**AGRO ASSIST TEST DOCUMENTATION**

**University at Albany**

**Department of Computer Science**

**ICSI 518**

**AGRO ASSIST TEST DOUCMENTATION**

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1. **INTRODUCTION**

This test documentation outlines the Agro Assist project's testing approach, procedures, and results. *Agro Assist* is a platform designed to empower farmers and users by integrating advanced agricultural solutions, including crop disease prediction, weather alerts, crop and fertilizer recommendations, equipment rentals, and e-commerce functionalities. The platform also includes an admin dashboard to streamline management and support various user roles: admin, farmer, and general users.

Testing has been conducted using automated and manual methods to ensure the platform's reliability and usability. Automated testing leverages **Selenium WebDriver with Java**, while certain features requiring exploratory and user-focused assessments were manually tested.

**Testing Environment:**

Testing Tool: Selenium WebDriver (Automated) and Manual testing

Programming Language: Java

IDE: Intellig IDEA Community

Test Framework: TestNG

Operating System: Windows 11

Browsers Tested: Chrome

**2. OBJECTIVES**

a) Validate the functionality and reliability of the platform’s core features.

b) Ensure seamless integration and usability across modules, such as disease prediction and crop recommendations.

c) Identify and resolve bugs to deliver a stable, user-friendly platform.

d) Provide transparent documentation of testing results and processes for future reference.

**3. IN SCOPE FEATURES**

The following features are within the scope of testing:

1. **Disease Prediction System**:
   * Upload crop images to detect potential diseases.
   * Provide accurate disease identification and treatment suggestions.
2. **Weather Alerts**:
   * Generate and display real-time weather notifications for specific regions.
3. **Crop Recommendations**:
   * Suggest suitable crops based on soil conditions, season, and weather.
4. **Fertilizer Recommendations**:
   * Provide optimal fertilizer suggestions based on soil and crop needs.
5. **E-commerce Platform**:
   * Add-to-cart, and order placement functionalities.
   * filter products effectively.
6. **Equipment Rental**:
   * List and browse available farming equipment for rent.
7. **Admin Dashboard**:
   * Manage user profiles, products.
   * Update product prices and upload new products.
   * Give admin, and farmer privileges to others.

**4. TEST CASES**

**\*\*Important below-mentioned test cases are tested using selenium driver and a few are manually tested. Test cases that are tested using the selenium web driver, such as these java files, are located in GitHub in the Agro Assist Testing repository.**

