



# American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Summer 2021 - 22

Section B

Software Quality and Testing

## Developing Test Plan for Mobile Banking System

A Report submitted

By

Student Name	Student ID
Nowshin Sayara	18-36237-1
Rubina Islam Reya	19-39811-1
Mustary Rahman Prottasha	19-39985-1

Under the supervision of

**Abhijit Bhowmik**

Associate professor & Special Assistant

Office of Student Affairs

Department of Computer Science

Faculty of Science and Technology

American International University Bangladesh

---

# Software Test Plan

For

## Mobile Banking System

Version 1.0.0 approved

Prepared by

<Nowshin,Prottasha,Rubina >

<American International University-Bangladesh>

<Created on 16 August, 2022>

## Table of Contents

Revision History .....	4
1. TEST PLAN IDENTIFIER: RS-MTP01.3 .....	5
2. REFERENCES .....	5
3. INTRODUCTION .....	5
Background to the Problem .....	5
Solution to the Problem .....	5
4. REQUEIREMNT SPECIFICATION .....	6
4.1 System Features.....	6
4.2    System Quality Attributes .....	8
4.3    System Interface .....	8
4.4 Project Requirements .....	11
5. FEATURES NOT TO BE TESTED .....	12
6. TESTING APPROACH.....	12
6.1 Testing Levels .....	12
6.2 Test Tools .....	13
6.3 Meetings .....	13
7. TEST CASES/TEST ITEMS .....	14
8. ITEM PASS/FAIL CRITERIA .....	20
9. TEST DELIVERABLES .....	21
10. STAFFING AND TRAINING NEEDS.....	21
11. RESPONSIBILITIES .....	21
12. TESTING SCHEDULE .....	23
13.PLANNING RISKS AND CONTINGENCIES .....	23
14. APROVALS .....	24

## Revision History

Revision	Date	Updated by	Update Comments
1	04.08.2022	Nowshin Sayara	First Draft
2	09.08.2022	Rubina Islam Reya	Second Draft
3	13.08.2022	Mustary Rahman Prottasha	Third Draft

## 1. TEST PLAN IDENTIFIER:RS-MTP01.3

Mobile Banking System

## 2. REFERENCES

- Software Requirement Specification (SRS) of the system
- Technical Specification
- Rules of User Interface Design Content
- Requirement Specification
- [https://www.ijettcs.org/Volume4Issue5\(2\)/IJETTCS-2015-10-09-16.pdf](https://www.ijettcs.org/Volume4Issue5(2)/IJETTCS-2015-10-09-16.pdf)
- <https://media.neliti.com/media/publications/263023-banking-bot-17957862.pdf>

## 3. INTRODUCTION

### Background to the Problem

- The business must develop a mobile banking system that enables users to readily access assistance for bank-related issues without the need for a human bank assistant. Additionally, we are using an AI system here.
- Everyone now lives a life that includes mobile banking. The banking industry is used by almost everyone to carry out their jobs. The majority of the work is done by hand. The use of online and mobile banking has increased significantly in recent years. Today, chatbots are increasingly popular. They are computer programs that converse in human languages with users. People are searching for these kind of bots for banking websites today..

## **Solution to the Problem**

In this project, we are attempting to use chat bots to carry out some of the fundamental banking activities. Currently, bots in the banking industry simply serve as guidelines; however, with our bot, we carry out banking operations for a list of a few institutions

## **4. REQUIREMENT SPECIFICATION**

### **4.1 System Features**

#### **1. System Login**

##### **Functional Requirements**

- 1.1 Users must be able to log in to the software using their assigned username and password.
- 1.2 The system will create a random verification code to retry login if the username and/or password have been entered incorrectly more than three times.
- 1.3 If a user attempts to log in more than five times, the system will prohibit that user's access for one hour.

Priority Level: High

Precondition: user have valid user id and password

#### **2. User Registration**

##### **Functional Requirements**

- 2.1 Users can register for the system via the program.
- 2.2 Following registration, User ID will be generated automatically, and OTP and User ID will be given to email automatically.

Priority Level: Medium

Precondition: User will need National ID, passport size jpg photo, Mobile number, email ID, must to register for the system.

### 3. Chatting BOT

#### Functional Requirements

3.1 This is an AI-based chat system that generates replies for users based on their most recent conversations.

Priority Level: High

Precondition: Use a specific term to receive the best and most relevant response for the user.

### 4. Bank Branch Finder

#### Functional Requirements

4.1 By inputting his or her location, a user can get branch information.

Priority Level: Medium

Precondition: User current area

### 5. Bank ATM Finder

#### Functional Requirements

5.1 User can find ATM location by entering his/ her area

Priority Level: Medium

Precondition: User current area

### 6. Feedback

#### Functional Requirements

6.1 User can give feedback or complain through the function

Priority Level: Medium

Precondition: User Bank account no.

