TEST PLAN DOCUMENT

AIUB BANK LIMITED

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Revision & Signoff Sheet

Document History:

Date	Version	Author	Change Description

Approvers List:

Name	Role	Version	Result	Date

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Note, the structure of this document is primarily based on the IEEE 829-1998 Standard for Software Test Documentation. Additional reference standards include IEEE 1008 (Unit Testing), 1012 & 1059(Validation & Verification) and 1074 (Software Life Cycle process).

Purpose:

The purpose of this document is to outline the test strategy and overall test approach for the Automated Teller Machine's transactions of AIUB Bank Limited. This document is only applicable for release V1.0 project. This includes test methodologies, traceability, resources required and estimated schedule.

Introduction:

In order to make the transaction easier and secured the AIUB Bank Limited has taken initiatives to develop a fully functioning ATM transaction System. This system will help both sides to have a hustle free transaction of money. The main goal of this project is to develop an efficient ATM System which will be user friendly and perform its intended tasks as well.

The system will be 24x7 available for transaction. It will have a touch screen user interface as well as keyboard interface so the users feel free to use its functionality. The users will need to select their desired destination from a list of different ATM machines situated in different areas. Before starting transaction the system will ask the user for his / her debit/credit card. Then the system will ask for the pi to validate the user. After validation the user will be provided with several options like withdrawal, balance check etc. The user can choose any option and the process will proceed. If the user chooses to withdraw money the system will check the account and provide the money if there is enough fund. There will be no need for any interface for ATM operator as the ATM machine will be started with the user interface after boot.

Due to pressing business needs, traditional development and testing processes have been customized to allow for faster and more frequent delivery cycles. Specifically, testing will now consist of the following phases:

- Unit and integration level – adherence to coding standards and successful communication between units
- Code Quality Assurance - acceptance into system level testing by successfully repeating a small subset of the tests performed in the code and integration level
- System level – compatibility, performance, usability, functionality etc.
- Test automation.
- System Quality Assurance & Acceptance (acceptance into Production)
- Post Implementation

This test plan document will outline the overall strategy and document the aspects of testing that are common to all of the phases.

Test objectives:

The main objective of the test is to verify that the functionality of ATM transaction of AIUB Bank Limited works according to the specifications. The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entrance criteria, prioritize lower severity defects for future fixing via CR. We will give priority in testing the most critical tasks like:

- System reliability & availability.
- System integrity & information correctness.
- Transaction reports and their correctness.
- Debit / Credit card credentials security.
- Reliability and robustness of the device.
- Proper account maintenance.

Software risk issues:

The followings are identified as the potential software risk:

- Functional complexity in recognition & acceptance of Credit/Debit cards.
- 24 x 7 available server maintenance.
- Transactional changes.
- Time limitations.
- Budget limitations.

Features to be tested:

- System availability.
- System reliability.
- System integrity.
- Accessibility.
- Information authenticity & correctness.
- Payment validation.
- Personal debit / credit instructions privacy.
- System efficiency.
- System load handling capabilities.
- Interfacing defects.
- Scalability.
- Modularity.
- Future enhancement options.
- Coding standards.

Features not to be tested:

It is the intent that all of the individual test cases contained in each test plan will be performed. However, if time does not permit, some of the low priority test cases may be dropped.

Approach:

The philosophy of the testing is risk-based testing, i.e. each test case will be prioritized as, High, Medium, or Low priority and then scheduled accordingly (Highest first). Exceptions to this general rule might include instances where:

- A large number of low priority test cases can be executed using a small amount of resources.
- Scheduling conflicts.
- A lower priority test is a pre-requisite of another higher priority test e.g. an expensive and high priority usability test might necessitate many of the inexpensive low priority navigational tests to have passed.
- Due to the lack of comprehensive requirements, navigational and functional tests may be scheduled first, so as to allow the testers the opportunity to gain familiarity with the system.

The testing will use a combination of manual and automated testing, due to the limited duration of the testing time, only automated tools that are already familiar to the **Leedsoft, Inc**. staff or have a minimum learning curve will be used. Due to the short period of time allotted for test execution, the systems source code will be frozen while being tested. Except for critical fixes that are blocking the testing efforts, changes will not be scheduled while a unit of code is being tested. Basic metrics will be kept for test effort (i.e. hours) test cases executed, and incidents. Due to the lack of available tools and time, no attempt will be made to collect more sophisticated metrics such as code coverage.

