transactions

	R6T2	login agent	Begin the session as an agent user	input.txt: login agent	Valid accounts file with no accounts	output.txt: Agent mode selected.	Transaction summary file with no transactions
	R6T3	login logout	Logout after logging in	input.txt: login logout	Valid accounts file with no accounts	output.txt: Logged out of Quinterac.	Transaction summary file with no transactions
	R6T4	login error	Disregard invalid session type	input.txt: login 49j14	Valid accounts file with no accounts	output.txt: Error message saying you must enter either 'machine' or 'agent'	Transaction summary file with no transactions
After type is accepted, reads valid accounts list file	R7T1	machine	Load valid accounts list file	input.txt: login machine	Valid accounts file with no accounts	output.txt: Successfully loaded accounts list	Transaction summary file with no transactions
	R7T2	agent	Load valid accounts list file	input.txt: login agent	Valid accounts file with no accounts	output.txt: Successfully loaded accounts list	Transaction summary file with no transactions
	R7T3	machine	Load invalid accounts list file	input.txt: login machine	Invalid accounts file with no accounts	output.txt: Error prompt: Failed to load accounts file	Transaction summary file with no transactions

Transaction Code - **logout**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Should only be accepted when logged in	R1T1	idle logout	Check that logout is not accepted	input.txt: logout	Valid accounts File	output.txt: Cannot logout. Session has not been started!	Cannot logout. Session has not been started!
no transaction other than login should be accepted after a logout	R2T1	logout withdraw	Check if transaction is available after logout	input.txt: withdraw	Valid accounts File	output.txt: Cannot process transaction. Please login.	Cannot process transaction. Please login.
	R2T2	logout transfer	Check if transaction is available	input.txt: logout transfer	Valid accounts File	output.txt: Cannot process	Cannot process transaction.

			after logout			transaction. Please login.	Please login.
	R2T3	logout deposit	Check if transaction is available after logout	input.txt: logout deposit	Valid accounts File	output.txt: Cannot process transaction. Please login.	Cannot process transaction. Please login.
	R2T4	logout createact	Check if transaction is available after logout	input.txt: logout createact	Valid accounts File	output.txt: Cannot process transaction. Please login.	Cannot process transaction. Please login.
	R2T5	logout deleteact	Check if transaction is available after logout	input.txt: logout deleteact	Valid accounts File	output.txt: Cannot process transaction. Please login.	Cannot process transaction. Please login.
	R2T6	logout login	Check if transaction is available after logout	input.txt: logout login	Valid accounts File	output.txt: Successfull y logged in	Successfull y Logged in!
End a Front End session (Processing Day) and print summary transaction file	R3T1	login logout	End session with no transaction s	input.txt login logout	Valid accounts File	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T2	machine logout	Check that logging out from machine is correct	input.txt: login machine logout	Valid accounts File with no accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T3	agent logout	Check that logging out from agent is correct	input.txt: login agent logout	Valid accounts File with no accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T4	machine withdraw logout	Check that logging out from machine withdraw is correct	input.txt: login machine withdraw logout	Valid accounts File with no accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T5	machine deposit	Check that logging out	input.txt: login	Valid accounts	output.txt: Successfull	Successfull y Logged

		logout	from machine deposit is correct	machine deposit logout	File with no accounts	y Logged Out! And Transaction Summary file Printed	Out! And Summary Transaction file printed!
	R3T6	machine transfer logout	Check that logging out from machine transfer is correct	input.txt: login machine transfer logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T7	agent withdraw logout	Check that logging out from agent withdraw is correct	input.txt: login agent withdraw logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T8	agent deposit logout	Check that logging out from agent deposit is correct	input.txt: login agent deposit logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T9	agent transfer logout	Check that logging out from agent transfer is correct	input.txt: login agent transfer logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T10	agent createacct logout	Check that logging out from agent Createacct is correct	input.txt: login agent createact logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T11	agent createac 1234567 logout	Check that logging out from agent Createacct Account ID is correct	input.txt: login agent createact 1234567 logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T12	agent deleteact logout	Check that logging out from agent Deleteact Is correct	input.txt: login agent deleteacct logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T13	agent	Check that	input.txt:	Valid	output.txt:	Successfully