## 4.2 System Quality Attributes

- **Usability:** A trained user shall be able to register into the system and login
- **Readability:** A trained user shall be able to read every page perfectly.
- **Efficiency:** All functional purpose shall be fulfilled
- **Portability:** Shall be able to run on every device correctly
- **Correctness:** All features shall be done the way stakeholders demanded.


## 4.3 System Interface

[Home](#)      [Branch Locator](#)      [ATM Finder](#)      [Report](#)      [Contact](#)      [SignIn](#)



*Figure 4-1 Home Page*






## Sign In

[forget password?](#)

[Login](#)

[Sign up](#)


Figure 4-2 Sign In Portal



## ATM Finder

[Search](#)

Figure 4-3 Search Panel



---

### Locate Branch

Bank Name By Area

Figure 4-4 Branch Locator



### Sign up

**First Name**

**Last Name**

**Gender**

Male ☐ Female ☐

**Email**

**Enter Password**

**Confirm Password**

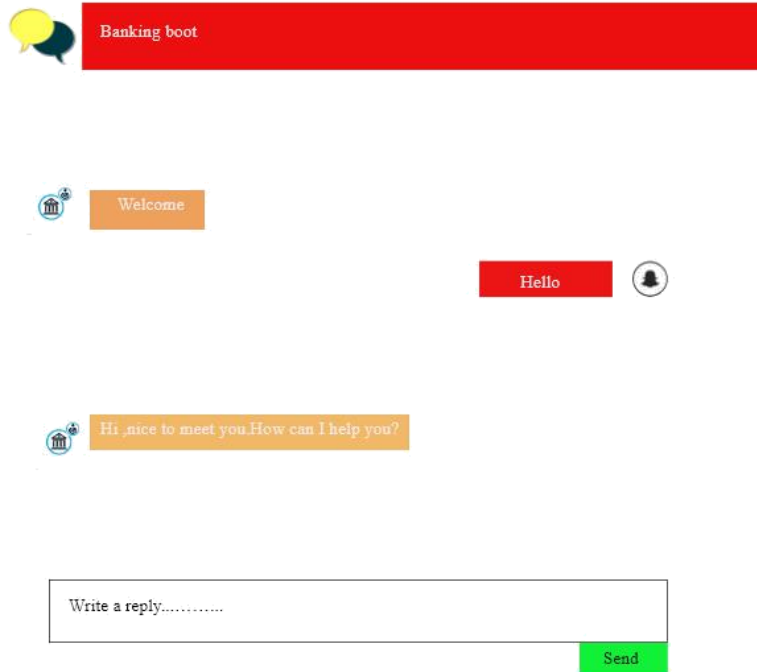
**National Id**

**Phone Number**

**Upload Picture**



Figure 4-5 Sign Up



*Figure 4-6 Chatting BOT*

## 4.4 Project Requirements

- **Time:** Needs to completed within 3 months
- **Budget:** 250,000 BDT
- **Environment:** Should be worked correctly in all device

## 5. FEATURES NOT TO BE TESTED

- Network Security
- Hardware related issues
- Any personal information.
- Low risk, has been used before successfully and is considered stable. UI/UX Design.

## 6. TESTING APPROACH

### 6.1 Testing Levels

- Unit, System/Integration (combined), and Acceptance test levels will make up the SMS project's testing. For system/integration testing, it is intended that there would be at least one independent test professional working full-time. However, due to financial limitations and stated deadlines, the test manager will conduct the majority of testing with input from the development teams.
- The developer will conduct UNIT testing, and the development team leader will provide their approval. Before unit testing is accepted and handed off to the tester, the programmer must show the team leader proof of it (test case list, sample output, data printouts, defect information). The test person will also receive access to all unit test data.
- SYSTEM/INTEGRATION ,The development team leader and test manager will oversee testing, with any necessary assistance from the individual developers. For this project, there are no specialized test tools available. After all critical flaws have been fixed,

programs go on to the System/Integration test. Up to two major flaws may exist in a software as long as they don't prevent testing (I.E. there is a work around for the error).

- o **ACCEPTANCE Testing** The development team leader and test manager will provide help to the actual end users as they do. One month after the System/Integration test procedure is finished, the acceptance test will be conducted concurrently with the current manual ZIP/FAX process.

## **6.2 Test Tools**

The only test tools to be used are the standard AS/400 provided utilities and commands.

