American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science &Technology (FST)

Summer 21 22

Section: D

Software Quality Assurance and Testing

Agricultural Gain

A Report submitted
By

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Software Test Plan

for

<Agricultural Gain >

Version 1.0 approved

Prepared by <author>

<American International University-Bangladesh >

<18.04.2023 >

Checked By Industry Personnel

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Company: Tekarsh

Sign: Nashif

Date:26.4.2023

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2023.04.26	Promi, Sadia Afrin	First Draft
0.2	2023.04.27	Hossain, Md. Yeasir	Final Draft
0.3	2023.04.28	Tisha, Makhnun Fatema	Final Draft
0.4	2023.04.29	Akram, Md. Wasim	Final Draft

1. TEST PLAN IDENTIFIER: Agricultural Gain-AGP01.3

2. REFERENCES

Software Requirement Specification (SRS) Document

3. INTRODUCTION

Background to the Problem

Bangladesh is an agricultural country where 87 percent of rural households rely on agriculture for at least part of their income. But the agriculture of our country still lags behind. Because in our country farmers are not aware of the intelligent technologies much compared to farmers of other countries. As a result, if they face any kind of problem, they do not understand what to do or where to go. Sometimes they have to go a long distance to consult. At the same time, the farmers do not get the proper money for their products as per the original market price. As our country is getting digital and it is the manifesto of the present government to make a digital country, so we wanted to make a application for the farmers as smart devices are very much available now in the rural areas also.

Solution to the Problem

In our country, if farmers face any kinds of problems regarding their crops, they do not understand where to contact. Our project will help them to contact agriculturists or veterinary specialists. Sometimes farmers need money to cultivate but they find it difficult to manage it. Even if they can hardly manage loans, they have to pay a huge amount of interest. Our project will help them to take loans and microcredits with a negligible amount of interest. Usually, the farmers sell their products to wholesalers and they sell them to the consumers. As a result, sometimes it is seen that farmers are not getting the proper price as the market price. Even the customers also want farm-fresh food which they sometimes may not get in this process. Our project will allow the customers to buy products directly from the farmers so that the farmers get proper money and the buyers get fresh food

4. REQUIREMENT SPECIFICATION

4.1 System Features

4.1.1 Registration

- The software shall allow new users to create an account by providing personal information such as expertise, institution name, address, gender, email, username and password.
- The software shall verify that the provided information is valid and not already in use.
- The software shall confirm successful registration with a pop-up message and redirect the user to the login page.
- The software shall limit account validity to a certain period and notify the user of the expiration date.

Priority Level: High

Precondition: User must have valid and unique personal information to create an account.

4.1.2 Login

- The software shall allow users to enter their username and password to access the system.
- If the username and/or password is incorrect, an error message will be displayed, and the user will be prompted to try again.
- If the user has forgotten their password, they can request a password reset by providing their registered email address.

Priority Level: High

Precondition: User must have a valid username and password or a registered email address for password reset.

4.1.3 Edit Profile

- The software shall allow users to edit their personal information such as name, email, and phone number.

Priority Level: medium

Precondition: user must be logged in.

4.1.4 Switch language

- **User can easily switch language Bangla to English or English to Bangla**

Priority Level: Medium

Precondition: user no need to log in

4.1.5 Logout

- The software shall allow the user to log out of the system.
- Upon logging out, the user shall be redirected to the login page.

Priority Level: Medium

Precondition: The user is logged into the system.

4.1.6 Contact us

- The "Contact Us" option on our software allows users to easily get in touch with us and ask any questions they may have. By using this option, users can receive prompt and personalized answers from our team.
- We're reachable on Facebook, YouTube, LinkedIn, and Twitter. Choose your favorite to get prompt and personalized answers.

Priority Level: Medium

Precondition: user no need to log in

4.1.7 Frequently asked question.

- Using this option, farmers can share their problems or find solutions to previous problems.
- Agriculturists can provide feedback on the farmer's problems.