		deleteact 1234567 logout	logging out from agent Deleteact Account ID is correct	login agent deleteacct 1234567 logout	accounts File with accounts	Successfull y Logged Out! And Transaction Summary file Printed	y Logged Out! And Summary Transaction file printed!
	R3T14	agent deleteact 1234567 bob logout	Check that logging out from Deleting an account is correct	input.txt: login agent deleteacct 1234567 bob logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T15	agent createact 1234567 bob logout	Check that logging out from Creating new account is correct	input.txt: login agent createact 1234567 bob logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T16	machine withdraw 1234567 logout	Check that logging out from machinewit hdraw Account ID is correct	input.txt: login machine withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T17	machine withdraw 1234567 100 logout	Check that logging out after withdrawin g from an account in machinemo de	input.txt: login machine withdraw 1234567 100 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T18	machine deposit 1234567 logout	Check that logging out after machine withdraw Account ID	input.txt: login machine withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T19	machine deposit 1234567 100 logout	Check that logging out after withdrawin g from machine mode works	input.txt: login machine withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T20	machine transfer 1234567 logout	Check that logging out after machine Transfer	input.txt: login machine transfer 1234567	Valid accounts File with accounts	input.txt: Successfull y Logged Out! And Transaction	Successfull y Logged Out! And Summary Transaction

			Account ID	logout		Summary file Printed	file printed!
	R3T21	machine transfer 1234567 7654321 logout	Check that logging out after machine Transfer Account ID Account to transfer to ID	input.txt: login machine transfer 1234567 7654321 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T22	machine transfer 1234567 7654321 100 logout	Check that logging out after a machine transfer is completed	input.txt: login machine transfer 1234567 7654321 100 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T23	agent withdraw 1234567 logout	Check that logging out from agent withdraw Account ID is correct	input.txt: login agent withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T24	agent withdraw 1234567 100 logout	Check that logging out after withdrawin g from an account in agent mode	input.txt: login agent withdraw 1234567 100 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T25	agent deposit 1234567 logout	Check that logging out after agent withdraw Account ID	input.txt: login agent withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T26	agent deposit 1234567 100 logout	Check that logging out after withdrawin g from agent mode works	input.txt: login machine withdraw 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!
	R3T27	agent transfer 1234567 logout	Check that logging out after agent Transfer Account ID	input.txt: login agent transfer 1234567 logout	Valid accounts File with accounts	output.txt: Successfull y Logged Out! And Transaction Summary file Printed	Successfull y Logged Out! And Summary Transaction file printed!

	R3T28	agent transfer 1234567 7654321 logout	Check that logging out after agent Transfer Account ID Account to transfer to ID	input.txt: login agent transfer 1234567 7654321 logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!
	R3T29	agent transfer 1234567 7654321 100 logout	Check that logging out after an agent transfer is completed	input.txt: login machine transfer 1234567 7654321 100 logout	Valid accounts File with accounts	output.txt: Successfully Logged Out! And Transaction Summary file Printed	Successfully Logged Out! And Summary Transaction file printed!

Transaction Code – **createacct**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Privileged transaction, only accepted in agent mode	R1T1	machine createacct	Can't create account under "machine" selection	input.txt: login machine createacct	Valid accounts file with no account or with accounts	output.txt: Error prompt stating invalid access	Transaction summary file with no transactions
	R1T2	agent createacct	User able to access createacct	input.txt: login agent createacct	Valid accounts file with no account or with accounts	output.txt: none	Transaction summary file with no transactions
New account number is exactly seven decimal digits not beginning with 0	R2T1	createacct 0123456 bob	Account number cannot begin with 0	input.txt: login agent createacct 0123456 bob	Valid accounts file with no account or with accounts	output.txt: Error prompt stating invalid account number	Transaction summary file with no transactions
	R2T2	createacct 12345678 bob	Account number must be 7 characters long	input.txt: login agent createacct 0123456 bob	Valid accounts file with no account or with accounts	output.txt: Error prompt stating invalid account number length	Transaction summary file with no transactions
	R2T3	createacct 1234567 bob	Account number accepted and	input.txt: login agent createacct	Valid accounts file with no account or	output.txt: none	Transaction summary file with no transactions

