



*COLLEGE OF COMPUTER SCIENCE AND
INFORMATION TECHNOLOGY
CSEB424 Software Testing*

Test Case Specification

Automated Teller Machine System
(ATMS)
Withdrawal

Version : 1.0.0
Date : 03/12/2017

Document Control

Document Name	ATMS Test Case Specification (Iteration 1)
Reference Number	ATMS_TCS_1
Version	1.0.0
Project Code	XYZ_ATMS
Status	In-Use
Date Released	3/12/2017

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Version History

Version	Release Date	Section	Amendments
1.0.0	3/12/2017	All	Original Document

Distribution List

Version	Release Date	Controlled Copy No	Recipient Name	Department	Issue Date	Return Date
1.0.0	3/12/2017	01		ATM Co. QA Dept.	3/12/2017	
1.0.0	3/12/2017	02		ATM Co. Test Team	3/12/2017	
1.0.0	3/12/2017	03		XYZ Bank	3/12/2017	

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1.0 Introduction

1.1 Purpose

This test case specification supports the following objective:

- i. To detail the test case derived from test coverage in Test Design Specification

1.2 References

The following IEEE standards have been referenced in preparation of this document:

- i. IEEE 829-2008 Standard for Software and System Test Documentation

The following document provide the test basis for this test design:

- i. ATMS Software Requirement Specification, ATMS_SRS_1.0
- ii. ATMS System Design Specification, ATMS_SDS_1.0
- iii. ATMS Test Design Specification, ATMS_TDS_1_1.0.0

2.0 Test Cases

2.1 Environment

Atms tests will be run using dummy accounts where tested transaction will not involve actual monetary transaction. Test shall be performed on actual ATM with the following specification.:

Hardware Name	CINEO C2040
Manufacturer	Wincor Nixdorf
Keyboard	EPP V6(ZKA & PCI 1.x/2.x certified)
Card Processor	Hybrid motorized - EMV 4.x Level 1 certified

Table 2.1 ATM Hardware Requirements

The following dummy ATM cards are needed for testing purposes:

Card Number	Validity	Available Account	Account Balance
0	Invalid	N/A	N/A
1	Valid	1	100
		2	1000
2	Valid	1	100
		3	5000
3	Valid	1	100
		2	1000
		3	5000

Table 2.1 Required Dummy ATM Cards

2.2 Test Case

2.2.3 Withdrawal

Test Case ID	TC-05-001		
Related Feature ID	005		
Objective	Account Type=0		
Covered Test Coverage Items	TCOV-05-001, TCOV-05-007		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Account Type=0	System displays error message "Invalid account selected. Please reselect your account."	Card 1	None

2.2.3.1 Account Type=0 Test Case

Test Case ID	TC-05-002		
Related Feature ID	005		
Objective	Account Type=1		
Covered Test Coverage Items	TCOV-05-002, TCOV-05-008		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Account Type=1	System will display the transaction menu and wait for user's transaction request.	Card 1	None

2.2.3.2 Account Type=1 Test Case

Test Case ID	TC-05-003		
Related Feature ID	005		
Objective	Account Type=2		
Covered Test Coverage Items	TCOV-05-002, TCOV-05-009		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Account Type=2	System will display the transaction menu and wait for user's transaction request.	Card 1	None

2.2.3.3 Account Type=2 Test Case

Test Case ID	TC-05-004		
Related Feature ID	005		
Objective	Account Type=3		
Covered Test Coverage Items	TCOV-05-002, TCOV-05-010		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Account Type=3	System will display the transaction menu and wait for user's transaction request.	Card 1	None

2.2.3.4 Account Type=3 Test Case

Test Case ID	TC-05-005		
Related Feature ID	005		
Objective	Account Type=4		
Covered Test Coverage Items	TCOV-05-003, TCOV-05-011		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Account Type=4	System displays error message "Invalid account selected. Please reselect your account."	Card 1	None

2.2.3.5 Account Type=4 Test Case

Test Case ID	TC-05-006		
Related Feature ID	005		
Objective	Amount Withdrawal=0		
Covered Test Coverage Items	TCOV-05-004, TCOV-05-012		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=0	System displays error message "Invalid amount selected. Please enter valid amount."	Card 1	None

2.2.3.6 Amount Withdrawal=0 Test Case

Test Case ID	TC-05-007		
Related Feature ID	005		
Objective	Amount Withdrawal=1		
Covered Test Coverage Items	TCOV-05-005, TCOV-05-013		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=1	System reads the input by user and performs dispensation of cash.	Card 1	None

2.2.3.7 Amount Withdrawal=1 Test Case

Test Case ID	TC-05-008		
Related Feature ID	005		
Objective	Amount Withdrawal=2		
Covered Test Coverage Items	TCOV-05-005, TCOV-05-014		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=2	System reads the input by user and performs dispensation of cash.	Card 1	None

