Failure Observed	Test failed	What was being tested	What was wrong about its output	Actions taken to address failure
Login				
login1	diff login1.bto & login1.out	Test that we can login as standard	Missing colon and missing newline at end of file login1.out	Remove the newline from the login1.bto and add a colon to "enter account holder name:" in the code
login2	diff login2.bto & login2.out	Test that we can login as admin	missing newline at end of file login2.out	Remove the newline from the login2.bto
login3	diff login3.bto & login3.out	Test that the account holder name is accepted/verified for standard session	After an invalid account holder name is entered the program would terminate, the test case would prompt welcome to banking session until a valid session is started resulting in login3.out missing 6 lines.	Added a do while loop in the main cpp with a boolean variable to continue looping until a sesson has started
login4	diff login4.bto & login4.out	Test that no transactions other than login should be accepted before a login	login4.bto went straight to enter session type before login inputed	Removed the incorrect line from login4.bto expected fille
		Test that no transactions other than login should be accepted	After one invalid input transaction login4.out ended, but login4.inp passed	
login4	diff login4.bto & login4.out	before a login Test that no transactions other than login should be accepted	in 7 more invalid transactions login4.bto expected test case was incorrect, continued to prompt 'enter	Session::login() method, removed an exit statement Change login4.bto test file so that all occurences of 'enter session type:' was
login4	diff login4.bto & login4.out	before a login	session type' before input was 'login'	was replaced with 'welcome to the banking system'
login5	diff login5.bto & login5.out	Test that once we login, no further logins are accepted until after a logout occurs	login5.out missing new line at end of file	Remove the new line from login5.bto test file
		Test that after standard login, only unprivileged transactions	login6.bto printed 'invalid input' but the login6.out file printed	
login6	diff login6.bto & login6.out	are accepted	'privileged transaction' Our etf files used " " as seperator but code(atf) used " "	Modified login6.bto test file to match the code
login1, login2, login3		Comparing the expected session transaction file with the actual	Our etf files used "PPPPPPP" for account balance but code used "PPPPPPP"	Modified the Transaction::logout() method to append the correct string to atf
login4, login5, login6	diff login(i).etf & login(i).atf	transaction file	- теренти	Tiles
Logout				
	diff logout1 bto 9 logout1 off	Test that legacit is only accounted when actually legaced in	logout1.bto test file printed 'enter session type:' before login passed as	Modified logout1.bto test file removing the 'enter session type' and replacing it with 'invalid input'
logout1	diff logout1.bto & logout1.atf	Test that logout is only accepted when actually logged in	input, logout1.out had the correct output logout2.bto test file printed newline at end of file but logout2.out	
logout2	diff logout2.bto & logout2.atf	Test that logout will end the session in admin	did not logout4.bto test file printed newline at end of file but logout4.out	Remove the newline from logout2.bto
logout4	diff logout4.bto & logout4.atf	Test that logout will end the session in standard	did not	Remove the newline from logout4.bto
			logout3.bto would print 'welcome to banking system' after 'logout'	Removed the 'welcome to banking system' from logout3.bto test file, if the session continues to loop then the session will never end, a new session
logout3	diff logou3.bto & logout3.atf	Test that after logout is invoked, stop accepting all transactions except login	is inputted, but the logout3.out file would just print 'session terminated' and the banking terminal would no longer take input	has to be started in order to get the 'welcome to bank system' prompt after logout has been called. Otherwise all of our test files will need to be updated.
	um rogous.blo & rogous.au		All test etf files had a new line and were 39 characters long, and	
logoout1, logout2, logout3, logout4	diff logout(i).etf & logout(i).atf	Comparing the expected session transaction file with the actual transaction file	all atf files didn't have a new line and were 41 characters long.	Added 2 characters to all of the logout.etf files and removed the new line at the end of the file
D				
Deposit		d1:Test that the admin is able to access deposit transaction.		
deposit1&deposit2	diff deposit1.bto & deposit1.out diff deposit2.bto & deposit2.out	d2:Test that the standard account is able to access deposit transaction.	Output missing colon at the end of each terminal line	Added colon to end of the line to ensure matching output.