			account created	1234567 bob	with accounts		
Unique account numbers	R3T1	createacct 1234567 joe	There cannot be two accounts under the same number	input.txt: login agent createacct 1234567 joe	Valid accounts file with account number 1234567 in use	output.txt: Error prompt saying account number is already claimed	Transaction summary file with no transactions
	R3T2	createacct 2345678 joe	Account number accepted and account created	input.txt: login agent createacct 2345678 joe	Valid accounts file with account number 1234567 in use	output.txt: none	Transaction summary file with no transactions
new account name is between 3 and 30 alphanumeric characters, possibly including spaces but not beginning or ending with a space	R4T1	createacct 1234567 hi	Account name must be greater than 2	input.txt: login agent createacct 1234567 hi	Valid accounts file without account number 1234567 in use	output.txt: Error prompt stating account names must be greater than 2	Transaction summary file with no transactions
	R4T2	createacct 1234567 dan	Account name cannot begin with space	input.txt: login agent createacct 1234567 hi	Valid accounts file without account number 1234567 in use	output.txt: Error prompt stating account names must not begin with a space	Transaction summary file with no transactions
	R4T3	createacct 1234567 dan	Account name cannot end with a space	input.txt: login agent createacct 1234567 dan	Valid accounts file without account number 1234567 in use	output.txt: Error prompt stating account names must not end with a space	Transaction summary file with no transactions
	R4T4	createacct 1234567 pass	Account name meets criteria and is accepted	input.txt: login agent createacct 1234567 pass	Valid accounts file without account number 1234567 in use	output.txt: none	Transaction summary file with no transactions

Transaction Code - **deleteacct**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Delete an existing account	R1T1	agent deleteacct	Delete an account from the list of valid account numbers	input.txt: login agent deleteacct 4510314 Christopher logout	Valid accounts file with 1 valid account: #: 4510314 Name: Christopher	output.txt: Account 4510314 successfully deleted.	Transaction summary file showing deletion of account
	R1T2	agent deleteacct	Can't delete an account that doesn't exist	input.txt: login agent deleteacct 4510313 Christopher	Valid accounts file not containing the account	output.txt: Account not found, could not be deleted.	Transaction summary file showing no transactions
Ask for account number to delete	R2T1	agent deleteacct	Ask user to enter 7-digit account number	input.txt: login agent	Valid accounts file containing no accounts	output.txt: Prompt saying to enter a valid 7 digit account number	Transaction summary file not showing transaction
Ask for account name to delete	R3T1	agent deleteacct	Ask user to enter name attached to 7 digit account	input.txt: login agent deleteacct 4206969	Valid accounts file containing the account 4206969 Christopher	output.txt: Prompt saying to enter a valid name attached to account 4206969	Transaction summary file not showing transaction
Check the account number is valid, and save account number and name in transaction summary file	R4T1	agent deleteacct valid	Search for the user's account number in the list of valid account numbers	input.txt: login agent deleteacct 4206969 Christopher logout	Valid accounts file containing 4206969 Christopher	output.txt: Prompt saying deletion successful	Transaction summary file showing: 4206969 Christopher
Only accepted when logged in in agent mode	R5T1	machine deleteacct	Can't use deleteacct in an ATM session	input.txt: login machine deleteacct	Valid accounts file containing no accounts	output.txt: Error prompt saying you must be agent to delete accounts	Transaction summary file showing no transactions
	R5T2	agent deleteacct	Can't use deleteacct when not in a session	input.txt: login deleteacct	Valid accounts file containing	output.txt: Error prompt saying you	Transaction summary file showing no