2.2.3.8 Amount Withdrawal=2 Test Case

Test Case ID	TC-05-009		
Related Feature ID	005		
Objective	Amount Withdrawal=4		
Covered Test Coverage Items	TCOV-05-005, TCOV-05-015		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=4	System reads the input by user and performs dispensation of cash.	Card 1	None

2.2.3.9 Amount Withdrawal=4 Test Case

Test Case ID	TC-05-010		
Related Feature ID	005		
Objective	Amount Withdrawal=5		
Covered Test Coverage Items	TCOV-05-005, TCOV-05-016		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=5	System reads the input by user and performs dispensation of cash.	Card 1	None

2.2.3.10 Amount Withdrawal=5 Test Case

Test Case ID	TC-05-011		
Related Feature ID	005		
Objective	Amount Withdrawal=6		
Covered Test Coverage Items	TCOV-05-006, TCOV-05-017		
Input	Expected Result	Special Procedural Requirements	Intercase Dependency
Amount Withdrawal=6	System displays error message "Invalid amount selected. Please enter valid amount."	Card 1	None

2.2.3.11 Amount Withdrawal=6 Test Case

Test Case ID	TC-05-012			
Related Feature ID	005			
Objective	Withdrawal Main Flow			
Covered Test Coverage Items	TCOV-05-0018, TCOV-05-024, TCOV-05-026, TCOV-05-028, TCOV-05-030, TCOV-05-038			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Selecting "Withdrawal" transaction.	System verifies type of account to withdraw from.	Card 1	None
2	Choosing valid account type.	System verifies type of account and requests for amount to withdraw.		
3	Inserting valid amount.	System dispenses cash, records in log, prints receipt and asks whether user wants to perform another transaction.		
4	Selecting "No" option.	System terminates and ejects card.		

2.2.3.12 Withdrawal Main Flow Test Case

Test Case ID	TC-05-013			
Related Feature ID	005			
Objective	Withdrawal Alternate Flow – Invalid Account Type			
Covered Test Coverage Items	TCOV-05-025, TCOV-05-039			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Selecting an Invalid Account Type	System displays error message "Invalid Account Type".	Card 1	None

2.2.3.13 Withdrawal Alternate Flow - Invalid Account Type

Test Case ID	TC-05-014			
Related Feature ID	005			
Objective	Withdrawal Alternate Flow – Cancel Withdrawal At Account Type Selection			
Covered Test Coverage Items	TCOV-05-027, TCOV-05-040			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Press Cancel button	System terminates the withdrawal session and asks whether to perform other transaction.	Card 1	None

2.2.3.14 Withdrawal Alternate Flow - Cancel Withdrawal At Account Type Selection

Test Case ID	TC-05-015			
Related Feature ID	005			
Objective	Withdrawal Alternate Flow – Invalid Withdrawal Amount (Insufficient Balance in ATM)			
Covered Test Coverage Items	TCOV-05-019, TCOV-05-021, TCOV-05-031, TCOV-05-041			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Selecting invalid amount.	System displays error message “Insufficient Cash” and requests to insert amount again.	Card 1	None

2.2.3.15 Withdrawal Alternate Flow - Invalid Withdrawal Amount (Insufficient Balance in ATM)

Test Case ID	TC-05-016			
Related Feature ID	005			
Objective	Withdrawal Alternate Flow – Invalid Withdrawal Amount (Insufficient Balance in Account)			
Covered Test Coverage Items	TCOV-05-019, TCOV-05-021, TCOV-05-031, TCOV-05-042			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Selecting invalid amount.	System displays error message “Insufficient Balance” and requests to insert amount again.	Card 1	None

2.2.3.16 Withdrawal Alternate Flow - Invalid Withdrawal Amount (Insufficient Balance in Account)

Test Case ID	TC-05-017			
Related Feature ID	005			
Objective	Withdrawal Alternate Flow – Invalid Withdrawal Amount (Daily Withdrawal Limit Reached)			
Covered Test Coverage Items	TCOV-05-043			
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Selecting invalid amount	System displays error message “Insufficient Balance” and requests to insert amount again.	Card 1	None

2.2.3.17 Withdrawal Alternate Flow - Invalid Amount Withdrawal (Daily Withdrawal Limit Reached)

Test Case ID		TC-05-018		
Related Feature ID		005		
Objective		Withdrawal Alternate Flow – Cancel When Entering Withdrawal Amount		
Covered Test Coverage Items		TCOV-05-030, TCOV-05-044		
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1	Press Cancel button.	System terminates withdrawal session and asks whether user wants to perform another transaction.	Card 1	None

2.2.3.18 Withdrawal Alternate Flow - Cancel When Entering Withdrawal Amount

Test Case ID		TC-05-019		
Related Feature ID		005		
Objective		Withdrawal Alternate Flow – Perform Another Transaction		
Covered Test Coverage Items		TCOV-05-045		
#	Input	Expected Result	Special Procedural Requirements	Intercase Dependency
1		System displays transaction menu and waits for user's transaction request.	Card 1	None

2.2.3.19 Withdrawal Alternate Flow - Perform Another Transaction