,		Test that the admin is able to complete a valid deposit	Incorrect input in the .inp file: Input directs to paybill transaction as	
deposit3	diff deposit3.bto & deposit3.out	transaction.	opposed to deposit transaction. Incorrect terminal expected file: Erronous transaction confirmation	Corrected input file to match expected input: paybill> deposit. Removed erronous line in expected file to conform to new guidelines around
deposit5	diff deposit5.bto & deposit5.out	Test that the admin account cannot complete an invalid deposit transaction.	that was removed during development of tests in p1 & no check in code to ensure that deposit doesn't hit bank max.	expected terminal output. Fixed code to include check to ensure max isn't violated. Also included check to ensure number input.
deposito	dili deposits.bio & deposits.but	d1:Test that the admin is able to access deposit transaction.	to ensure that deposit doesn't hit bank max.	violated. Also included check to ensure number input.
	diff deposit1.bto & deposit1.out	d2:Test that the standard account is able to access deposit transaction	Fixing deposit5 raised errors around if input was an integer value or not	
deposit1&deposit2&deposit3	diff deposit2.bto & deposit2.out diff deposit3.bto & deposit3.out	d3:Test that the admin is able to complete a valid deposit transaction.	and since we were originally inputting a value of type float e.g. 1.00 it caused incorrect output.	Fixed input file to correctly follow requirements — e.g. that the decimal position is implied and with correct number of digits — 1.00 to 00000100.
		Test that the standard account cannot complete an invalid	Incorrect terminal expected file: Erronous transaction confirmation	Removed erronous line in expected file to conform to new guidelines around
deposit6	diff deposit6.bto & deposit6.out	deposit transaction.	that was removed during development of tests in p1	expected terminal output. Added colon to end of withdrawal terminal output lines in code.
		T		Added check to ensure user cannot use funds just deposited basically checks
deposit7	diff deposit7.bto & deposit7.out	Test that funds deposited in this session are unavailable for use (withdrawal) in standard.	Output missing colon at the end of each terminal line for withdrawal Check to ensure user cannot use funds just deposited not implemented	whether or not sufficient funds exist since the transaction is recorded after logout.
deposit8	diff deposit8.bto & deposit8.out	Test that funds deposited in this session are unavailable for use (pavbill) in standard.	Type mismatch — similar to above where we were inputting a value of type float e.g. 1.00.	Fixed input file to correctly follow requirements e.g. that the decimal position is implied and with correct number of digits 1.00 to 00000100.
.,		Test that funds deposited in this session are unavailable for use	,,,	, , , , , , , , , , , , , , , , , , , ,
deposit8	diff deposit8.bto & deposit8.out	(paybill) in standard. Test that funds deposited in this session are unavailable for use	Erronous output in code: extra word Type mismatch — similar to above where we were inputting a value of	Removed extra word to match expected out Fixed input file to correctly follow requirements e.g. that the decimal position
deposit9	diff deposit9.bto & deposit9.out	(withdrawal) in admin.	type float e.g. 1.00.	is implied and with correct number of digits 1.00 to 00000100.
deposit9	diff deposit9.bto & deposit9.out	Test that funds deposited in this session are unavailable for use (withdrawal) in admin.	Error in expected terminal output: Different than what was expected as per how everyone else was asking for account holder name.	Fixed expected terminal output
deposit10	diff deposit10.bto & deposit10.out	Test that funds deposited in this session are unavailable for use (paybill) in admin.	Type mismatch — similar to above where we were inputting a value of type float e.g. 1.00.	Fixed input file to correctly follow requirements — e.g. that the decimal position is implied and with correct number of digits — 1.00 to 00000100.
