

## **Bug 5 - Balance inquiry Money Market Card 2 - Exploratory - Version 1.0** Created:

30/Jan/24 Updated: 02/Feb/24

**Status:** Resolved

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Testing balance inquiry for money market using card 2

Customer has not yet taken any actions on the system.

Customer selects balance inquiry and selects money market (one of the available accounts) yet is faced with “invalid account type” on the screen.

To replicate this bug start the system, turn it on, load up 10 20\$ bills, insert card with valid number and pin (2 and 1234 respectively), select balance inquiry, select money market.

Expected Outcome: System displays balance in money market account correctly (5000\$)

Actual Outcome: System produces an error on the screen saying “invalid account type”

## **Bug 4 - Balance inquiry Money Market Card 1 - Exploratory - Version 1.0** Created:

30/Jan/24 Updated: 02/Feb/24

**Status:** Resolved

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Testing the balance inquiry for money market account.

The customer has not yet taken any actions on the system, all balances are untampered.

Customer selects money market account and system displays “Unknown Error” as well as what appears to be 500\$ being withdrawn from the system.

To replicate this bug start the system, turn it on, load up 10 20\$ bills, insert card with valid number and pin (1 and 42 respectively), select balance inquiry, select money market.

Expected outcome: The money market is not a possible choice for balance inquiry as the card with number 1 and pin 42 only has access to checking and savings not money market.

Actual Outcome: The balance inquiry correctly displays the total balance of savings however it appears to withdraw money from somewhere and produce an “Unknown Error” on the screen.

### **Bug 3 - Money Transfer - Exploratory - Version 1.0**

Created: 30/Jan/24 Updated: 02/Feb/24

**Status:** Resolved

**Project:** [lab1](#)

**Version of Bug:** 1.0

#### **Description**

Testing transfer of money from savings to checking account.

The customer has not yet taken any actions on the system, all balances are untampered.

Instead of transferring 20\$ from savings to checking, the system transfers 19.50

To replicate this bug first start the system, turn it on, load up 10 20\$ bills, insert card with valid number and pin (1 and 42 respectively), select money transfer (3), select from savings, select to checking, input 20.00\$. Receipt on the right displays an amount equal to 19.50\$ rather than 20.00\$.

Expected outcome: A total balance of 120\$ in checking and an amount of 20\$

Actual outcome: A total balance of 119.50\$ in checking and an amount of 19.50\$

## **Bug 2 - Deposit - Exploratory - Version 1.0**

Created: 30/Jan/24 Updated: 02/Feb/24

**Status:** Persistent

**Project:** [lab1](#)

**Version of Bug:** 1.0

### **Description**

Testing deposit into checking account.

The customer has not yet taken any actions on the system, all balances are untampered.

Customer deposits 20\$ however the balance is only updated by 10\$.

To replicate this bug first start up the system, turn it on, load 10 20\$ bills, insert card with valid number and pin (1 and 42), then select deposit and checking, then input 20.00\$ as the amount and hit “click to insert envelope”. On the receipt it can be seen that the amount is 20\$ however the total balance displays 110.00\$

Expected outcome was a total balance of 20.00\$ after deposit of 20.00\$ with an initial balance of 0\$

Actual outcome was a total balance of 10.00\$ after deposit of 20.00\$ with an initial balance of 0\$

**Test Case 15 Fail** Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24**Status:** Fixed**Project:** [lab1](#)**Version of Bug:** 1.0**Description**

Function: Withdrawal.

Initial System State: System has been started up with less than the maximum withdrawal amount in cash on hand; System is requesting a withdrawal amount.

Action: Choose to withdrawal 200\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 5 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal from savings.
- Choose to withdrawal 200\$.

Expected Outcome:

System displays an appropriate message for customer to choose a different amount.

Actual Outcome:

However, the system currently dispenses 20\$ and subtracts 20\$ from the savings account rather than displaying a correct message that tells the customer it doesn't have enough.

