

Exploratory (Manual Non-scripted) Testing – Abdul, Azmath

Test Case #	Use Case	Function Being Tested	Initial System State	Input	Expected Output	The actual outcome	How to recreate
1	System Startup	System is started when the switch is turned "on"	System is off	Activate the "on" switch	System requests the initial cash amount	System requested the initial cash amount	N/A
2	Session	System reads a customer's ATM card	System is on and idle	Insert a readable card	Card is accepted; system asks for entry of PIN	Card was accepted; system asked for entry of PIN	N/A
3	Session	System accepts customer's PIN	System prompts for PIN entry	Enter correct PIN (e.g., 42)	System displays a menu of transaction types	System displayed a menu of transaction types	N/A
4	Session	System handles an invalid PIN	System prompts for PIN entry	Enter an incorrect PIN	Error message is displayed; system prompts for re-entry of PIN	Error message was displayed; system prompts for re-entry of PIN	N/A
5	Withdrawal	System performs a legitimate withdrawal transaction properly	System displays withdrawal options	Select a withdrawal amount within account balance and ATM cash	Cash is dispensed; receipt printed with correct amount and updated balance; transaction logged	Wrong amount of cash is dispensed than what is selected; receipt printed with incorrect amount requested but correct correlating updated balance; transaction logged with incorrect amount	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 1. Press 1. Press 1.
6	Withdrawal	System verifies sufficient ATM cash for withdrawal	ATM is started with limited cash relative to request	Select a withdrawal amount greater than available ATM cash	System displays a message indicating insufficient ATM cash; prompts user to	System displays a message indicating insufficient ATM cash; prompts user to	N/A

					choose a different amount	choose a different amount	
7	Withdrawal	System verifies sufficient account balance for withdrawal	System prompts for withdrawal amount	Select a withdrawal amount exceeding account balance	System displays a message indicating insufficient funds; offers the option to perform another transaction	System proceeds with transaction then offers the option to perform another transaction	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 1. Press 1. Press 5.
8	Deposit	System performs a legitimate deposit transaction properly	System prompts for deposit amount and envelope insertion	Enter a valid deposit amount; simulate envelope insertion	Envelope accepted; receipt printed showing deposit amount and updated balance; transaction logged	Envelope accepted; receipt printed shows correct deposit amount but updated wrong balance amount and wrong amount available; transaction logged correctly	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 2. Press 1. Enter \$50 Press enter. Click insert envelop.
9	Transfer	System performs a legitimate transfer transaction properly	System prompts for transfer details (source, destination, amount)	Select valid source and destination accounts; enter a valid transfer amount	Transfer completed; receipt printed with correct details and updated balances; transaction logged	can't transfer from or to money market	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 3. Press 3. Press 2. Enter \$50 Press enter.
10	Inquiry	System performs a legitimate balance inquiry transaction	System displays the transaction menu	Choose balance inquiry; select an account (e.g., Checking)	Receipt printed showing correct account balance; transaction logged	Receipt printed showing incorrect card number card 1 shows card 2 card 2 shows card 3	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 4. Press 1.

11	Transaction Cancellation	Customer cancels a transaction before completion	System is in the middle of a transaction (e.g., during withdrawal)	Press the "Cancel" key	System displays a cancellation message; transaction aborted; returns to the transaction menu or ejects card	System does not display a cancellation message; transaction aborted; ejects card	N/A
12	Transaction	System handles an invalid menu option	Menu of transactions being displayed	Press menu option that is not 1,2,3,4	An appropriate message is displayed and re-entry of transaction type is again requested	The system dispenses \$20	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 0.
13	Transaction Cancellation	Customer cancels any transaction	System displays any Transaction e.g Withdraw, Deposit, Money Transfer, Balance Inquiry	Press the "Cancel" key	System displays a would you like to do another transaction message	Spelling mistake would is spelled as "wood"	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 1. Press cancel.
14	Balance Inquiry	user selects Balance Inquiry	Menu of balance Inquiry	User presses 4 for balance inquiry	All accounts should be displayed	Only "Checking" and "Money Market" menu options are displayed.	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 4.
15	Invalid PIN Extension	Leading Zeros in PIN	System is asking for entry of PIN	For card 1 user enters 0042	Card Ejection with error message "FAILURE invalid card" or "PIN was incorrect"	Card is accepted	Enter 10 in number of \$20 bills. Insert card. Enter card number 1. Enter pin 0042.
16	Balance Inquiry	user selects money market	Menu of balance Inquiry	User presses 2	Displays account information	Displays Unknown Error on the green screen and \$500 appears right below the green	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 4. Press 2