аорожно	am depositro oto di depositro odi	(payon) it admit.	ypo nous o.g. 1.00.	is implied and with correct number of digits 1.00 to 00000100.
	diff deposit1.etf & deposit1.atf		Error in code out: One extra space in the actual transaction file from reqs	Fixed by removing space in code. Fixed by adding space in expected.
deposit1 et al.	et al.	As above for all	Error in expected file: One space too short from reqs	Swapped underscores for spaces.
deposit1 et al.	diff deposit1.etf & deposit1.atf et al.	As above for all	Error in code out: Type mismatch as above outputting value of type float	Fixed by changing code out to a string that has integer type by stoi.
Paybill				
paybill4	diff paybill4.bto & paybill4.out	Test that the admin is able to access paybill transaction and enter valid company CQ.	Error in expected terminal output: asked for "amount" instead of "the amount"	Added the word "the" to the expected terminal output.
	,,,,	Test that the admin is able to access paybill transaction and enter	Error in expected terminal output: asked for "amount" instead of	
paybill5	diff paybill5.bto & paybill5.out	valid company FI. Test that the admin account is able to access paybill transaction	"the amount" Error in the expected terminal output: Output "invalid payee" instead of	Added the word "the" to the expected terminal output.
paybill9	diff paybill9.bto & paybill9.out	but unable to enter invalid company "AQ".	"invalid input"	Switched "invalid payee" with "invalid input" in the expected terminal out file.

Failure Observed	Test failed	What was being tested	What was wrong about its output	Actions taken to address failure
paybill10	diff paybill10.bto & paybill10.out	Test that the standard account is able to access paybill transaction but unable to enter invalid company "AQ".	Error in the expected terminal output: Output "invalid payee" instead of "invalid input"	Switched "invalid payee" with "invalid input" in the expected terminal out file.
			Error in the expected terminal output: Output "paybill complete" instead of	Switched "paybill complete" with "payment successful" in the expected
paybill11	diff paybill11.bto & paybill11.out	Test that the admin is able to complete a valid paybill transaction. Test that the standard account is able to complete a valid paybill	"payment successful"	terminal out file.
paybill12	diff paybill12.bto & paybill12.out	transaction.	Error in the expected terminal output: Output "paybill complete" instead of "payment successful"	Switched "paybill complete" with "payment successful" in the expected terminal out file.
paybill13	diff paybill13.bto & paybill13.out	Test that the standard account cannot complete an invalid paybill transaction (>2000).	Error in code: Code should reject >2000 payment in standard session mode & erronous capital 'A' in expected terminal output	Amended code to include new if statement to check if session is standard and payment is greater than 2000 & removed capital 'A' from expected terminal or
	μ,,			,,,
			Error in code out: One extra space in the actual transaction file from reqs Error in expected file: One space too short from regs	Fixed by removing space in code. Fixed by adding space in expected.
paybill1 et al.	diff paybill1.etf & paybill1.atf et al	As above for all	Error in code out: Underscores where spaces should be	Swapped underscores for spaces.
paybill1 et al.	diff paybill1.etf & paybill1.atf et al	As above for all	Error in code out: Type mismatch as above outputting value of type float	Fixed by changing code out to a string that has integer type by stoi.
01				
Changeplan	diff changeplan1.bto &		Error in expected terminal output: Asks simply for "account name"	
changeplan1	changeplan1.out	Test for when request changeplan, verifies privilege status	instead of "account holder name"	Swapped "account name" to "account holder name"
	diff changeplan2.bto &		Error in expected terminal output: Asks simply for "account name" instead of "account holder name"	Swapped "account name" to "account holder name"
changeplan2	changeplan2.out	Test that specify bank account name that exists, then cancels	Error in code output: Missing colon	Added colon where missing
changeplan3	diff changeplan3.bto & changeplan3.out	Test that specify account number that exists, then cancels	Error in input: Missing input of account holder name	Added line to input the account holder's name
	diff changeplan4.bto &		Error in expected terminal output: Asks simply for "account name"	·
changeplan4	changeplan4.out	Test that confirms change of plan	instead of "account holder name" Infinitely looped.	Swapped "account name" to "account holder name" Fixed infinite loop by removing method call within itself now returns false.