Priority Level: Medium

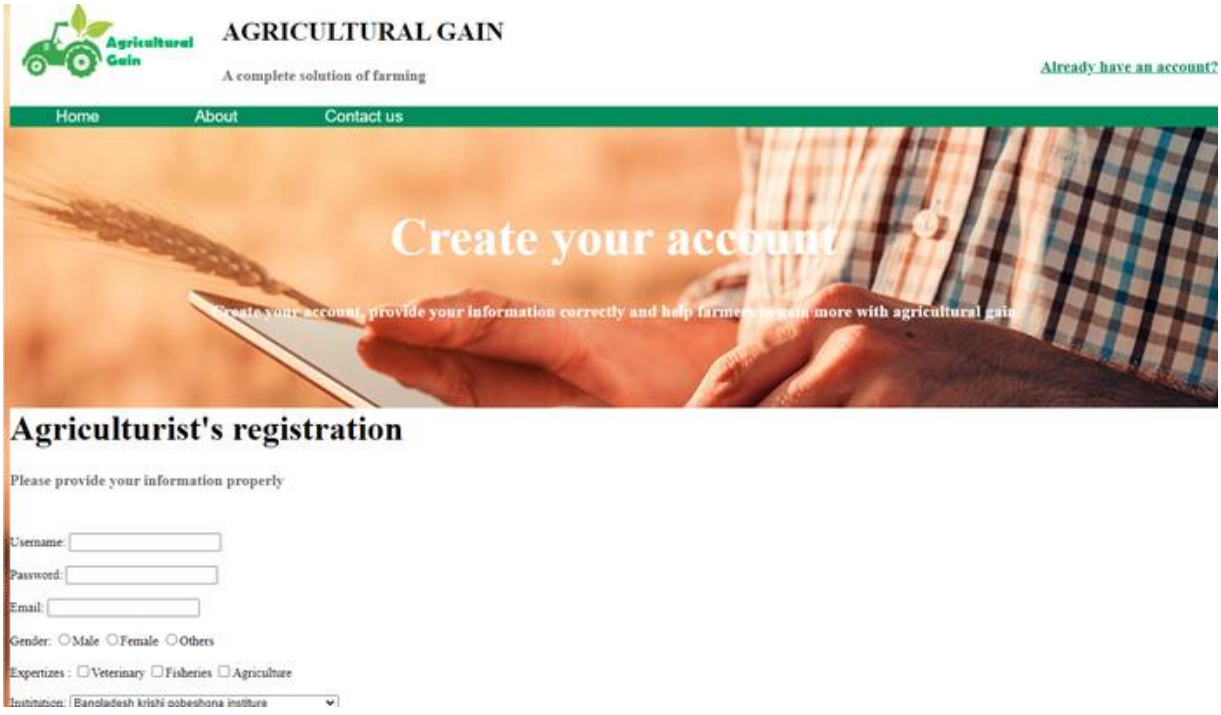
Precondition: User must be logged in.

4.2 System Quality Attributes

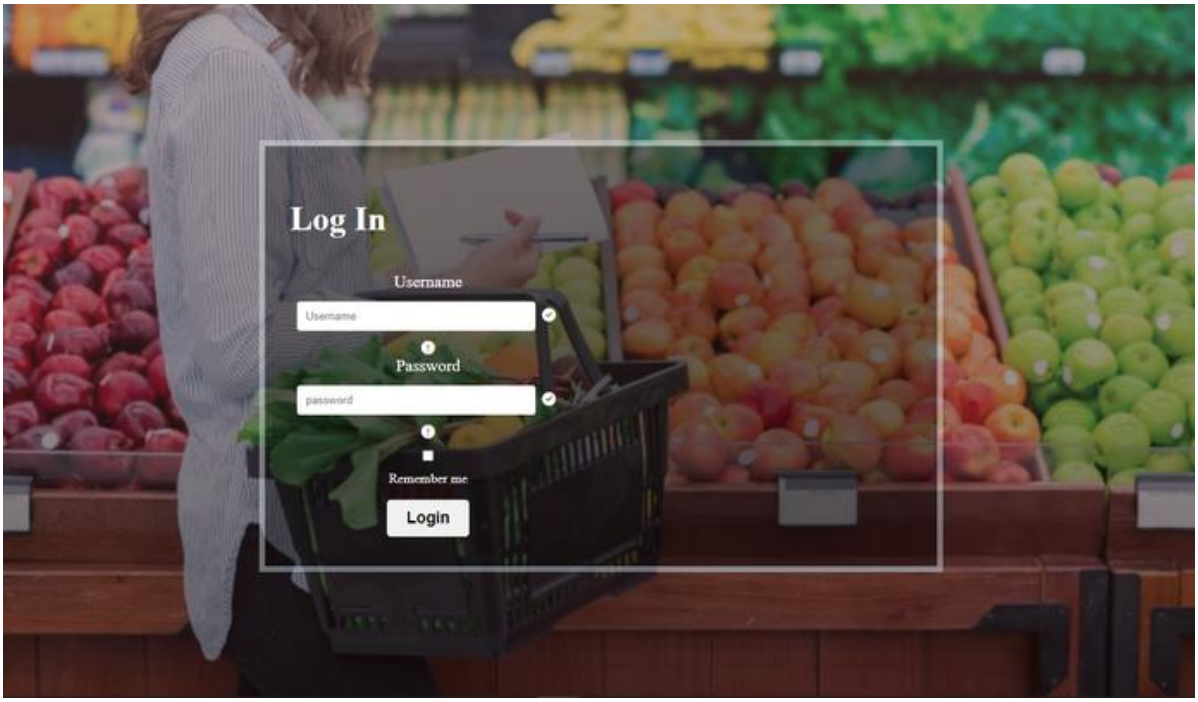
- Reliability: The system should be able to handle a large volume of users with minimal downtime, ensuring that users can rely on the system for their daily agricultural needs.
- Security: The system should have robust security measures in place to protect sensitive user information and financial insurance.
- Usability: The system should be user-friendly, making it easy for users to contact the agriculturists and veterinary specialists.
- Performance: The system should be able to process quickly and efficiently, minimizing wait times for users.
- Maintainability: The system should be easy to maintain and update, allowing for quick bug fixes and software updates as needed.
- Availability: The system should be available for use at all times, with minimal downtime for maintenance or updates.