## **Balance Inquiry Fail** Created: 29/Jan/24 Updated: 02/Feb/24

**Status:** Persistent

**Project:** [lab1](#)

**Version of Bug:** 1.0/1.1

### **Description**

Function: Balance Inquiry.

Initial System State: System asks customer to input the desired account to inquire from.

Action: Money Market is chosen.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any amount \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Balance Inquiry.
- Choose to inquire from Money Market.

Expected Outcome:

The system should simply display the balance of the Money Market account.

Actual Outcome:

However, the system shows an unknown error occurred in the ATM display. The system then dispenses 500\$. The system also incorrectly shows the current balance of the savings account.

## Exploratory Deposit Fail 2

Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Function: Deposit.

Initial System State: System asks customer to enter a dollar amount to deposit.

Action: Input any valid number less than or equal to 10\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Deposit.
- Choose to Deposit to Checking or Savings.
- input a number less than or equal to 10\$.
- Insert envelope.

Expected Outcome:

This process should add the inputted to the savings or checking and dispense a receipt showing the correct transaction details. Given the initial balance of \$1000 in savings for, the balance should be \$1005 when the transaction is complete given that 5\$ was inputted.

Actual Outcome:

However, it currently deducts \$10 from the account and then adds the inputted number. For example, if \$5 is deposited into the checking account with an initial value of \$100, the system subtracts, reducing it to \$90, and then adds the \$5, resulting in a final value of \$95 instead of the expected \$105.

## Exploratory Deposit Fail 1 Created: 29/Jan/24 Updated: 02/Feb/24

**Status:** Persistent

**Project:** [lab1](#)

**Version of Bug:** 1.0/1.1

### Description

Function: Deposit.

Initial System State: System asks customer to enter a dollar amount to deposit.

Action: Input 48\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Deposit.
- Choose to Deposit to Checking or Savings.
- Deposit 48\$.
- Insert envelope.

Expected Outcome:

This process should add \$48 to the savings or checking and dispense a receipt showing the correct transaction details. Given the initial balance of \$1000 in savings for, the balance should be \$1048 when the transaction is complete.

Actual Outcome:

However, it currently adds only \$38 and changes the balance the balance from \$1000 to \$1038, rather than the expected \$1048.

## Test Case 14 Fail Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24



<b>Status:</b>	Fixed
<b>Project:</b>	<a href="#">lab1</a>
<b>Version of Bug:</b>	1.0

### Description

When testing the withdrawal functionality, specifically during a legitimate withdrawal transaction, an issue was identified.

Function: Withdrawal

Initial System State: System is displaying the menu of withdrawal amounts

Action: Choose an amount that the system currently has and which is not greater than the account balance

Steps to Reproduce:

- After inserting card number and PIN for card, choose withdrawal transaction from menu of transaction types displayed.
- Choose checking account from menu of account types displayed.
- Click option 1 (\$20) to withdraw, since we have more than \$20 available and in our balance

Expected Outcome:

System dispenses this amount of cash; System prints a correct receipt showing amount and correct updated balance; System records transaction correctly in the log (showing both message to the bank and approval back)

Actual Outcome:

It says “insufficient funds” when I tried to withdraw \$20 and I had enough money. Also when I choose to withdraw \$20, it gave me \$40 instead.

## Exploratory Withdrawal Fail 5

Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Function: Withdrawal.

Initial System State: System asks customer to choose a dollar amount to withdraw.

Action: Choose to withdrawal 200\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 10 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal to savings.
- Choose to withdrawal 200\$.

Expected Outcome:

This process should deduct \$200 from the savings and dispense a \$200 worth of bills. Given the initial balance of \$1000 in savings, the balance should be \$800 when completed.

Actual Outcome:

However, the system currently subtracts only \$20 and reduces the balance from \$1000 to \$980, rather than reducing by 200\$.

## Exploratory Withdrawal Fail 4 Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Function: Withdrawal.

Initial System State: System asks customer to choose a dollar amount to withdraw.