	diff changenlan5 hts 9		Error in expected terminal output: Asks simply for "account name" instead of "account holder name"	Bto files updated accordingly. Swapped "account name" to "account holder name"
changeplan5	diff changeplan5.bto & changeplan5.out	Test that handles invalid plan	Code output "unknown plan"	Removed "unknown plan" in favour of "invalid input"
changeplan6	diff changeplan6.bto & changeplan6.out	Test for inputting changeplan but is unprivileged	Terminal output incorrect: Used "invalid input" as opposed to "privileged transaction" as we decided.	Changed "invalid input" to "privileged transaction"
Criangepiano	Changepiano.out	rest for inputting changeplan but is unprivileged	Terminal output incorrect: Erronous use of cancel when asking for	Changed invalid input to privileged transaction
	diff changeplan7.bto &		transaction tune	Removed cancel in incorrect place Swapped "account name" to "account holder name"
changeplan7	changeplan7.out	Test that has invalid account name inputted	Error in expected terminal output: Asks simply for "account name" instead of "account holder name"	Swapped account name to account node name
			Terminal output incorrect: Erronous use of cancel when asking for transaction type.	Removed cancel in incorrect place
	diff changeplan8.bto &		Error in expected terminal output: Asks simply for "account name"	Swapped "account name" to "account holder name"
changeplan8	changeplan8.out	Test that has invalid account number inputted	instead of "account holder name"	
			Error in code out: One extra space in the actual transaction file from regs	Fixed by removing space in code.
changeplan1 et al	diff changeplan1.etf & changeplan1.atf et al	As above for all.	Error in expected file: One space too short from reqs Error in code out: Underscores where spaces should be	Fixed by adding space in expected. Swapped underscores for spaces.
-	diff changeplan4.etf &		Error in code out: Missing extra characters to specify the plan being	
changeplan4	changeplan4.atf	Test that confirms change of plan	changed to	Fixed by adding characters in successful changeplan to the transaction file.
Create				
			create1.out missing new line at end of the file Invalid input and hangs when it gets to "cancel" in create1.input	
create1	diff create1.bto & create1.out	Test that verifies privilege status on create request		Removed extra line from create1.bto
create2	diff create2.bto & create2.out	Test that asks for existing account holder name and cancels	create2.out missing new line at end of the file create3.out missing new line at end of the file	Removed extra line from create2.bto
		Tool that involve now again they 20 shareston	create3.out missing "create account specified" prompt after user inputs	removed "create account specified" prompt in create3.bto
create3	diff create3.bto & create3.out	Test that inputs new name more than 20 characters	"create"	Removed extra line from create3.bto Adjusted prompt from "enter initial amount:" to "enter balance:" in create4.bto
	diff create4.bto & create4.out	Test that inputs new valid name and cancels	create4.out missing new line at end of the file incorrect promot in out file	Removed extra line from create4.bto
create4	dili create4.bto & create4.but	rest that inputs new valid name and cancers	create5.out missing new line at end of the file	Adjusted prompt from "enter initial amount:" to "enter balance:" in create5.bto
	diff create5 bto & create5 out	Test that input for initial balance for new account is	incorrect prompts in out file No checking for invalid input for balance	Removed extra line from create5.bto
create5	diff creates.bto & creates.out	greater than 8 digits Test that asks for initial balance for new account name that is	create6.out has incorrect prompt in out file	added checking for value going over 8 digits Adjusted prompt from "enter initial amount:" to "enter balance:" in create6.bto
create6	diff create6.bto & create6.out	between 0 and 99999.99	create6.out missing new line at end of the file	Removed extra line from create6.bto
		Test that asks for initial balance for existing account name	create7.out has incorrect prompt in out file	Adjusted prompt from "enter initial amount:" to "enter balance:" in create7.bto Removed extra line from create7.bto