			(haven't chosen ATM or agent yet)		no accounts	must be agent to delete accounts	transactions
No further transactions should be accepted on a deleted account	R6T1	agent createacct on deletedacct	Can create account with same name as deleted account because it has been deleted	input.txt: login agent deleteacct 4206969 Christopher logout login agent createacct 4206969 Christopher logout	Valid accounts file containing 4206969 Christopher	output.txt: Prompt saying account deleted, followed by prompt saying account created	Transaction summary file showing deletion of 4206969 Christopher followed by creation of account 4206969 Christopher
	R6T2	agent deposit into deletedacct	Can't deposit into a deleted account	input.txt: login agent deleteacct 4206969 Christopher logout login agent deposit 4206969	Valid accounts file containing 4206969 Christopher	output.txt: Prompt saying account deleted, followed by error prompt saying can't deposit into deleted account	Transaction summary file showing deletion of account and no deposit (due to account being deleted)
	R6T3	agent withdraw on deletedacct	Can't perform any transaction on deleted account.	input.txt: login agent deleteacct 4206969 Christopher logout login agent withdraw 4206969	Valid accounts file containing 4206969 Christopher	output.txt: Prompt saying account deleted, followed by error prompt saying withdraw could not be done on deleted account	Transaction summary file showing deletion of account and no withdraw (due to account being deleted)
	R6T4	agent transfer on deletedacct	Can't perform any transaction on deleted account.	input.txt: login agent deleteacct 4206969 Christopher logout login agent transfer	Valid accounts file containing 4206969 Christopher	output.txt: Prompt saying account deleted, followed by error prompt saying transfer	Transaction summary file showing deletion of account and no transfer (due to account

				4206969		could not be done on deleted account	being deleted)
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Transaction Code - **deposit**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Account number is valid for deposit/ account exists	R1T1	machine deposit 0123456 1000	Cant deposit into invalid account number/ non-existing account	input.txt: login machine deposit 0123456 1000	Valid accounts file with or without account numbers	output.txt: Error prompt stating invalid account number	Transaction summary file showing no transactions
	R1T2	agent deposit 0123456 1000	Cant deposit into invalid account number/ non-existing account	input.txt: login agent deposit 0123456 1000	Valid accounts file with or without account numbers	output.txt: Error prompt stating invalid account number	Transaction summary file showing no transactions
	R1T3	machine deposit 1234567 1000	Account number and amount for deposit is valid	input.txt: login machine deposit 1234567 1000 logout	Valid accounts file with account number: 1234567	output.txt: none	Transaction summary file showing 10 dollars deposited to account 1234567
	R1T4	agent deposit 1234567 1000	Account number and amount for deposit is valid	input.txt: login agent deposit 1234567 1000 logout	Valid accounts file with account number: 1234567	output.txt: none	Transaction summary file showing 10 dollars deposited to account 1234567
Amount to be deposited is a valid amount	R2T1	machine deposit 1234567 200001	Cant deposit amount greater than \$2000.00 at ATM	input.txt: login machine deposit 1234567 200001	Valid accounts file with account number: 1234567	output.txt: Error prompt stating user cannot deposit more than \$2000.00 at ATM	Transaction summary file showing no transactions
	R2T2	agent deposit	Cant deposit	input.txt: login	Valid accounts	output.txt: Error	Transaction summary

		1234567 100000000	amount greater than \$999,999.9 9 at agent	agent deposit 1234567 100000000	file with account number: 1234567	prompt stating user cannot deposit more than \$999,999.9 9 at agent	file showing no transaction s
	R2T3	machine deposit 1234567 200000	Deposit accepted at ATM	input.txt: login machine deposit 1234567 200000 logout	Valid accounts file with account number: 1234567	output.txt: none	Transaction summary file showing \$2000.00 deposited to account number 1234567
	R2T4	agent deposit 1234567 99999999	Deposit accepted at Agent	input.txt: login agent deposit 1234567 99999999 logout	Valid accounts file with account number: 1234567	output.txt: none	Transaction summary file showing \$999,999.9 9 deposited to account number 1234567
Daily deposit limit for ATM not reached	R3T1	agent deposit 1234567 150000	ATM cannot accept more than \$5000.00 per account per day	input.txt: login machine deposit 1234567 200000 deposit 1234567 200000 deposit 1234567 150000 logout	Valid accounts file with account number: 1234567	output.txt: Error prompt saying amount deposited exceeds daily limit	Transaction summary file showing \$4000.00 deposited to account number 1234567