- o The Program Development Manager (PDM) will be used as the source version configuration management tool in conjunction with the in-house check-in/check-out control utility. The check-in/out utility is part of each developer's standard AS/400 access menu.
- o The initial prototypes for the new screens will be developed using the AS/400 Screen Design Aid (SDA). The initial layout and general content of the screens will be shown to the sales administration staff prior to proceeding with testing and development of the screens.

## **6.3 Meetings**

The test team will get together once every two weeks to assess work so far and spot potential issues early on. Every two weeks, the project manager and the head of the test team will also meet. The dates for these two sessions will be separate weeks. When necessary, more meetings can be held to address emergencies.

## 7. TEST CASES/TEST ITEMS

Project Name: Mobile Banking System		Test Designed By: Nowshin Sayara		
Test Case ID: BS_001		Test Designed date: 05 August,2022		
Test Priority: Medium		Test Executed by: Rubina Islam Reya		
Module Name: User Registration		Test Execution date: 08 August,2022		
Test Title: Registration with user valid information				
Description: Test User Registration page				
Pre-condition: User will need valid email, national ID, Passport size photo and personal information.				
Dependency:				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the Home page.</li><li>- Click Sign Up</li><li>- Enter First name</li><li>- Enter Last name</li><li>- Enter gender</li><li>- Enter Email</li><li>- Enter password</li><li>- Enter Confirm Pass- word</li><li>- Enter National ID</li><li>- Enter phone</li><li>- Upload picture of 413 x 531 pixels, format (jpeg, PNG).</li><li>- Click on Submit</li></ul>	<p>First name: Mrs.Alex</p> <p>Last name: Za</p> <p>Gender: Male</p> <p>Email: <a href="mailto:alex@gmail.com">alex@gmail.com</a></p> <p>Password:A12345x</p> <p>Confirm Password:A12345x</p> <p>National Id: 199328465719374</p> <p>Phone No: +8801992749371</p> <p>Upload Image: Profile.png</p>	User profile page will appear after validating email and national Id.	As expected	Pass
Post-Condition: validation email sent to the user email after confirming the email the user data stored into the database. User Sign Up into the system successfully				

Project Name: Mobile Banking System			Test Designed By: Rubina Islam Reya	
Test Case ID:BS_002			Test Designed date: 06 August,2022	
Test Priority: High			Test Executed by: Mustary Rahman Prottasha	
Module Name: Login session			Test Execution date: 07 August,2022	
Test Title: Bank account holder login.				
Description: A user can login using user ID and Password.				
Pre-condition: User must have valid ID and Password.				
Dependency: BS_001				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the login page</li><li>- Enter user id and password</li><li>- Click login</li></ul>	User Id: CB501  Password: 665984	Bank Account holder should be able to login into the system.	As expected	Pass
Post Condition: Bank account holder is validated by database and successfully logged into the system. The account session details are stored in the database.				



Project Name: Mobile Banking System			Test Designed By: Mustary Rahman Prottasha		
Test Case ID:5. BS_003			Test Designed date: 10 August, 2022		
Test Priority: Medium			Test Executed by: Nowshin Sayara		
Module Name: Chatting Bot			Test Execution date: 12 August,2022		
Test Title: Test user chatting session.					
Description: A valid user can send text message to the bank administrative.					
Pre-condition: Bank holder must be registered; Logged in to the system;					
Dependency: BS_001, BS_002					
Test Steps		Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the home page.</li><li>- Click menu bar</li><li>- Click contact</li><li>- Enter Bank Account number</li><li>- Enter the text</li><li>- Click send</li></ul>		Bank Account No: 230239177770	User should send the message successfully and sent message should appear with time.	As expected	pass

Post-Condition: Sent Data and time stored into the database.

Project Name: Mobile Banking System			Test Designed By: Nowshin Sayara	
Test Case ID: BS_004			Test Designed date: 08 August,2022	
Test Priority: Medium			Test Executed by: Mustary Rahman Prottasha	
Module Name: Branch Locator			Test Execution date: 11 August,2022	
Test Title: Test search for a Branch				
Description: Bank Account holder can locate a branch according to the area				
Pre-condition: User must be Login to the system				
Dependency: BS_002				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the Home page</li><li>- Click on Branch Locator</li><li>- Enter Branch name by area.</li><li>- Click search button.</li></ul>	Branch Name:  CMD Ltd, Uttara.	Able to find the requested branch location.	As expected	Pass

Post-Condition: Search found message show.