create7	diff create7.bto & create7.out	that is between 0 and 99999.99	create7.out missing new line at end of the file	Removed extra prompt from create7.bto
create8	diff create8.bto & create8.out	Test that has user request create but is unprivileged	create8.out has incorrect prompt in out file create8.out missing new line at end of the file	Adjusted prompt from "invalid input" to "privileged transaction" in create8.bto Removed extra line from create8.bto
	aliff between alf and a		all etf files missing extra spaces at the end of the string	Add-dd
create1 ~ 8	diff between etf and atf	Comparing output between etf and atf		Added extra spaces in all etf files
Disable				
disable1, disable2, disable3, disable4, disable5, disable6.			all bto files had an extra line at the end	Adjusted prompt from bto files to keep up to date with the out files
disable7, disable8 disable1 disable2 disable3	diff between bto and out	Comparing output between bto and out	bto and out had different prompts for the same transaction	Removed extra line from all bto files
disable4, disable5, disable6,			all etf files missing extra spaces at the end of the string	
disable7, disable8	diff between etf and atf	Comparing output between etf and atf		Added extra spaces in all etf files
Delete				
			delete1 out missing new line at end of the file	Removed extra line from delete1.bto Removed extra prompt from delete1.bto

Failure Observed	Test failed	What was being tested	What was wrong about its output	Actions taken to address failure
delete2	diff delete2.bto & delete2.out	Test priviledge status on unprivileged user using delete()	delete2.out missing new line at end of the file delete2.out missing prompts in bto file because of new implementations	Removed extra line from delete2.bto Added extra prompt to delete2.bto
		Test that delete will request account holder name and	delete3 inp was missing a call resulting in a infinite loop delete3 inp has a call where it will return true but in the bto file it expects a false	Added line for the user to prompt the account number in delete3.inp Adjusted prompt from "account not found" to "account number not found" Removed extra prompt "delete specified"
delete3	diff delete3.bto & delete3.out	that it is verified	Missing collen in prompt "enter account number"	Adjusted prompt so it correctly displays ":" as well Removed extra line from delete4.bto
delete4	diff delete4.bto & delete4.out	Test that delete will request account number and that it is verified	delete4.out missing new line at end of the file delete4.out missing prompts in bto file because of new implementations	Added extra prompt to delete4.bto
delete5	diff delete5.bto & delete5.out	Test that account name and number is verified	delete5.out missing new line at end of the file delete5.out missing prompts in bto file because of new implementations	Removed extra line from delete5.bto Removed extra prompt from delete5.bto
		Test that program prevents transactions on a deleted account		Implemented method which would check status of account Removed extra line from delete6.bto
delete6	diff delete6.bto & delete6.out		missing a method that would check if an account is deleted or not	Removed extra prompt from delete6.bto
delete7	diff delete7.bto & delete7.out	Test that account balance is 0 in order to properly delete	delete7.inp was calling cancel at a point where it shouldn't	Adjusted lines in delete7.inp
delete1, delete2, delete3, delete4, delete5, delete6, delete7	diff with etf and atf	Comparing etf with atf	Looks like the same output but still giving an error	Added missing spaces at end of all etf files
Withdrawal				
		Test that system ask for account holders name when	withdrawal1.bto didn't have line 'transaction cancelled' but	Added the 'transaction cancelled' line to withdrawal1.bto since 'cancel'
withdrawal1	diff withdrawal1.bto & withdrawal1.out	logged in as admin	withdrawal1.out did	passed in as input after enter account number prompt
withdrawal2	diff withdrawal2.bto & withdrawal2.out	Test that withdrawal transaction is accepted for standard session	withdrawal2.out file missing 'withdrawal succesful' line	Transaction::withdrawal() method the if statements checking the withdrawal amount had an error with the comparison between integers
