

ATM Machine Test strategy & Plan Document:

1.INTRODUCTION

This document outlines the overall strategy, scope, approach, and deliverables for testing the ATM machine, covering both positive and negative test cases to ensure the functionality, reliability, and user experience of the system.

1.1 SCOPE

1.1.1 In Scope

- Card reader, keypad, screen button, and touch functionality
- Cash withdrawal and deposit (cheque/cash) operations
- PIN verification, session timeout, and logout functionality
- Receipt printing after transactions
- Display messages for various user actions (incorrect PIN, no cash, invalid card, etc.)
- Functional testing using cards from different banks
- UI and readability checks (font, colour, layout)
- Negative scenarios: expired cards, invalid PINs, invalid cheque, withdrawal limit violations

Out-of-Scope Testing:

- ATM network communication and server/database integration
- Third-party banking backend systems
- Mobile or internet banking integration

1.2 QUALITY OBJECTIVE

The objective is to ensure the ATM performs all critical operations accurately, securely, and efficiently, including:

- Correct and secure handling of customer data
- Proper functioning of physical hardware interfaces
- Accurate, timely, and understandable user feedback and messages
- Compliance with usability, accessibility, and banking standards
- Prevention of fraudulent activities or incorrect transactions

1.3 ROLES AND RESPONSIBILITIES

Role	Responsibilities
Test Manager	Define strategy, allocate resources, Review test progress.
QA Engineers	Design test cases, execute tests, Report Bugs
Developers	Fix defects, provide technical Support
Business Analyst	support clarification of requirements
Project Manager	Track deliverables, communicate Communicate with stakeholders

2. METHODOLOGY

2.1 OVERVIEW

The testing approach follows an **Agile-based test methodology** with the following steps:

- Define test cases and design based on features and user scenarios
- Conduct modular and regression testing after fixes
- Continuously report and track defects
- Perform both manual and automated tests (where possible on simulators)
- Regular status updates to stakeholders

2.2 TEST LEVELS

- **Unit Testing:** Performed by developers (not covered here)
- **Integration Testing:** Between ATM modules and services
- **System Testing:** End-to-end testing of ATM flows
- **Regression Testing:** Re-run previous tests to validate new changes
- **User Acceptance Testing (UAT):** Final check by business stakeholders

2.3 BUG TRIAGE

Bugs will be categorized based on severity and priority:

- **Critical:** ATM cannot process transactions
- **High:** Major functionality like PIN validation failing

- **Medium:** UI/text issues or usability problems
- **Low:** Minor layout or font inconsistencies

Bugs will follow the lifecycle: **New** → **Assigned** → **Fixed** → **Retested** → **Closed**

Bug reviews will be held regularly during test cycles.

2.4 SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

Suspension Criteria

Testing activities will be temporarily suspended if any of the following conditions occur:

- **ATM Machine is Inaccessible or Out of Service**
The machine is powered off, undergoing maintenance, or physically unavailable for test execution.
- **Hardware Failure**
One or more critical hardware components (e.g., card reader, printer, keypad, screen) are malfunctioning, preventing further test steps.
- **Blocking Defects**
A critical or high-severity defect is identified that halts key functionalities (e.g., PIN cannot be entered, withdrawal not working), making it impossible to proceed with the remaining test cases.

Resumption Requirements

Testing can be resumed only after the following conditions are met:

- **All Blocking Issues Resolved**
Critical and high-priority defects that caused the suspension must be fixed, tested, and closed successfully.
- **Test Environment is Fully Restored**
The ATM machine and its associated test environment (network, tools, power supply, hardware) must be operational and stable.
- **Valid Test Data and Updated Test Plan are Available**
Required test inputs (e.g., test cards, PINs, cheques) must be ready. If the test plan was affected due to changes or fixes, it should be reviewed and updated accordingly.
- **Verification by QA Lead**
The QA/Test Lead must confirm that the system is stable, and all prerequisites are satisfied before allowing testing to resume.

2.5 TEST COMPLETENESS

Testing will be considered complete when:

- All planned test cases have been executed
- All critical and high-severity defects are fixed and verified

- Final test summary report is reviewed and approved

3. TEST DELIVERABLES

- Test Plan Document
- Test Case Document (Manual + Negative Scenarios)
- Bug Report / Defect Logs
- Daily Status Reports
- Test Summary Report

4. RESOURCE & ENVIRONMENT NEEDS

4.1 TESTING TOOLS

- **JIRA** – Defect and task tracking
- **Selenium (with simulators)** – Test automation (if applicable)
- **Excel/Google Sheets** – Test case documentation
- **Postman** – API testing (if applicable for backend simulation)