						screen and the receipt prints	
17	Transaction	Transaction finished	System displays any Transaction e.g Withdraw, Deposit, Money Transfer, Balance Inquiry	User finishes a transaction	System displays a would you like to do another transaction message	Spelling mistake would is spelled as "wood"	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 1. Press 1. Press 1.

Exploratory (Manual Non-scripted) Testing – Hashir, Taiwu

Test Case	Use Case	Function Being Tested	Initial System State	Input	Expected Output	The actual outcome	How to recreate Bug
1	System Startup and Cash Initialization	ATM startup and cash initialization	ATM is off	Press the power "on" button and enter \$20 bills	ATM powers on and indicating the next step	ATM powers on and asks for inserting card	N/A
2	Valid Card Insertion	Card recognition and acceptance	ATM is on and idle	Insert a valid card (card number "1")	Card is accepted; system prompts for PIN entry	Same as expected	N/A
3	Unreadable/Invalid Card Insertion	Handling of an invalid or unreadable card	ATM is on and idle	Insert an unreadable or invalid card	Card is ejected	Asking for PIN	N/A
4	Correct PIN Entry	PIN validation	After valid card insertion, PIN prompt is displayed	Enter correct PIN "42"	PIN is validated; transaction menu is displayed	Same as expected	N/A
5	Incorrect PIN Entry and Re-Entry	Handling of incorrect PIN and re-entry process	After valid card insertion; PIN prompt is displayed	Enter an incorrect PIN then re-enter the correct PIN "42"	First attempt rejected with an error; on correct re-entry, the transaction menu is displayed	Same as expected	N/A
6	Withdrawal - Valid	Processing a withdrawal transaction	Transaction menu is displayed; account and ATM have	Select withdrawal; enter a valid amount within	Correct amount of cash is dispensed	cash dispensed is the amount entered + \$20, which is correct	N/A

			sufficient funds	account balance and ATM cash limits			
7	Withdrawal – Insufficient Account Funds	Withdrawal processing when account funds are low	Transaction menu is displayed; account balance is lower than the requested amount	Select withdrawal; enter an amount exceeding the account balance	Error message “Insufficient funds” is displayed; no cash is dispensed	No error message is displayed, charged \$20	Select withdrawal Select checking Select \$200
8	Withdrawal – Cancellation	Ability to cancel a withdrawal transaction	Withdrawal process initiated	Begin a withdrawal and press “Cancel” at the account or amount selection stage	no cash is dispensed	no cash is dispensed, Showing “Insufficient available balance”, Typo “Wood”	When withdrawing, click “Cancel” button
9	Deposit - Valid	Processing a deposit transaction	Transaction menu is displayed; deposit option is available	Select deposit; choose an account; enter a valid deposit amount; simulate envelope insertion	Correct Amount is deposited into respective account, ATM adds deposited number to the overall balance.	Incorrect Value is displayed, every deposit amount is added but then it subtracts \$10 from balance	When depositing notes down inputted value, click the input envelope button, when the display information shows the updated balance, it will display the number that was added - \$10
10	Deposit - Cancellation	Cancelling a deposit transaction	Deposit process initiated	Press “Cancel” during the deposit process	The deposit process is cancelled; prompts user on another transaction	Same as expected, however the only defect is the incorrect spelling of “would”.	When initiating for deposit, press the cancel button through the process. When it is cancelled it will show on the green screen, “wood you like to do another transaction”.
11	Balance Inquiry	Displaying the account balance	Transaction menu is displayed; account is available	Select balance inquiry; choose the account	Shows account balance of the respective account; Shows an accurate number	Outcome as expected.	N/A