withdrawal4	diff withdrawal4.bto & withdrawal4.out	Test that the account holder currently logged in has a valid bank account	withdrawal4.bto printed "account holder does not exist" and withdrawal4.out printed "account not found" withdrawal4.bto printed "bank account number invalid" and withdrawal4.out printed "account number not found"	Made adjustment to the withdrawal.blo output to match with withdrawal4.out to be consistent with the rest of the code
withdrawal5	diff withdrawal5.bto & withdrawal5.out	Test that a standard session can only withdraw a maximum of \$500.00	withdrawal5.bto prints "maximum withdrawal for a standard session is \$500.00" and withdrawal5.out prints "invalid input"	Made adjustment to withdrawal5.bto to be consistent with withdrawal5.out. Just print 'invalid input' for simplicity
withdrawal6	diff withdrawal6.bto & withdrawal6.out	Test that the account will have an available balance of at least \$0.00 after withdrawal	withdrawal6.bto prints "insufficient funds for withdrawal" and withdrawal6.out prints "invalid input"	Made adjustment to withdrawal6.bto to be consistent with withdrawal6.out. Just print 'invalid input' for simplicity. Also, changed the input file so that this test was an admin session working with values over \$500.
withdrawal1, withdrawal2, withdrawal3, withdrawal4, withdrawal5, withdrawal6,	diff withdrawal(i).etf & withdrawal(i).atf	Comparing the expected session transaction file with the actual transaction file	All test etf files had a new line and were 39 characters long, and all atf files didn't have a new line and were 41 characters long. All test etf files used '' as separator but atf (code) using '_"	Added 2 characters to all of the withdrawal eff files and removed the new line at the end of the file Transaction: withdrawal() method change string to append to file to use '' as separator
Transfer			transfer1.out could not find the account number, even though the account	Transaction::validateAccountNumber() method modified. Added a conditional
transfer1	diff transfer1.bto & transfer1.out	Test that the system ask for the account holder name if logged in as admin	transfer .out could not find the account number, even though the account number existed. transfer1.out resulted in a failed transfer but transfer1.bto resulted in a successful transfer	Transaction::vailgateAccountnumber() method modified. Added a conditional to check whether the currentTransaction is transfer and check current bank account file to see if the secound account number exists.
transfer4	diff transfer4.bto & transfer4.out	Test that the account holder currently logged in has a valid account	transfer4.bto printed 'account holder name not found' but transfer4.out printed 'account not found'	Modified transfer4.bto test case to match with transfer4.out to stay consistent with the rest of the test cases and code.
transfer5	diff transfer5.bto & transfer5.out	Test that the bank account the funds are being transferred to is a valid account	transfer5.bto printed 'bank account number(to) invalid' but transfer5.out printed 'account number not found'	Modified transfer5.bto test case to match with transfer5.out to stay consistent with the rest of the test cases and code.
transfer6	diff transfer6.bto & transfer6.out	Test that the maximum transfer for a standard session is \$1000.00	transfer6.bto printed 'transfer limit for a standard session is \$1000' and transfer6.out 'invalid input' extra new line at the end of transfer6.bto	"Modified transfer6.bto test case to match with transfer6.out to stay consistent with the rest of the test cases and code." Remove new line from transfer6.bto
transfer7	diff transfer7.bto & transfer7.out	Test that the account balance will be at least \$0.00 after transfer		
transfer1, trasnfer2 transfer3, transfer4, transfer5, transfer6 trasnfer7	diff transfer(i).etf & transfer(i).atf	"Comparing the expected session transaction file with the actual transaction file"	All test etf files had a new line and were 39 characters long, and all atf files didn't have a new line and were 41 characters long. All test etf files used '' as separator but atf (code) using '_"	Added 2 characters to all of the transfer.etf files and removed the new line at the end of the file Transaction::transfer() method change string to append to file to use ' ' as separator