4.3 System Interface

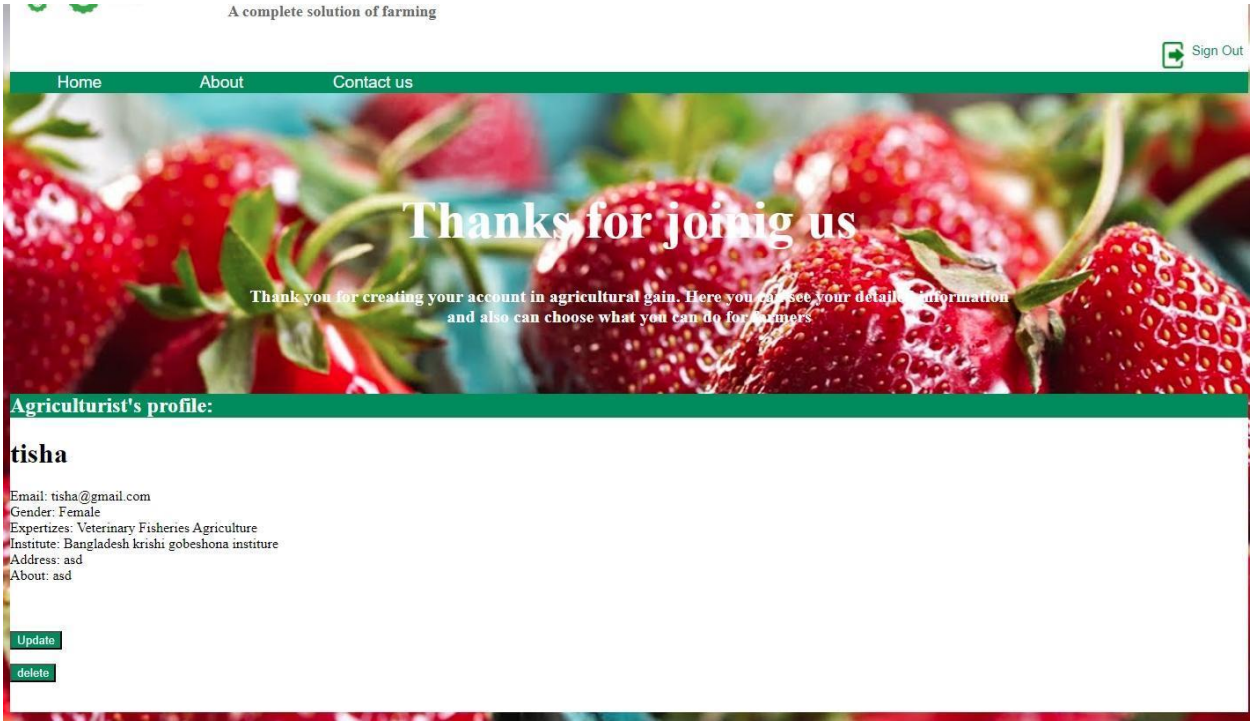
Registration



Login

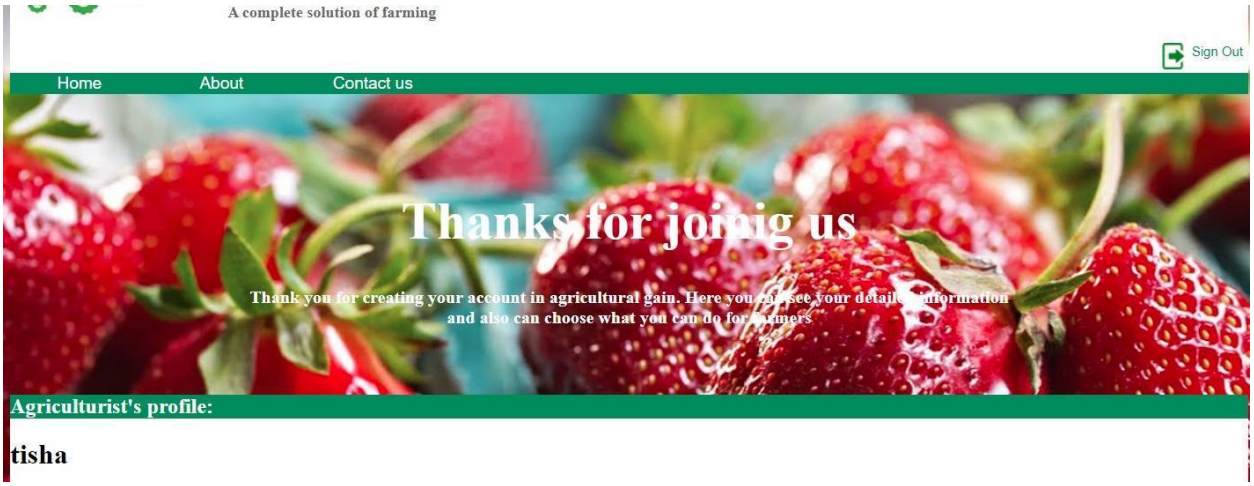


Edit profile

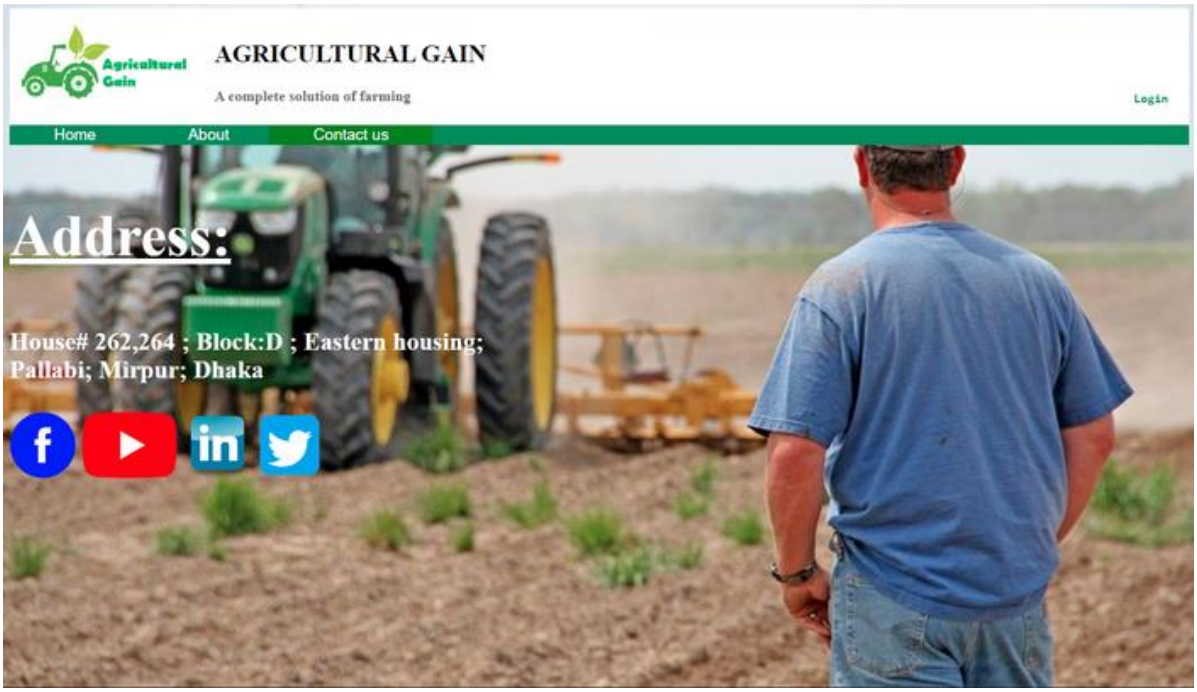


Switch language

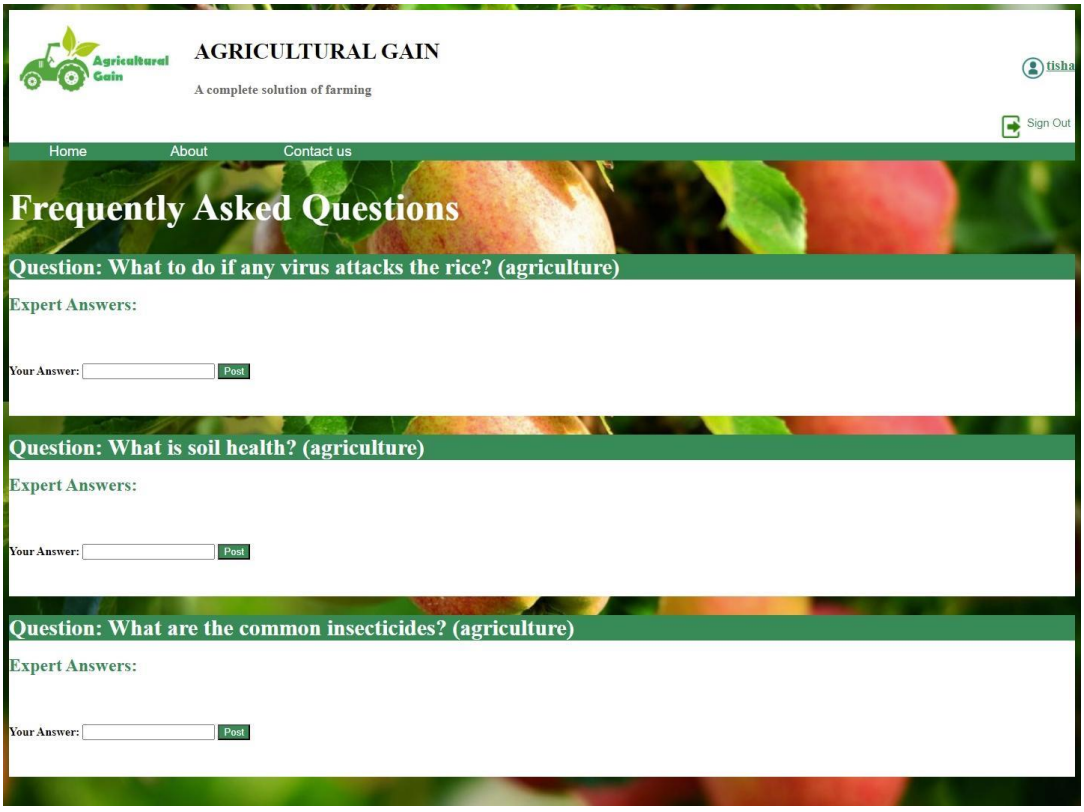
Log out



Contact us



Frequently ask question



4.4 Project Requirements

- For software databases, shall use MySQL database server, but other databases are also acceptable.
- For testing, shall use Selenium Automation.
- The android app size is maximum 50MB..

5. FEATURES NOT TO BE TESTED

The following is a list of the areas that will not be specifically addressed. All testing in these areas will be indirect as a result of other testing efforts. For example:

- PC based spreadsheet analysis applications using Reassigned Sales data. Because these applications are completely under the control of the customer and are outside the scope of this project. The necessary data base format information will be provided to the customers to allow them to extract data. Testing of their applications is the responsibility of the application maintainer/developer.

6. TESTING APPROACH

6.1 Testing Levels

- **Unit testing**: To make sure the little pieces of code are functioning properly; the developer runs unit tests throughout the software development process. The testing team receives a report once the team leader approves the testing progress.
- **Integration Testing**: Following unit testing, a group of testers does integration testing by putting together smaller units to see if the new module is flawlessly linked with the current system.
- **System testing**: After integration testing, the entire system is tested in a black-box fashion to make sure all modules function properly with one another.
- **Acceptance Testing**: Acceptance testing is the last step of testing, during which beta users of the product use it in real-time and provide comments. Any defects are fixed by the testing team, demonstrating the high caliber of the product as a whole.

