Software Test Plan (STP) - ATM System (Sample)

Project: Automated Teller Machine (ATM) System
Version: 1.0
Authors: <QA Team>
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Status: Sample / Draft

1. Introduction

Purpose: This document defines the test plan for the ATM System v1.0. It outlines objectives, scope, strategy, resources, schedule, and responsibilities for testing.

Scope: Testing covers ATM features such as authentication, cash withdrawal, balance inquiry, deposit, and fund transfer. Hardware maintenance and core banking system internals are excluded.

References: ATM SRS v1.0, Design Specifications v1.0, Banking Standards, PCI-DSS.

Definitions: ATM (Automated Teller Machine), PIN (Personal Identification Number), SRS (Software Requirements Specification), RTM (Requirements Traceability Matrix).

2. Test Items

- ATM Authentication module
- Cash withdrawal module
- Balance inquiry module
- Deposit module
- Fund transfer module
- Admin/maintenance interface

3. Features to be Tested

Features mapped to SRS requirement IDs:
- ATM-F-001: Validate PIN
- ATM-F-010: Cash withdrawal with balance check
- ATM-F-020: Balance inquiry
- ATM-F-030: Deposit acceptance
- ATM-F-040: Fund transfer
- ATM-NF-001: Response time ≤ 5s
- ATM-NF-002: 99.9% availability

4. Features Not to be Tested

- Core banking backend logic (assumed tested by vendor)
- ATM hardware device firmware (vendor responsibility)
- Third-party payment gateway integrations

5. Test Approach / Strategy

Levels:
- Unit tests (module-level)
- Integration tests (ATM Bank Core)
- System tests (end-to-end ATM functionality)
- Acceptance tests (UAT)

Types:
- Functional testing (core features)
- Regression testing
- Performance testing (response time, load)
- Usability testing (UI clarity, accessibility)

Entry Criteria: Stable build delivered, test data available, test environment ready.
Exit Criteria: 100% of planned test cases executed, 0 critical defects open, all acceptance criteria satisfied.

5.1 Security Validation

- Validate PIN handling (masking, no logging)
- TLS 1.2+ verification
- PCI-DSS compliance checks
- Fuzzing for input fields (card data, PIN entry)
- Penetration testing of authentication flows

6. Test Environment

Hardware: ATM terminal with card reader, dispenser, printer, deposit acceptor.
Software: ATM app v1.0, core banking API sandbox.
Tools: Selenium (UI automation), Postman (API), JMeter (performance), Jira (defect tracking).
Test Data: Dummy customer accounts, cards, transactions.

7. Test Schedule

Milestones:
- Test case design: 05-Sep-2025
- Environment setup: 07-Sep-2025
- Test execution start: 08-Sep-2025
- Test execution end: 20-Sep-2025
- UAT: 22-Sep-2025 to 25-Sep-2025

8. Test Deliverables

- Test Plan (this document)
- Test Cases (manual & automated)
- Test Scripts
- Test Data
- Test Execution Logs
- Defect Reports
- Test Summary Report

9. Roles and Responsibilities

Role	Name	Responsibility
QA Lead	<Name>	Prepare plan, coordinate execution
Test Engineer	<Name>	Design & execute test cases, log defects
Developer	<Name>	Support defect fixes and triage
Product Owner	<Name>	Approve test results, sign-off readiness

10. Risks and Mitigation

Risk	Mitigation
Delay in stable build delivery	Request early smoke builds from dev team
Test environment downtime	Maintain backup environment on cloud VM
Dependency on third-party ATM hardware vendor	Engage vendor early and maintain test stubs

11. Assumptions & Dependencies

- Core banking API sandbox will be stable and available
- Test data (accounts/cards) will be provided before execution
- Hardware drivers will be available from vendor

12. Suspension & Resumption Criteria

Suspend testing if:

- Environment unavailable for >4 hours
- Build is too unstable (blocks >30% test cases)

Resume testing if:
- Blocking defects are resolved
- Environment stabilized

13. Test Case Management & Traceability

RTM ensures mapping of SRS requirements to test cases.
Example:
- ATM-F-001 (PIN validation) TC-Auth-01, TC-Auth-02
- ATM-F-010 (Withdrawal) TC-WD-01, TC-WD-02
- ATM-NF-001 (Response time) TC-Perf-01

14. Test Metrics & Reporting

Metrics collected:
- % test cases executed
- % passed/failed
- Defect density
- Defect aging
- Requirement coverage

Reports:
- Daily execution status
- Final Test Summary Report

15. Approvals

Role	Name	Signature / Date
QA Lead		
Dev Lead		
Product Owner		