Action: Choose to withdrawal 100\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 10 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal to savings.
- Choose to withdrawal 100\$.

Expected Outcome:

This process should deduct \$100 from the savings and dispense a \$100 worth of bills. Given the initial balance of \$1000 in savings, the balance should be \$900 when completed.

Actual Outcome:

However, it currently subtracts \$200 and reduces the balance from \$1000 to \$800, rather than subtracting 100\$.

### Exploratory Withdrawal Fail 3 Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

#### Description

Function: Withdrawal.

Initial System State: System asks customer to choose a dollar amount to withdraw.

Action: Choose to withdrawal 60\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 10 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal to savings.
- Choose to withdrawal 60\$.

Expected Outcome:

This process should deduct \$60 from the savings and dispense \$60. Given the initial balance of \$1000 in savings, the balance should be \$940 when completed.

Actual Outcome:

However, it currently subtracts \$100, and dispenses 100\$. Reducing the balance from \$1000 to \$900, rather than 60\$.

## Exploratory Withdrawal Fail 2 Created: 29/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Function: Withdrawal.

Initial System State: System asks customer to choose a dollar amount to withdraw.

Action: Choose to withdrawal 40\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 10 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal to savings.
- Choose to withdrawal 40\$.

Expected Outcome:

This process should deduct \$40 from the savings and dispense a \$40 bill. Given the initial balance of \$1000 in savings, the balance should be \$960 when completed.

Actual Outcome:

However, the system currently subtracts and dispenses \$60 and reduces the balance from \$1000 to \$940, rather than reducing by 40\$.

## Exploratory Withdrawal Fail 1

Created: 27/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

Function: Withdrawal.

Initial System State: System asks customer to choose a dollar amount to withdraw.

Action: Choose to withdrawal 20\$.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load 10 \$20 bills.
- Insert card.
- Enter a correct card number and pin number.
- Choose Withdrawal.
- Choose to withdrawal to savings.
- Choose to withdrawal 20\$.

Expected Outcome:

This process should deduct \$20 from the savings and dispense a \$20 bill. Given the initial balance of \$1000 in savings, the balance should be \$980 when completed.

Actual Outcome:

However, the system currently subtracts \$40 and reduces the balance from \$1000 to \$960, rather than reducing by 20\$.

## Test Case 39 Fail

Created: 27/Jan/24 Updated: 02/Feb/24

**Status:** Persistent

**Project:** [lab1](#)

**Version of Bug:** 1.0/1.1

### Description

Function: Invalid pin extension

Initial System State: Request to re-enter PIN is being displayed.

Action: Enter incorrect PIN

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any amount of \$20 bills.
- Insert card.
- Enter a correct card number, then input a incorrect pin number.
- Enter incorrect pin again.
- Enter the correct pin.

Expected Outcome:

The system should grant access to the user upon entering the correct PIN on the re-enter screen, allowing them to proceed to the chosen transaction type.

Actual Outcome:

After entering the correct PIN on the re-enter screen, the system incorrectly redirects to the original enter PIN screen (see photo attached), preventing the access to the chosen transaction type

## Test Case 37 Fail Created: 27/Jan/24 Updated: 02/Feb/24

<b>Status:</b>	Persistent
<b>Project:</b>	<a href="#">lab1</a>
<b>Version of Bug:</b>	1.0/1.1

### Description

Function: Invalid pin extension

Initial System State: Request to re-enter PIN is being displayed.

Action: Enter correct PIN

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any amount of \$20 bills.
- Insert card.
- Enter a correct card number, then input a incorrect pin number.
- Enter the correct pin.

Expected Outcome:

The system should grant access to the user upon entering the correct PIN on the re-enter screen, allowing them to proceed to the chosen transaction type.

Actual Outcome:

After entering the correct PIN on the re-enter screen, the system incorrectly redirects to the original enter PIN screen (see photo attached), preventing the access to the chosen transaction type.