Transaction Code - **withdraw**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Withdraw from an account	R1T1	machine withdraw	Perform withdrawal in ATM mode	input.txt: login machine withdraw 4206969 42000 logout	Valid accounts file with account 4206969 Christopher in it	output.txt: Successfull y withdrew \$420.00 from 4206969	Transaction summary file showing withdrawal of \$420.00 from 4206969

	R1T2	agent withdraw	Perform withdraw in agent mode	input.txt: login agent withdraw 4206969 42000 logout	Valid accounts file with account 4206969 Christopher in it	output.txt: Successfully withdrew \$420.00 from 4206969	Transaction summary file showing withdrawal of \$420.00 from 4206969
Ask for account number to withdraw	R2T1	machine withdraw accnum	Get account number to withdraw from (ATM mode)	input.txt: login machine withdraw	Valid accounts file with no accounts	output.txt: Prompt asking the user to enter a 7-digit account number to withdraw from	Transaction summary file showing no transactions
	R2T2	agent withdraw accnum	Get account number to withdraw from (agent mode)	input.txt: login agent withdraw	Valid accounts file with no accounts	output.txt: Prompt asking the user to enter a 7-digit account number to withdraw from	Transaction summary file showing no transactions
Ask for amount to withdraw	R3T1	machine withdraw amount	Get amount to withdraw (ATM mode)	input.txt: login machine withdraw 4206969	Valid accounts file with 4206969 Christopher	output.txt: Prompt asking the user to enter an amount to withdraw	Transaction summary file showing no transactions
	R3T2	agent withdraw amount	Get amount to withdraw from (agent mode)	input.txt: login agent withdraw 4206969	Valid accounts file with 4206969 Christopher	output.txt: Prompt asking the user to enter a 7-digit account number to withdraw from	Transaction summary file showing no transactions
Check account number is valid and that amount is valid	R4T1	machine withdraw accname invalid	Can't withdraw from an invalid account name	input.txt: login machine withdraw jfin141	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying invalid account name	Transaction summary file showing no transactions
	R4T2	agent withdraw accname invalid	Can't withdraw from an invalid	input.txt: login agent withdraw	Valid accounts file with 4206969	output.txt: Error prompt saying	Transaction summary file showing no

			account name	jfin141	Christopher	invalid account name	transactions
	R4T3	machine withdraw amount invalid	Can't withdraw an invalid amount	input.txt: login machine withdraw 4206969 iejfij3	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying invalid amount	Transaction summary file showing no transactions
	R4T4	agent withdraw amount invalid	Can't withdraw an invalid amount	input.txt: login agent withdraw 4206969 iejfij3	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying invalid amount	Transaction summary file showing no transactions
Withdrawals above \$1000 should be rejected in ATM mode (\$999,999.99 in agent mode)	R5T1	machine withdraw abovelimit	Can't withdraw above \$1000 in ATM mode	input.txt: login machine withdraw 4206969 2000000	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying you can't withdraw more than \$10,000.00 in ATM mode	Transaction summary file showing no transactions
	R5T2	agent withdraw above limit	Can't withdraw above \$999,999.99 in ATM mode	input.txt: login agent withdraw 4206969 392482938 498	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying you can't withdraw more than \$999,999.99 in ATM mode	Transaction summary file showing no transactions
A total of at most \$5000 can be withdrawn from an account per day (MACHINE MODE ONLY, unlimited in agent)	R6T1	machine withdraw above daily limit	Can't withdraw more than \$5,000 total per day in machine mode	input.txt: login agent withdraw 4206969 400000 logout login agent withdraw 4206969 200000	Valid accounts file with 4206969 Christopher	output.txt: Prompt saying withdrew \$4000.00 followed by prompt saying you can not withdraw another \$2000.00 due to \$5000.00 ATM limit per day	Transaction summary file showing \$4000.00 withdrawn, no further transactions
	R6T2	agent withdraw no limit	Can withdraw without limit (AGENT	input.txt: login agent withdraw 4206969	Valid accounts file with 4206969 Christopher	output.txt: Prompt saying withdrew \$60,000.00	Transaction summary file showing \$60,000.00