Project Name: Mobile Banking System			Test Designed By: Rubina Islam Reya	
Test Case ID: BS_005			Test Designed date: 09 August,2022	
Test Priority: Medium			Test Executed by: Nowshin Sayara	
Module Name: ATM finder			Test Execution date August 11, 2022	
Test Title: Test search for a Branch				
Description: Bank Account holder can search the ATM by area and see the location.				
Pre-condition: User must be Login to the system				
Dependency: BS_002				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the Home page</li><li>- Click on ATM finder</li><li>- Enter Area or city name.</li><li>- Click search button.</li></ul>	Area Name:  Bashundhara-1	Able to find the requested ATM booth location.	As expected	Pass

Post-Condition: Search found message show.

Project Name: Mobile Banking System			Test Designed By: Mustary Rahman Prottasha	
Test Case ID: BS_006			Test Designed date: 09 August,2022	
Test Priority: Medium			Test Executed by: Rubina Islam Reya	
Module Name: Report an issue			Test Execution date: August 11 ,2022	
Test Title: Report an issue test				
Description: Users can report or give feedback about any issue.				
Pre-condition: User must be Login to the system				
Dependency: BS_002				
Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)
<ul style="list-style-type: none"><li>- Go to the Home page</li><li>- Click on Feedback</li><li>- Enter bank account no</li><li>- Type the desired text</li><li>- Click on submit button.</li></ul>	Bank Account No: 23023916765230  Report: My deposit is not authorized yet	User should get a reply from bank administrative.	As expected	Pass

Post-Condition: Show the feedback of bank administrative

## 8. ITEM PASS/FAIL CRITERIA

- At the Unit test level-
    - ✓ All test cases completed.
    - ✓ Individual module testing is completed.
    - ✓ All cases completed with a percentage containing some minor defects since it is impossible to get 100% tested.
  - At the Integration test level-
    - ✓ Interaction between integrated unit is tested.
    - ✓ All test cases are checked.
    - ✓ A specific number of plans are completed without errors.
  - At the System test level-
    - ✓
      - o System's compliance with specific requirements are checked.
    - ✓
      - o All lower level plans are completed.
  - At the Acceptance test level-
    - ✓
      - o User acceptance is checked.
    - ✓
      - o Specified percentage of acceptance criteria.
  - Compare the total defects.
  - Determine the severity of the defects.
-



## **9. TEST DELIVERABLES**

Test Deliverables are the test artifacts which are given to the stakeholders of a software project during the SDLC (Software Development Life Cycle). Every software application goes through different phases of SDLC and STLC.

- Acceptance test plan
- System/Integration test plan
- Unit test plans/turnover documentation
- Screen prototypes
- Report mock-ups
- Defect/Incident reports and summaries
- Test Cases
- Test Data
- Test Defect Report
- Test Summary Report
- Test Status Report
- Error Corrective Actions
- Execution Log Files

## **10. STAFFING AND TRAINING NEEDS**

For system testing, acceptability testing, and integration testing, one tester will be employed full-time. At the project's conclusion, this testing will still be ongoing. Testing will be done manually and automatically. Both human and automated integration testing will be used for some tests. Test Studio and Selenium software will be used for automated testing. The software will be taught to those involved in testing for testing purposes. Since the automated testing is so sensitive, training is the program's first priority. The test manager will watch the entire process.

In order to provide complete and proper testing the following areas need to be addressed in terms of training.

- A. The developers and the testers must be trained on selenium and test studio. Also trained on the electronic data interchange [EDC] interface.
- B. Specification of test items which is to be tested and who tested that part. And the training program will be arranged by test manager.
- C. Unit testing will be handled manually but the integration testing will be on both manually and automated.

## 11. RESPONSIBILITIES

	TM	PM	DEV TEAM	TEST TEAM	CLIENT
Unit test Documentation & Execution		<b>X</b>		<b>X</b>	<b>X</b>
Unit Test of Project Planning & Responsibilities	<b>X</b>				<b>X</b>
System Design Reviews	<b>X</b>				
Detail Design Reviews	<b>X</b>				<b>X</b>
Test procedures and Rules Check			<b>X</b>		<b>X</b>
Test Plan Affordability		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Screen & Prototype Reviews	<b>X</b>		<b>X</b>		



## 12. TESTING SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team, development team, management and customer will be handled by the project manager in conjunction with the development and test team leaders.



## 13. PLANNING RISKS AND CONTINGENCIES

- Planning should be on time
- The tasks should be performed on time
- The test team should follow the test manager command for testing case
- The automated testing should be performed clearly
- Web template testing with UI/UX
- Using agile scrum and connecting with the client.
- Agile Kanban information updated to the client.
- Server connection
- Network dependency
- Working plan and procedures
- Requirement specification.

- Requirement elicitation
- Design analysis

## 14. APROVALS

Role	Name	Signature
Project Manager	Mustary Rahman Prottasha	
Test Lead	Rubina Islam Reya	
Development Manager & Analyst	Nowshin Sayara	