## **Test Case 29 Fail** Created: 27/Jan/24 Updated: 02/Feb/24 Resolved: 02/Feb/24

**Status:** Fixed

**Project:** [lab1](#)

**Version of Bug:** 1.0

### Description

When testing the transfer functionality, specifically during a legitimate transfer process, an issue was identified.

Function: Transfer

Initial System State: System is displaying a request for the customer to type a dollar amount.

Action: Enter a legitimate dollar amount.

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any amount of \$20 bills.
- Enter a valid card number and PIN.
- Click on the "Transfer" option.
- Choose "to transfer from checking"
- Choose "transfer to savings"
- Input an amount of \$100 to transfer.
- Read the receipt.

Expected Outcome:

The system should generate a correct receipt displaying the transferred amount and the updated balances accurately. The system must record the transaction correctly in the log. Specifically, when \$100 is transferred from the checking account to the savings account, the checking account balance should be \$0, and \$100 should be added to the existing \$1000 balance in the savings account. This should result in a savings account balance of \$1100 and a checking account balance of \$0. Additionally, the receipt should include "Transfer From: CHKG To: SVGS".

Actual Outcome:

The system incorrectly transferred 99.5\$ rather than the expected 100\$ from the checking account to the savings account. After the transfer, the checking account balance is \$0.5, and only 99.5\$ is added to the existing \$1000 balance in the savings account. The savings account now has a balance of \$1099.5. Additionally, the receipt incorrectly shows "Transfer From: SVGS To: CHKG.".

## Test Case 22 Fail Created: 27/Jan/24 Updated: 02/Feb/24

<b>Status:</b>	Persistent
<b>Project:</b>	<a href="#">lab1</a>
<b>Version of Bug:</b>	1.0/1.1

### Description

When testing the deposit functionality, specifically during a legitimate deposit process, an issue was identified.

Function: Deposit

Initial System State: System is requesting that customer insert an envelope.

Action: System requests customer to insert an envelope

Steps to Reproduce:

- Restart the ATM and power it on.
- Load any amount of \$20 bills.
- Enter a valid card number and PIN.
- Click on the "Deposit" option.
- Choose "Deposit into checking."
- Input an amount of \$50.
- Insert the envelope.
- Read the receipt.

Expected Outcome:

The system should successfully accept the deposit and display the banking menu. The receipt should accurately reflect the deposited amount, updating the balance correctly. In this case 150\$.

Actual Outcome:

The receipt incorrectly states that the total balance is \$140, whereas it should be \$150 after depositing \$50. See picture below

**[SCRUM-2] [Bug 1 – Withdrawal - Exploratory 1.0](#)** Created: 19/Jan/24 Updated: 02/Feb/24

**Status:** Resolved

**Project:** [lab1](#)

**Version of Bug:** 1.0

**Description**

Testing Function Withdrawal:

The customer has not yet taken any actions on the system, all balances are untampered.

The customer then proceeds to make a withdrawal of 20\$ from their savings account.

Rather than withdrawing 20\$ the system withdraws 40\$ from the savings account

To replicate this bug, start up the system, turn it on, load atm with 10 20\$ bills, insert card with valid number (1), then input card pin (42), then select withdrawal from savings, then select 20\$.

The expected outcome is a withdrawal of 20\$ however the system displays a withdrawal of 40\$ and the receipt displays a balance of 960\$ where it was initially 1000\$.

[SCRUM-2] [Bug 3.1 – Money Transfer - Exploratory 1.1](#) Created: 19/Jan/24 Updated: 02/Feb/24

Status:	To-Do
Project:	<a href="#">lab1</a>
Version of Bug:	1.1

#### Description

Same as the money transfer test for version 1.0

Initial state is the same (untampered).

Steps to replicate are the same as bug 3 money transfer test for version 1.0

The expected outcome is the checking account gets updated accordingly, in this case 20\$ increase from the savings account.

The actual outcome: the money transfer is correct however the receipt now shows the wrong information stating that the transfer occurred from checking to savings even though it is the other way around. Total balance and available money are correct.