12	Transfer - Valid	Transferring funds between accounts	Transaction menu is displayed; both source and destination accounts are active	Select transfer; choose source and destination accounts; enter a valid transfer amount	Transfers correct amount from bank A to bank B, maintaining correct values.	Incorrect amount transferred. Deducts \$0.50 from input transfer amount.	When transferring note down inputted value, click the input enter button, when the display information shows the updated balance, it will display the number that was added – \$0.50
13	Transfer Insufficient Account Funds	Handling invalid input during transfer	Transfer process initiated	Enter an invalid (e.g., negative) amount	If invalid amount is inputted, notifies user and directs user for next step	ATM Freezes with blank screen	After arriving at the transfer screen, input an extremely large number, such as “600000”, when you press the enter button the app should freeze
14	Transfer – Cancellation	Handling cancellation during transfer	Transfer process initiated	Start a transfer then press “Cancel”	Transferring of balance is cancelled leaving both accounts unaffected	Cancel button does not work, transfer goes through regardless.	During the transfer process press the “cancel” button, note that the button becomes unresponsive and the transfer continues.
15	Multiple Transactions	Managing multiple transactions in one session	Transaction menu is displayed after successful authentication	Execute a series of transactions sequentially (e.g., deposit, then withdrawal, then balance inquiry)	Consistent balance account throughout the process	Multiple transactions break logic, will show insufficient funds when withdrawing even if there is	Firstly deposit any number(eg.\$20) into the checking's account. Afterwards make it to the withdraw screen and try to withdraw an amount that is less than current balance (eg,\$10), it will prompt the user with insufficient funds.

Manual Scripted Testing

Test Case #	Use Case	Function Being Tested	Initial System State	Input	Expected Output	The actual outcome	How to recreate
2	System Startup	System accepts initial cash amount	System is requesting cash amount	Enter a legitimate amount	System is on	System is on	N/A
3	System Startup	Connection to the bank is established	System has just been turned on	Perform a legitimate inquiry transaction	System output should demonstrate that a connection has been established to the Bank	System output demonstrates that a connection has been established to the Bank	N/A
4	System Shutdown	System is shut down when the switch is turned "off"	System is on and not servicing a customer	Activate the "off" switch	System is off	System is off	N/A
6	Session	System rejects an unreadable card	System is on and not servicing a customer	Insert an unreadable card	Card is ejected; System displays an error screen; System is ready to start a new session	Card is ejected; System displays an error screen; System is ready to start a new session	N/A
8	Session	System allows customer to perform a transaction	System is displaying menu of transaction types	Perform a transaction	System asks whether customer wants another transaction	System asks whether customer wants another transaction	N/A
9	Session	System allows multiple transactions in one session	System is asking whether customer wants another transaction	Answer yes	System displays a menu of transaction types	System displays a menu of transaction types	N/A
10	Session	Session ends when customer chooses not to do another transaction	System is asking whether customer wants another transaction	Answer no	System ejects card and is ready to start a new session	System ejects card and is ready to start a new session	N/A
12	Withdrawal	System asks customer to choose an account to withdraw from	Menu of transaction types is being displayed	Choose Withdrawal transaction	System displays a menu of account types	System displays a menu of account types	N/A

13	Withdrawal	System asks customer to choose a dollar amount to withdraw	Menu of account types is being displayed	Choose checking account	System displays a menu of possible withdrawal amounts	System displays a menu of possible withdrawal amounts	N/A
17	Withdrawal	Withdrawal transaction can be cancelled by the customer prior to choosing amount	System is displaying menu of account types	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
18	Withdrawal	Withdrawal transaction can be cancelled by the customer prior to choosing amount	System is displaying menu of dollar amounts	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
19	Deposit	System asks customer to choose an account to deposit to	Menu of transaction types is being displayed	Choose Deposit transaction	System displays a menu of account types	System displays a menu of account types	N/A
20	Deposit	System asks customer to enter a dollar amount to deposit	Menu of transaction types is being displayed	Choose checking account	<i>System displays a request for the customer to type a dollar amount</i>	System displays a request for the customer to type a dollar amount	N/A
21	Deposit	System asks customer to insert an envelope	System is displaying a request for the customer to type a dollar amount	Enter a legitimate dollar amount	System requests that the customer insert an envelope	System requests that the customer insert an envelope	N/A
23	Deposit	Deposit transaction can be cancelled by the customer prior to inserting an envelope	System is displaying menu of account types	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
24	Deposit	Deposit transaction can be cancelled by the customer prior to inserting an envelope	System is requesting customer to enter a dollar amount	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A