6.2 Test Tools

The test tools to be used for this project:
Popular open-source software called Selenium WebDriver is used to automate web application testing. It enables programmers to replicate user behaviors on web browsers by writing code in a variety of computer languages (such as Python, Java, C#, and Ruby). Testers can run automated functional and regression tests on web applications using Selenium WebDriver to make sure they are operating as intended.
Unit tests are simple to create and execute with the help of Pytest, a testing framework for Python. In order to improve the effectiveness and efficiency of testing, Pytest can offer a

thorough and automated testing solution for web applications when used with Selenium WebDriver.

6.3 Meetings

The test team will meet once in every week to evaluate progress to date and to identify error trends and problems as early as possible. The test team leader will meet with development and the project manager once every two weeks as well. These two meetings will be scheduled on different weeks. Additional meetings can be called as required for emergency situations.

7. TEST CASES/TEST ITEMS

Project Name: Agricultural Gain	Test Designed by: Tisha
Test Case ID: FR_1	Test Designed date: 12th April, 2023
Test Priority (Low, Medium, High): High	Test Executed by: Tisha
Module Name: Signup Session	Test Execution date: 17th April, 2023
Test Title: verify registration with valid information	
Description: Test website registration page	

Precondition (If any): User must have valid and authorized information				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Go to Signup 3. Enter Valid information's 4. Click submit	Username: Tisha Password: 87654321 Email: tisha03@gmail.com Gender: Female Expertize: Agriculturists Institution: xyz Address: Uttara,Dhaka	User should be able to sign up for the website and become a valid user	Registration Successful	Pass
Post Condition: User information is stand in the database and now the user can use the username and password to login.				

Project Name: Agricultural Gain	Test Designed by: Tisha
Test Case ID: FR_2	Test Designed date: 12th April, 2023
Test Priority (Low, Medium, High): High	Test Executed by: Tisha
Module Name: Login Session	Test Execution date: 17th April, 2023
Test Title: verify login with valid username and password	
Description: Test website login page	

Precondition (If any): User must have valid username and password

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click submit	Username: Tisha Password: 87654321	User should login into the application	Login Successful	Pass

Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.

Project Name: Agricultural Gain	Test Designed by: Tisha
Test Case ID: FR_3	Test Designed date: 13th April, 2023
Test Priority (Low, Medium, High): Medium	Test Executed by: Tisha
Module Name: Admin login	Test Execution date: 17th April, 2023
Test Title: verify admin login with valid information	
Description: Check If admin login works perfectly with valid Username and password	

Precondition (If any): Agriculturists must have valid username and password

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Go to Login 3. Enter Valid admin username and password 4. Click submit	Username: Abcd Password: abcd	Admin should be able to logged in	Login Successful	Pass

Post Condition: Redirect to admin dashboard

Project Name: Agricultural Gain	Test Designed by: Washim Akram
Test Case ID: FR_4	Test Designed date: 13th April, 2023
Test Priority (Low, Medium, High): Medium	Test Executed by: Washim
Module Name: Manage user	Test Execution date: 17th April, 2023
Test Title: Manage user profiles	
Description: To check If user can manage user profile details	

Precondition (If any): User must be logged in				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Go to user profile dashboard 3. Put new data/ edit previous data 4. Click update button	New password: uhy876	Data update must be successful	Updated Successfully	Pass
Post Condition: Redirect to user profile dashboard				

Project Name: Agricultural Gain			Test Designed by: Tisha	
Test Case ID: FR_5			Test Designed date: 13th April, 2023	
Test Priority (Low, Medium, High): Medium			Test Executed by: Tisha	
Module Name: User modification			Test Execution date: 17th April, 2023	
Test Title: Delete user				
Description: Check If admin can delete a user from the system				
Precondition (If any): Admin must be logged in into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Go to user profile dashboard 3. Select user to delete 4. Click delete button	N/A	Delete action must be successful	Deleted Successfully	Pass
Post Condition: Redirect to user profile dashboard				

Project Name: Agricultural gain	Test Designed by: Promi
Test Case ID: FR_6	Test Designed date: 15th April, 2023
Test Priority (Low, Medium, High): High	Test Executed by: Promi
Module Name: Purchasing Product	Test Execution date:17th April, 2023
Test Title: Here we will try to purchase a product	
Description: Test website buyer feature	