			ONLY)	6000000 logout		successfull y	withdrawn, no further transactions
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Transaction Code - **transfer**

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Both account numbers must be valid and existing	R1T1	machine transfer 0123456 0012345 200000	Can't transfer from non-existing account to non-existing account	input.txt: login machine transfer 0123456 0012345 200000	Valid accounts file with or without valid accounts	output.txt: Error prompt stating neither account is valid	Transaction summary file showing no transactions
	R1T2	agent transfer 0123456 0012345 200000	Can't transfer from non-existing account to non-existing account	input.txt: login agent transfer 0123456 0012345 200000	Valid accounts file with or without valid accounts	output.txt: Error prompt stating neither account is valid	Transaction summary file showing no transactions
	R1T3	machine transfer 1234567 0123456 200000	Can't transfer from existing account to non-existing account	input.txt: login machine transfer 1234567 0123456 200000	Valid accounts file with account number 1234567	output.txt: Error prompt stating an account is invalid	Transaction summary file showing no transactions
	R1T4	agent transfer 1234567 0123456 200000	Can't transfer from existing account to non-existing account	input.txt: login agent transfer 1234567 0123456 200000	Valid accounts file with account number 1234567	output.txt: Error prompt stating an account is invalid	Transaction summary file showing no transactions
	R1T5	machine transfer 1234567 2345678 200000	Can transfer valid amount given valid account numbers	input.txt: login machine transfer 1234567 2345678 200000 logout	Valid accounts file with account number 1234567 and 2345678	output.txt: none	Transaction summary file showing \$2000.00 transfer from account 1234567 to account 2345678
	R1T6	agent transfer	Can transfer	input.txt: login	Valid accounts	output.txt: none	Transaction summary

		1234567 2345678 200000	valid amount given valid account numbers	agent transfer 1234567 2345678 200000 logout	file with account number 1234567 and 2345678		file showing \$2000.00 transfer from account 1234567 to account 2345678
Amount to be transferred is valid	R2T1	machine transfer 1234567 2345678 1000001	Can't transfer amount greater than \$10,000.00 in ATM mode	input.txt: login machine transfer 1234567 2345678 1000001	Valid accounts file with account number 1234567 and 2345678	output.txt: Error prompt stating transfer amount limit exceeded	Transaction summary file showing no transaction s
	R2T2	agent transfer 1234567 2345678 100000000	Can't transfer amount greater than \$1,000,000. 00 in agent mode	input.txt: login agent transfer 1234567 2345678 100000000	Valid accounts file with account number 1234567 and 2345678	output.txt: Error prompt stating transfer amount limit exceeded	Transaction summary file showing no transaction s
	R2T3	machine transfer 1234567 2345678 1000000	Can transfer \$10,000.00 or less in ATM mode	input.txt: login machine transfer 1234567 2345678 1000000 logout	Valid accounts file with account number 1234567 that has at least \$10,000.00 and account number 2345678	output.txt: none	Transaction summary file showing \$10,000.00 transfer from account 1234567 to account 2345678
	R2T4	agent transfer 1234567 2345678 99999999	Can transfer \$999,999.9 9 or less in agent mode	input.txt: login agent transfer 1234567 2345678 100000000 logout	Valid accounts file with account number 1234567 that has at least \$999,999.9 9 and account number 2345678	output.txt: none	Transaction summary file showing \$10,000.00 transfer from account 1234567 to account 2345678
Daily transfer limit not exceeded	R3T1	agent transfer 1234567 2345678 100000	Can't transfer more than \$10,000.00 in a single	input.txt: login agent transfer 1234567	Valid accounts file with account number	output.txt: Error prompt stating current	Transaction summary file showing \$9,500.00

			day per account	2345678 950000 transfer 1234567 2345678 100000 logout	1234567 that has at least \$9500.00 and account number 2345678	amount exceeds daily transfer limit	transfer from account 1234567 to account 2345678
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Transaction Summary File