25	Deposit	Deposit transaction can be cancelled by the customer prior to inserting an envelope	System is requesting customer to insert an envelope	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
26	Transfer	System asks customer to choose an account to transfer from	Menu of transaction types is being displayed	Choose Transfer transaction	System displays a menu of account types specifying transfer from	System displays a menu of account types specifying transfer from	N/A
27	Transfer	System asks customer to choose an account to transfer to	Menu of account types to transfer from is being displayed	Choose checking account	System displays a menu of account types specifying transfer to	System displays a menu of account types specifying transfer to	N/A
28	Transfer	System asks customer to enter a dollar amount to transfer	Menu of account types to transfer to is being displayed	Choose savings account	System displays a request for the customer to type a dollar amount	System displays a request for the customer to type a dollar amount	N/A
30	Transfer	Transfer transaction can be cancelled by the customer prior to entering amount	System is displaying menu of account types specifying transfer from	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
31	Transfer	Transfer transaction can be cancelled by the customer prior to entering amount	System is displaying menu of account types specifying transfer to	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
32	Transfer	Transfer transaction can be cancelled by the customer prior to entering amount	System is requesting customer to enter a dollar amount	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A

33	Inquiry	System asks customer to choose an account to inquire about	Menu of transaction types is being displayed	Choose Inquiry transaction	System displays a menu of account types	System displays incomplete menu of account types saving account missing	Enter 10 in number of \$20 bills. Insert card. Enter card number. Enter pin. Press 4.
35	Inquiry	Inquiry transaction can be cancelled by the customer prior to choosing an account	System is displaying menu of account types	Press "Cancel" key	System displays an appropriate message and offers the option to do another transaction	System displays an appropriate message and offers the option to do another transaction	N/A
36	Invalid PIN Extension	Customer is asked to reenter PIN	System is asking for entry of PIN	Enter an incorrect PIN; attempt an inquiry transaction	Customer is asked to re-enter PIN	Customer is asked to re-enter PIN	N/A
37	Invalid PIN Extension	Correct re-entry of PIN is accepted	Request to re-enter PIN is being displayed	Enter correct PIN	Original transaction completes successfully	Requests to enter PIN again	Enter 10 in number of \$20 bills. Insert card. Enter card number 1. Enter pin 1. Enter pin 42.
38	Invalid PIN Extension	Incorrect re-entry of PIN is not accepted	Request to re-enter PIN is being displayed	Enter incorrect PIN	Appropriate message is displayed and re-entry of PIN is requested	Appropriate message is displayed and re-entry of PIN is requested	
39	Invalid PIN Extension	Correct re-entry of PIN on the second try is accepted	Request to re-enter PIN is being displayed	Enter incorrect PIN first, then correct PIN	Original transaction completes successfully	Asks for pin again after correct PIN Second time	Enter 10 in number of \$20 bills. Insert card. Enter card number 1. Enter pin 1. Enter pin 42.
40	Invalid PIN Extension	Correct re-entry of PIN on the third try is accepted	Request to re-enter PIN is being displayed	Enter incorrect PIN twice, then correct PIN	Original transaction completes successfully	Asks for pin again after correct PIN third time	Enter 10 in number of \$20 bills. Insert card. Enter card number 1. Enter pin 1. Enter pin 1. Enter pin 42

Regression Testing (Version 1.1)

Test Case #	Use Case	Function Being Tested	Initial System State	Input	Expected Output	The actual outcome	Status
5	Withdrawal	System performs a legitimate withdrawal transaction properly	System displays withdrawal options	Select a withdrawal amount within account balance and ATM cash	Cash is dispensed; receipt printed with correct amount and updated balance; transaction logged	Cash is dispensed; a receipt is printed showing the correct amount and updated balance; the transaction is logged.	RESOLVED
6	Withdrawal	System verifies sufficient ATM cash for withdrawal	ATM is started with limited cash relative to request	Select a withdrawal amount greater than available ATM cash	System displays a message indicating insufficient ATM cash; prompts user to choose a different amount	The system displays a message indicating insufficient cash in the ATM and prompts the user to select a different amount.	RESOLVED
7	Withdrawal	System verifies sufficient account balance for withdrawal	System prompts for withdrawal amount	Select a withdrawal amount exceeding account balance	System displays a message indicating insufficient funds; offers the option to perform another transaction	The system displays a message indicating insufficient funds and provides the option to proceed with another transaction.	RESOLVED
8	Deposit	System performs a legitimate deposit transaction properly	System prompts for deposit amount and envelope insertion	Enter a valid deposit amount; simulate envelope insertion	Envelope accepted; receipt printed showing deposit amount and	The envelope is accepted; a receipt is printed displaying the correct deposit	IN-PROGRESS

