# American University-
## Department of
## Subject: Software

# International Bangladesh
## Computer Science
## Quality and Testing

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## 1. Test Plan Identifier:

Test plan name: AIUB BANK ATM SYSTEM

Test plan ID: 2017-00010

Date: 13.07.2017

## 2. References

Test plan for the AIUB BANK official website is developed on
supporting documents. Refer to the actual version of the documents as
stored in the configuration management system. Here is the list for those
reference documents.
List of the document that supported the test plan

- Software Requirements specification report on AIUB web site.
- Project plan.
- Details design document.
- International standard test plan.

## 3. Introduction

The test plan describes the scope of the overall test effort and provides a record of the test
planning process. Anyone can configure the test plan to meet the needs of your team. Typically,
a test plan identifies the requirements, risks, test cases, the test environments to test, the business
and quality objectives, the test schedules, and other items.

We have been developed our website well equipped technology. The document is supposed to
give a complete planning of a systematic strategy for software testing of AIUB BANK Official
website. The AIUB BANK is composed of numerous features. This test plan is actually designed
to ensure those feature work up on the mark. Both directly and indirectly affected will be address
hear. The AIUB BANK contains all the information about the AIUB BANK employee and
customer with each and every transaction. The document represent the master plan of the AIUB
BANK. As we know that a master plan is the living and breathing document that summarize the
overall document that is needed to a software product. It also includes of
the software testing including unit, system and beta testing. And our
document is enough good to describe the all the test case. It is also outline
of pass and fail criteria and indicates the planed date and week.

## 4. Test Items:

 List of test items

- Verify that touch of the ATM screen is smooth and operational
- Verify that user is allowed to get account details like available balance
- Verify that user is not allowed to exceed one transaction limit amount
- Verify that user is not allowed to exceed one day transaction limit amount
- Verify that user is allowed to do only one transaction per pin request
- Verify that user is not allowed to proceed with expired ATM card
- Verify that in case ATM machine runs out of money, proper message is displayed to user
- Verify the slot for ATM Card insertion is as per the specification
- Verify that font of the text displayed in ATM screen is as per the specification
- Verify that user is presented with options when card is inserted from proper side.

- The system will ask for the transaction type after satisfactory validation of the customer PIN. The customer will be given three options: withdrawal transaction, or query transaction, or transfer transaction.
- If a customer selects withdrawal transaction, the system will prompt the customer to enter account number and amount to be dispensed.
- For a withdrawal transaction, the system will determine that sufficient funds exist in the requested account, that the maximum daily limit has not been exceeded, and that there are sufficient funds available at the local cash dispenser.
- If a customer selects query transaction, the system will prompt the customer to enter account number.
- The system will check if there are enough funds available in the 'from account', which are being requested for transfer to the 'to account'.
- If the transfer transaction is approved, a receipt will be printed and the card will be ejected. The information printed on the receipt includes transaction number, transaction type, amount type, and account balance.
- The system will cancel any transaction if it has not been completed if the customer presses the Cancel button.
- The customer records, account records, and debit card records will all be maintained at the server and will not be the responsibility of the system.
- The system will not be responsible for opening or closing of accounts, and to create, update, or delete customer and debit card records. These tasks are performed elsewhere by the bank.
- The system will not be responsible for the maintenance of the hardware devices of the ATM or network facilities.
- If a query transaction is approved, the system will print a receipt and eject the card. The information contained on the receipt includes transaction number, transaction type, and account balance.

## 5. Software risk issues

- Meeting the planned deadlines plays a vital role in the successful completion of a project. Before you prepare your risk mitigation strategy, it is important to understand the reasons that increases the likelihood of risk occurrence.
- Inaccurate time and effort estimation.
- Inability to foresee the total scope.
- Inability to complete tasks at the estimated time
- Lack of test tools.
- Not enough training.
- Database security and safety
- Poorly documented and changes.
- Not enough budget or schedule for testing
- Rapid change.

## 6. Features to be tested

| Feature | Likelihood | Impact | Priority |
|---|---|---|---|
| Fund withdrawal | HIGH | High | High |
| Quarry of balance | Medium | High | High |
| Transfer money | High | High | High |
| Authorized ATM card | Low | High | MEDIUM |
| Card deadline | LOW | Low | Low |
| Card lost | Medium | Medium | Medium |
| PIN verification | High | High | High |
| Number of timed | Medium | Medium | Medium |
| Enter account No | High | High | High |
| Check fund | High | High | High |

## 7. Features not to be tested:

| FEATURE | Description |
|---|---|
| New account | It need not to be tested because new account create by the admin only. |
| Password recovery | It need not to be tested because new account create by the admin only. |
| Change the services | It need not to be tested because new account create by the admin only. |
| Network security | Testing network security out of our scope. |

## 8. Approach:

**Testing levels**: The testing approach about the AIUB BANK is a master testing plan consist of unit testing, system or integration system and acceptance testing. It this project most of the tests have done by the developer and professional tester. Developer's works to the system testing. And the professional tester the integration and system testing. And the acceptance test is done by the actual end user.

**Configure management**: The programmer under development and those in full test phase controls tracking of change. The migration of the website from the first stage to the last stage tested according to the guideline. All kinds of change and modification change request will be handled by the published plans and guidelines.

**Test tools**
Selenium – Web browser automation.

Microsoft visual studio – Load testing.
CIUnit- for unit testing.
Free mind- free mind mapping software.
JSUnit – unit testing for JavaScript.
Multi mechanize – performance and load testing.