Item pass/fail criteria:

The entrance criteria's for each phase of testing must be met before the next phase can commence. Formal approval will be granted by the Test Leader. He will retain the decision as to whether the total and / or criticality of any or all detected incidents / defects warrant the delay (or rework) of the ATM transaction system. The system will be considered passed if it meets 98% of the desired test case results.

Suspension Criteria and Resumption Requirements:

In general, testing will only stop if the system enters death phase or fails to deliver its intended usability and has been declined by the customer.

Test deliverables:

The following documents will be generated as a result of these testing activities:

- o Master test plan (MTP).
- o Individual test plans for each phase of the testing cycle.
- o Combination incident / test summary reports for each phase.
- o Test log for each phase.
- o Automated test scripts and supporting test data

Remaining test tasks:

Upon delivery of the aforementioned test deliverables and the successfully installation of the ATM transaction System release V1.0 application into the production environment, all of the tasks covered by this master test plan will be deemed to have been completed. The only exception being the post-implementation test plan, which will be a continuing effort until the application is replaced or decommissioned.

Test environment:

The system will be tested under a controlled environment inside the office of LEEDSOFT Inc. Due to a limited budget and the pressing need complete the testing phase, LEEDSOFT Inc. has decided not to purchase any additional hardware, instead LEEDSOFT Inc. will utilize its existing set of desktop and laptop machines, which currently consists of the following machine specifications:

Available Human Resource Related to Testing: 20 Persons (Eight hour working day).

Available Hardware Environment:

Machine Category	Description
High-end PC	Core i7 Processor, 8 GB RAM, External GPU, 17" LCD Monitor, 100 Mbps Ethernet Line and Stereo Speakers.
Mid-range Laptops	Core i5 Processor, 4 GB RAM, 15" LCD Monitor, 100 Mbps Ethernet Line.
Low-end PC	Core i3 Processor, 4 GB RAM, External GPU, 15" LCD Monitor, 100 Mbps Ethernet Line and Stereo Speakers.
Available Operating Systems: Windows 10, Windows 7 and Linux.	

Available Testing Tools:

The following 3rd party testing tools are available for testing:

- Selenium
- Bugzilla
- Load Runner
- TestComplete
- DoMinatro Pro
- SQLInjector
- Bobby
- Scrubby
- Stylet
- KeyReadiness

Staffing & training needs:

The relevant LEEDSOFT Inc. managers will ensure that the staff assigned to this project are experienced with:

- General development lifecycle & testing techniques.
- All development and automated testing tools that they may be required to use.

Responsibilities:

- ➤ Salman,MD.– CEO.
- ➤ Gazi Ahmedul Hauque – Project Manager.
- ➤ Salman,MD.– Development Lead.
- ➤ Gazi Ahmedul Hauque – Test Lead.

Schedule:

The following tentative schedule will hopefully be meet:

- Test design (this document) is expected to be completed by the end of this month.
- Test execution is expected to last no more than three weeks and to start immediately after the test plans have been approved.
- Producing the Test Incident/Summary report is expected to be completed within 2 business days of completing the test execution phase.

A more detailed breakdown is currently being developed and will be completed before this master test plan is approved.

Risks and Contingencies:

The following seeks to identify some of the more likely project risks and propose possible contingencies:

- Server failure - Testing will be delayed until this situation is rectified, may need to recruit more staff to do the testing or reduce the number of test cases.

- Testing software is not available / not working - This will delay the introduction of automated testing and result in more manual testing, may need to recruit more staff to do the testing or reduce the number of test cases.

- Testing staff shortages/unavailability, many of the test staff are part-time and have other higher priorities, in addition no slack time is allocated for illness or vacation, may need to recruit more staff to do the testing or reduce the number of test cases.
- A large number of defects/incidents makes it functionally impossible to run all of the test cases – As many test cases as possible will be executed.
- Not enough time to complete all test cases. If time cannot be extended, individual test cases will be skipped, starting with the lowest priority.

Approvals:

Project Sponsor	S. M. Abdur Bhuyan Rouf
Test manager	Salman, Md.
Development team manager	Gazi Ahmedul Haque