					updated balance; transaction logged	amount but an incorrect updated balance, which is one less than the actual amount, and the wrong available balance is shown; however, the transaction is logged correctly.	
9	Transfer	System performs a legitimate transfer transaction properly	System prompts for transfer details (source, destination, amount)	Select valid source and destination accounts; enter a valid transfer amount	Transfer completed; receipt printed with correct details and updated balances; transaction logged	The transfer is completed; a receipt is printed containing the correct details and updated balances; the transaction is logged.	RESOLVED
10	Inquiry	System performs a legitimate balance inquiry transaction	System displays the transaction menu	Choose balance inquiry; select an account (e.g., Checking)	Receipt printed showing correct account balance; transaction logged	Receipt printed showing incorrect card number card 1 shows card 2 card 2 shows card 3	IN-PROGRESS
11	Transaction Cancellation	Customer cancels a transaction before completion	System is in the middle of a transaction (e.g., during withdrawal)	Press the "Cancel" key	System displays a cancellation message; transaction aborted; returns to the transaction menu or ejects card	The system displays a cancellation message, aborts the transaction, and either returns to the transaction menu or ejects the card.	RESOLVED

12	Transaction	System handles an invalid menu option	Menu of transactions being displayed	Press menu option that is not 1,2,3,4	An appropriate message is displayed and re-entry of transaction type is again requested	The system dispenses \$20	IN-PROGRESS
13	Transaction Cancellation	Customer cancels any transaction	System displays any Transaction e.g Withdraw, Deposit, Money Transfer, Balance Inquiry	Press the "Cancel" key	System displays a would you like to do another transaction message	Spelling mistake would is spelled as "wood"	RESOLVED
14	Balance Inquiry	user selects Balance Inquiry	Menu of balance Inquiry	User presses 4 for balance inquiry	All accounts should be displayed	Only "Checking" and "Money Market" menu options are displayed.	RESOLVED
15	Invalid PIN Extension	Leading Zeros in PIN	System is asking for entry of PIN	For card 1 user enters 0042	Card Ejection with error message "FAILURE invalid card" or "PIN was incorrect"	Card is accepted	IN-PROGRESS
16	Balance Inquiry	user selects money market	Menu of balance Inquiry	User presses 2	Displays account information	Displays Unknown Error on the green screen and \$500 appears right below the green screen and the receipt prints	IN-PROGRESS
17	Transaction	Transaction finished	System displays any Transaction e.g Withdraw, Deposit, Money Transfer,	User finishes a transaction	System displays a would you like to do another transaction message	Spelling mistake would is spelled as "wood"	RESOLVED

			Balance Inquiry				
33	Inquiry	System asks customer to choose an account to inquire about	Menu of transaction types is being displayed	Choose Inquiry transaction	System displays a menu of account types	System displays incomplete menu of account types saving account missing	RESOLVED
37	Invalid PIN Extension	Correct re-entry of PIN is accepted	Request to re-enter PIN is being displayed	Enter correct PIN	Original transaction completes successfully	Requests to enter PIN again	RESOLVED
39	Invalid PIN Extension	Correct re-entry of PIN on the second try is accepted	Request to re-enter PIN is being displayed	Enter incorrect PIN first, then correct PIN	Original transaction completes successfully	Asks for pin again after correct PIN Second time	RESOLVED
40	Invalid PIN Extension	Correct re-entry of PIN on the third try is accepted	Request to re-enter PIN is being displayed	Enter incorrect PIN twice, then correct PIN	Original transaction completes successfully	Asks for pin again after correct PIN third time	RESOLVED