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Each line is at most 61 characters (plus newline)	R1T1	summary past line limit	Can't have a summary transaction line past 61 characters (plus newline)	input.txt: login machine withdraw 4206969 000000000 00010 logout	Valid accounts file with account 4206969 Christopher in it	output.txt: Error prompt saying transaction line would extend past 61-character limit	Transaction summary file showing no transactions (due to failure)
Transaction code is always the first three characters of the message line	R2T1	summary transaction code not front	Transaction summary code MUST be first three chars	input.txt: 4206969 5000 MOM 5050778 Christopher	Valid accounts file with account 4206969 Christopher and 5050778 Tom in it	output.txt: Error prompt saying transaction summary code must be first three characters	Transaction summary file showing no transactions (due to failure)
Items are separated by exactly one space	R3T1	summary elements separated	Summary elements must be delimited by spaces	input.txt: DEL42069 69 000 0000000 Christopher	Valid accounts file with account 4206969 Christopher	output.txt: Error prompt saying transaction summary elements must be separated by spaces: "CCC AAA BBB DDD"	Transaction summary file showing no transactions (due to failure)
Account numbers are always exactly seven decimal digits not beginning with 0	R4T1	summary valid accnum	Account number in summary must begin with 0 and be exactly 7 digits	input.txt: DEL 0314913 000 0000000 Christopher	Valid accounts file with no accounts	output.txt: Error prompt saying transaction summary account	Transaction summary file showing no transactions (due to failure)

						number must be 7 digits and no leading 0	
Monetary amounts are between 3 and 8 decimal digits, 000 to 99999999	R5T1	summary valid amounts	Amounts in summary must be between 3 and 8 decimal digits, 000 to 99999999	input.txt: DEP 4206969 1 0000000 Christopher	Valid accounts file with account 4206969 Christopher	output.txt: Error prompt saying transaction summary amount must be between 3 digits and 8 digits	Transaction summary file showing no transactions (due to failure)
Account names are between 3 and 30 alphanumeric characters, possibly including spaces, but not beginning or ending with a space	R6T1	summary name small	Name in summary line must be between 3 and 30 chars	input.txt: NEW 4206969 000 0000000 Li	Valid accounts file with no accounts	output.txt: Error prompt saying transaction summary name must be between 3 and 30 chars	Transaction summary file showing no transactions (due to failure)
	R6T2	summary name beginning space	Name in summary can't begin with space	input.txt: NEW 4206969 000 0000000 <two spaces> Rob	Valid accounts file with no accounts	output.txt: Error prompt saying name in sum file can't begin with space	Transaction summary file showing no transactions (due to failure)
	R6T3	summary name ending space	Name in summary can't end with space	input.txt: NEW 4206969 000 0000000 Rob <two spaces>	Valid accounts file with no accounts	output.txt: Error prompt saying name in sum file can't end with space	Transaction summary file showing no transactions (due to failure)
Unused numeric fields are filled with zeroes	R7T1	summary unused cents	Unused cents should be 000	input.txt: NEW 4206969 000 0000000 Rob	Valid accounts file with 4206969 Rob	output.txt: Created account Rob!	Transaction summary file showing: NEW 4206969 000 0000000 Rob
	R7T2	summary unused number	Unused number should be 0000000	input.txt: NEW 4206969 000 0000000	Valid accounts file with 4206969 Rob	output.txt: Created account Rob!	Transaction summary file showing: NEW