Precondition (If any): User must be logged into the system as Buyer.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Find out the search button and click on it. 3. Type your desired product. 4. Now, select the product you want to buy and click on it. 5. Click on make payment. 6. Select Bkash Payment 7. Click on complete order.	N/A	Product purchase must be successful	Purchased successfully	Pass

Post Condition: Redirect to buyer dashboard

Project Name: Agricultural gain	Test Designed by: Yeasir
Test Case ID: FR_7	Test Designed date: 15th April, 2023
Test Priority (Low, Medium, High): High	Test Executed by: Promi
Module Name: Farming loans	Test Execution date:17th April, 2023
Test Title: Applying for farming loans.	
Description: Check If user can apply for farming loans.	
Precondition (If any): User must be logged into the system as farmer	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Select loans option. 3. Choose a type of loan. 4. Choose loan amount. 5. Enter valid information. 6. Click confirm option.	Name: ABC Age:54 Gender NID: xxxxxxx Address: XYZ Picture of farmer: Land information:	User should be able to apply for farming loan successfully.	Successfully applied	Pass
Post Condition: Redirect to farmers dashboard				

Project Name: Agricultural gain			Test Designed by: Promi	
Test Case ID: FR_8			Test Designed date: 15th April, 2023	
Test Priority (Low, Medium, High): High			Test Executed by: Promi	
Module Name: Frequently ask questions			Test Execution date:17th April, 2023	
Test Title: To check if user can ask questions				
Description: Test FAQ feature				
Precondition (If any): User must be logged into the system as farmer				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Select FAQ option. 3. Ask any question	Question: What to do if any virus attacks the rice?	User should be allowed asked any question	Asked question Successfully	Pass
Post Condition: Redirect to home page				

Project Name: Agricultural gain			Test Designed by: Promi	
Test Case ID: FR_9			Test Designed date: 15th April, 2023	
Test Priority (Low, Medium, High): Medium			Test Executed by: Promi	
Module Name: YouTube session			Test Execution date:17th April, 2023	
Test Title: Test YouTube feature				
Description: To check if user can go to the YouTube from the system				
Precondition (If any): User must be logged into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Click the Contact Us button. 3. Click on YouTube button.	N/A	YouTube page about agricultural must be shown	Successfully shown agricultural videos	Pass
Post Condition: Redirect to home page				

Project Name: Agricultural gain			Test Designed by: Promi	
Test Case ID: FR_10			Test Designed date: 15th April, 2023	
Test Priority (Low, Medium, High): High			Test Executed by: Promi	
Module Name: Sign out Session			Test Execution date:17th April, 2023	
Test Title: To check if user can sign out from the system				
Description: Test website sign out feature				
Precondition (If any): User must be logged into the system				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website. 2. Click sign out button	N/A	User should be signed out from the application	Sign out Successful	Pass
Post Condition: Redirect to login page				

8. ITEM PASS/FAIL CRITERIA

The entrance criteria for each step of testing must be met before proceeding to the subsequent phase. The criteria for passing and failing are listed below.

1. In accordance with the stated scenario, the expected outcome must occur for the design to be deemed successful; otherwise, this criterion must be failed.
2. If an item is tested ten times and functions correctly nine times, but fails once, it will be called a failure case.
3. Crashing of the system will be deemed a failure scenario.
4. After submitting a query to the system, if the desired page does not show, it will be considered a failure.

9. TEST DELIVERABLES

Test deliverables are the documents and resources made available to stakeholders during the software development process to aid testing efforts. This document lists the necessary paperwork, devices, and tools.

- To stay on track, adequate documentation of unit testing findings and outcomes is essential, as is continual progress reporting.
- Choosing the correct audience for acceptance testing is critical to avoiding misleading findings and comments. This is analogous to a contract for the supply and release of software from the development team.

- It is recommended to monitor the system's integration of new modules for future verification.
- Project management solutions such as Jira and Trello may be utilized for maintaining progress reports.
- A comprehensive report with outcomes from tests shall be sent when

10. STAFFING AND TRAINING NEEDS

1) Project Manager: Responsible for the overall project execution. This includes drafting requirements and managing the testing cycle, among other tasks. Therefore, project managers need training in these areas.