**Measures and Metrics**: The flowing information will be collected by the development team during the unit testing process. The information will be provided to the test team at programmer turn over as well as be provided to the project team on a biweekly basis.

## 9. Item Pass/Fail criteria:

The test process will be completed when the project leader satisfied with the result of the test. For this, at least 90 percent of the test case must be passed. All functionalities must be covered in this test cases and most of all, high and medium severity must be detected and fixed. Minor defected, but make sure that it will not create major defects. The project leader will decide the whether the detected defects and critically will ensure the AIUB BANK of version 1.0 to delay.

## 10. Suspension Criteria and Resumption Requirements:

| Criteria name | |
|---|---|
| 1.  ATM card verification | • To verifying the card it is required to connect the central server. If the central server is not connected the ATM machine than it is not possible to verify the card. |
| 2.  Withdrawal transaction Validation/Query of Accounts/Transfer fund | • This is also required central server connection. First it is needed to approve the card than user can choose the option of them. If first one does not work than next one will not work. |

## 11. Test Deliverables:

- Test plan document.
- Test cases.
- Test design specification.
- Tools and their outputs.
- Error log and execution log.
- Problem report and corrective actions.

**12. Remaining test tasks:**

| Task | Assigned to | Status |
|---|---|---|
| 1. Defining unit test procedures. | PM, TL, DEV | |
| 2. Creating integration test plan. | TT, TL | |
| 3. Create system test plan. | PM, TL, TT, TS | |
| 4. Develop acceptance test plan. | PM, TL, DEV, Client | |
| 5. Verifying prototype screens. | PM, DEV, client | |

**13. Environmental needs:**

We need some environment to test the system. The requirements are,

- An ATM Machine.
- Some cash.
- A central server.
- Network connectivity.

**14. Responsibilities:**

| | PM | TL | DEV | Client | TT |
|---|---|---|---|---|---|
| Unit test execution and documentation. | | x | x | | |
| Integration test documentation and execution. | x | x | x | | x |
| System testing execution | x | x | | | x |
| UX review | x | | x | x | |
| Acceptance test execution and documentation. | x | x | | x | |
| Test procedures | x | x | x | | x |
| Screen prototype review | | | x | x | |

Development department is responsible for execution of unit test execution.

Project manager is involved with system test, integration test, UX review, Test procedures.

Client is responsible for acceptance test, UX review and prototype review.

**15. Schedule:**

For every work there is a time schedule defined. All the members time line are mentioned in the test plan and the test schedule who are involved with the project.

1. All the members of the test tem and the development team settle down for understanding the requirements.
2. Develop the master plan by the test lead and he allocate the time depending on the review.
3. Review of the System design document by test team personnel. This will provide the team with a clearer understanding of the application structure and will further define the Inventory classes, sub-classes and objectives.
4. Than develop the acceptance test plan by the test lead with the presence of vary of technical and non-technical person.
5. Review the test documentation by the technical person. This will give a clear understanding.
6. Unit testing must be done while developing the project.
7. Time allocated for both System/Integration and Acceptance test processes.

## 16. Planning Risk and Mitigation Plan:

| Risk | Impact | Mitigation Plan |
|------|--------|-----------------|
| **Schedule**<br>Testing schedule is tight. If the start of the testing is delayed due to design tasks, the test cannot be extended beyond scheduled start date. | High | • The testing team can control the preparation tasks (in advance) and the early communication with involved parties.<br>• Some buffer has been added to the schedule for contingencies, although not as much as best practices advise. |
| **Resources**<br>Not enough resources, resources on boarding too late (process takes around 15 days. | High | • Holidays and vacation have been estimated and built into the schedule; deviations from the estimation could derive in delays in the testing. |
| **Defect**<br>Defects are found at a late stage of the cycle or at a late cycle; defects discovered late are most likely be due to unclear specifications and are time consuming cost factor to | High | • Defect management plan is in place to ensure prompt communication and fixing of issues. |

| | | |
|---|---|---|
| resolve. | | |
| **Connectivity**<br>Network connection can be issue. | Medium | • To test the system, it is required to connect to the server through network connection. An alternative or local server can be used due to the interruption of network connection. |
| Non-availability of Independent Test environment and accessibility | High | • Due to non-availability of the environment, the schedule gets impacted and will lead to delayed start of Test execution. |
| Delayed Testing Due To new Issues. | High | • During testing, there is a good chance that some "new" defects may be identified and may become an issue that will take time to resolve. There are defects that can be raised during testing because of unclear document specification. These defects can yield to an issue that will need time to be resolved. |

**17. Role Expectations:**

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

| Roles | Name | Contact |
|---|---|---|
| 1. Project Manager | | |
| 2. Test Lead | | |
| 3. Business Analyst | | |
| 4. Development lead | | |
| 5. Testing Team | | |
| 6. Development Team | | |
| 7. Technical Lead | | |

## 18. Approvals:

The name and titles of the persons who must approve this plan.

| | |
|---|---|
| Signature: | |
| Name: | |
| Role: | |
| Date | |

| | |
|---|---|
| Signature: | |
| Name: | |
| Role: | |
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| Signature: | |
| Name: | |
| Role: | |
| Date | |

| | |
|---|---|
| Signature: | |
| Name: | |
| Role: | |
| Date | |

## 19. Glossary:

- Mitigation Plan – This term is used to differentiate an alternative plan.
- TM – Test Manager.
- PM – Project Manager.
- DEV – Developer Team.
- TT – Test Team.