				Rob			4206969 000 0000000 Rob
Unused account name fields are filled with three asterisks: ***	R8T1	summary unused name	Unused name should be ***	input.txt: NEW 4206969 000 0000000 ***	Valid accounts file with 4206969 and no name	output.txt: Created account 4206969 with no name	Transaction summary file showing: NEW 4206969 000 0000000 ***
Set of transactions ends with an end of session code (EOS)	R9T1	summary end code	Can't write transactions without EOS code	input.txt: NEW 4206969 000 0000000 Christopher ----- DEP 4206969 4194 0000000 Christopher	Valid accounts file with 4206969 Christopher	output.txt: Error prompt saying no EOS character after logout	Transaction summary file blank due to lack of EOS

Valid Accounts List File

Requirement	Test No.	Test Name	Purpose	Input	Input Files	Terminal Output	Output Files
Each line is exactly 7 characters	R1T1	line exceeds 7 characters	Each line must only be 7 characters	input.txt: List: [1234567, 1234765, 12345678]	Valid accounts file containing one invalid account	output.txt: Error prompt stating line exceeds 7 characters	Transaction summary file showing no transactions
	R1T2	valid accounts file (only 7 characters per line)	Accounts are all valid in file	input.txt: List: [1234567, 1234765, 1234367]	Valid accounts file containing all valid accounts	output.txt: none	Transaction summary file showing no transactions
Valid account numbers	R2T1	account number invalid length	Can't have accounts greater than 7 characters	input.txt: List: [4206969, 51999993, 0000000]	Valid accounts file containing one invalid account	output.txt: Error prompt saying account numbers must be 7 digits	Transaction summary file with nothing written
	R2T2	account number	Can't have account	input.txt: List:	Valid accounts	output.txt: Error	Transaction summary

		begins with zero	number beginning with 0	[0319314, 0000000]	file containing one invalid account	prompt saying account numbers cannot begin with 0	file with nothing written
End of list is 0000000	R3T1	list invalid ending	List cannot end without special number 0000000	input.txt: List: [4206969]	Valid accounts file containing no special account number	output.txt: Error prompt saying valid numbers list must end with special number 0000000	Transaction summary file with nothing written
	R3T2	list valid ending	List ends with special account number	input.txt: List: [4206969, 0000000]	Valid accounts file containing valid number	output.txt: Successfully read list file!	Transaction summary file with nothing written

Test Plan Document

Test File Structure

All test files are text files placed in their respective test case directories. The hierarchy of how these folders are stored is as follows:

- **<root_test_dir>** (root folder of test cases)
 - **<transactions_dir>** (folder holding all test files for each transaction code)
 - **<transaction_code>** (i.e. *login*, *withdraw*)
 - **<R#>** (requirement number according to test case table)
 - **<T#>** (test case number according to test case table)
 - **accounts.txt** (valid accounts list file)
 - **input.txt** (the input for this specific test case)
 - **output_expected.txt** (the output we expect from this test case)
 - **testing.py** (the script that will run the tests)

Example of R2T1 for **login**:

- **test_files**
 - **transactions**
 - **login**
 - **R2**
 - **T1**
 - **accounts.txt**
 - **input.txt**
 - **output_expected.txt**
- **testing.py**

Running Test Cases

Test cases will be ran using the following instructions

1. Run **testing.py** in the **test_files** directory using the following syntax:
 - ⇒ `python testing.py login R2T1`
2. The testing script will produce whether the tests failed or passed depending on the exact string comparison of the output from running the inputs through the script and the expected outputs we have provided with each test case.
3. The user runs the next test.
4. OPTIONAL: the user can run all tests using:
 - ⇒ `python testing.py all`

Validation

Validation will be done by comparing the console output of the script with the inputs for the test and the **output_expected.txt** that we have provided in the <T#> folder.

Storage of Results

Results will be stored under the **results** directory in each test case folder. This folder is generated on the first run of a respective test case and is continually populated with each successive run of that case. The results will be saved in a report-readable .txt file in the results folder with a filename that iterates with each test:

⇒ result1 (2019-10-05).txt