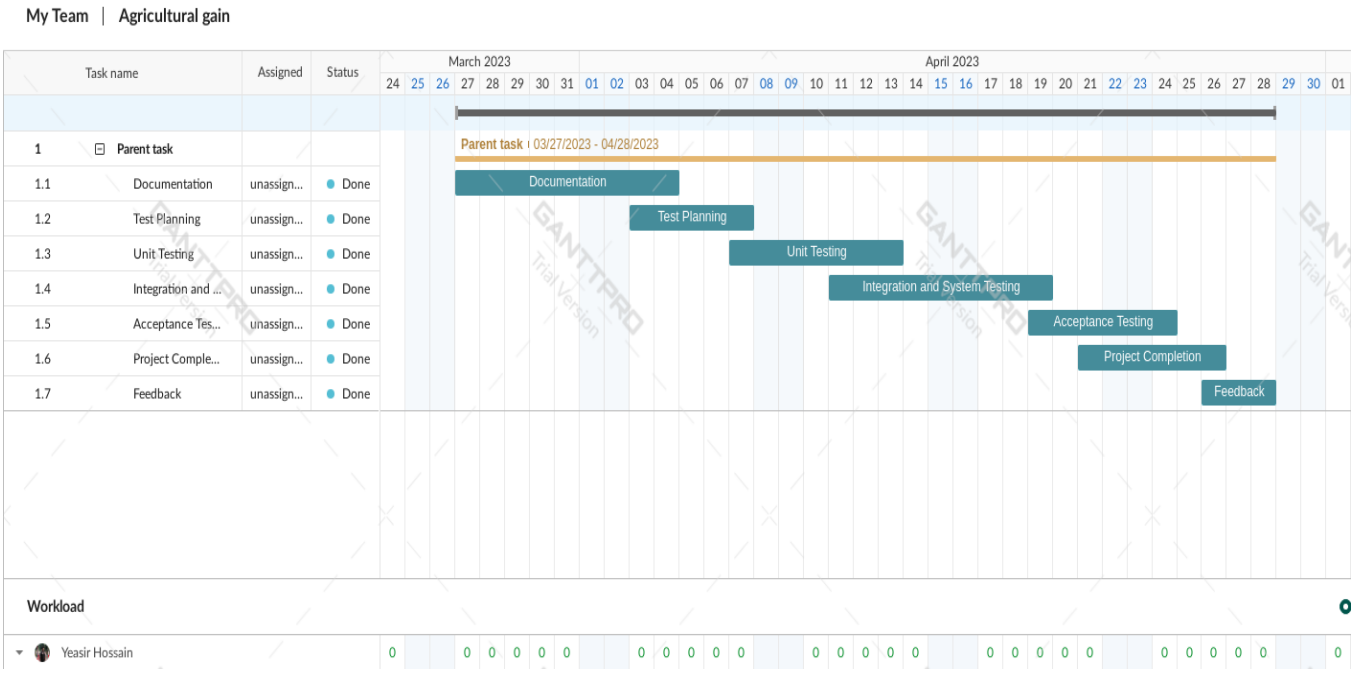
2) Test Manager: Responsible for creating expert test strategies, evaluating test deliverables, managing test cycles, and recommending testing completion. Test managers must be qualified to evaluate professional standard test designs.

3) Test Engineer: Responsible for designing tests, creating test methods, generating test data, executing tests, constructing automated test strategies, and providing the test administrator with measurement information. Test engineers should therefore be able to plan and execute any test case using automated technologies.

11. RESPONSIBILITIES

	TM	PM	Dev Team	Test Team	Client
Acceptance test documentation & execution	X	X		X	X
System/Integration test documentation & execution	X	X		X	
Unit test documentation & execution	X	X		X	
System Design Reviews		X	X		X
Detail Design Reviews		X	X		X
Test procedures and rules	X			X	
Screen & Report prototype reviews		X	X		X
Change Control and regression testing	X		X	X	

12. TESTING SCHEDULE



13. PLANNING RISKS AND CONTINGENCIES

Effective risk and emergency planning is crucial to the accomplishment of a project. In a project, it is used to control the risk of exceptions. The planned product must be in line with the service areas, ethics, and manners in order to succeed; otherwise, it will fall short of expectations. There are also certain guidelines and norms to help the organization deal with ambiguous circumstances. The existence of such a system and proper maintenance of it are crucial.

14. APROVALS

Project Sponsor - Steve Sponsor	
Development Management - Ron Manager	
EDI Project Manager - Peggy Project	
RS Test Manager - Dale Tester	
RS Development Team Manager - Dale Tester	
Reassigned Sales - Cathy Sales	
Order Entry EDI Team Manager - Julie Order	