**Link: https://github.com/Agro-care/Testing/tree/main/Testprac/src/test/java/testingprac**

|  |  |
| --- | --- |
| **TEST CASE ID** | Logintestt1 |
| **OBJECTIVE** | Validate user login with valid credentials |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”. |
| **EXPECTED RESULT** | Signing in as a farmer in Agro Assist |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | logintestt1 |
| **OBJECTIVE** | Validate user login with valid credentials with wrong input. |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”. |
| **EXPECTED RESULT** | Throws the error “Invalid username or password”. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Logint3 |
| **OBJECTIVE** | Validate user login with valid credentials with wrong input. |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”. |
| **EXPECTED RESULT** | Throws the error “Invalid username or password”. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Signuptestt1 |
| **OBJECTIVE** | Validate user sign-in process |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter:  a. email  b. name  c. password  d. confirm password  e. Select role: Farmer  4. click “Sign In”. |
| **EXPECTED RESULT** | Helps you to Sign In the website. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Signupt2 |
| **OBJECTIVE** | Validate user sign-in process with wrong input values |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter:  a. email  b. name  c. password  d. confirm password  e. Select role: Farmer  4. click “Sign In”. |
| **EXPECTED RESULT** | Throws an error showing that entering valid information is required. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Signupt3 |
| **OBJECTIVE** | Validate user sign-in process with wrong input values |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter:  a. email  b. name  c. password  d. confirm password  e. Select role : User  4. click “Sign In”. |
| **EXPECTED RESULT** | Throws an error showing that entering valid information is required. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Navbartest1 |
| **OBJECTIVE** | Validate user sign-in process with wrong input values |
| **PRECONDITION** | The user need to login. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Weather alerts”.  7. click “Crop recommendation”.  8.click “fertilizer recommendation”  9. click “Ecommerce Store”  10. click “cart”  11. click “Logout” |
| **EXPECTED RESULT** | Throws an error showing that entering valid information is required. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Homet1 |
| **OBJECTIVE** | Verifying Navbar’s working. |
| **PRECONDITION** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Explore Crops”.  6. click “Home”.  7. click “Find Equipment”.  8. click “Home”.  9. click “Logout”. |
| **EXPECTED RESULT** | Throws an error showing that entering valid information is required. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Manual Weather Alert testing 1 |
| **OBJECTIVE** | To check output after denying location access to the website |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Weather alerts”.  7. deny location alert by browser.  8. click “Logout”. |
| **EXPECTED RESULT** | Throws an error showing that the user denied geolocation. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Manual |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Manual Weather Alert testing 2 |
| **OBJECTIVE** | To check output after accepting location access |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Weather alerts”.  7. Accept location alert by browser.  8. check location matches you.  9. click “Logout”. |
| **EXPECTED RESULT** | Give weather, Weather Alerts respective to the location |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Manual |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Manual Weather Alert testing 3 |
| **OBJECTIVE** | To check output after accepting location access |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Weather alerts”.  7. input “Guntur”  8. click “Guntur district, IN”.  9. click “Logout”. |
| **EXPECTED RESULT** | Give weather, Weather Alerts respective to the location |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Manual |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | croprecomt1 |
| **OBJECTIVE** | Validate Crop Recommendation on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Crop Recommendation”.  7. Select Arabic.  8. Input temperature value: 20  9. Input humidity value: 83  10. input Nitrogen value: 90  11. Input Phosphorus: 42  12. Input Potassium: 43  13. Input soil pH: 6.5  14. Input rainfall: 202  15. click “Get Crop Recommendation”  16. click “Logout”. |
| **EXPECTED RESULT** | أرز |
| **ACTUAL RESULT** | أرز |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | croprecomt2 |
| **OBJECTIVE** | Validate Crop Recommendation on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Crop Recommendation”.  7. Select japanese.  8. Input temperature value: 24  9. Input humidity value: 68  10. input Nitrogen value: 90  11. Input Phosphorus: 49  12. Input Potassium: 21  13. Input soil pH: 6.5  14. Input rainfall: 74  15. click “Get Crop Recommendation”  16. click “Logout”. |
| **EXPECTED RESULT** | トウモロコシ |
| **ACTUAL RESULT** | トウモロコシ |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Fertrecom |
| **OBJECTIVE** | Validate Fertilizer Recommendation on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Fertilizer Recommendation”.  7. Select: hindi.  8. Select soil type: Sandy  9. Select: Millets  10. Input Moisture value: 43  11. input Nitrogen value: 21  12. Input Phosphorus: 0  13. Input Potassium: 0  14. Input temperature: 33  15. Input Humidity: 64  16. Input city: Hyderabad  15. click “Get Fertilizer Recommendation”  16. click “Logout”. |
| **EXPECTED RESULT** | 28-28 |
| **ACTUAL RESULT** | 28-28 |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Fertrecomt2 |
| **OBJECTIVE** | Validate Fertilizer Recommendation on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Fertilizer Recommendation”.  7. Select: Chinese (simplified).  8. Select soil type: Loamy  9. Select: Sugarcane  10. Input Moisture value: 38  11. input Nitrogen value: 35  12. Input Phosphorus: 34  13. Input Potassium: 0  14. Input temperature: 26  15. Input Humidity: 52  16. Input city: tianjin  15. click “Get Fertilizer Recommendation”  16. click “Logout”. |
| **EXPECTED RESULT** | 尿素 |
| **ACTUAL RESULT** | 尿素 |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | distt1 |
| **OBJECTIVE** | Validate Disease Prediction on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Disease Prediction”.  7. Select: telugu.  8. click “Choose File”. Path for my file(C:/Users/prems/Downloads/bangala.jpg)  9. click “PREDICT DISEASE”.  10. click “Logout”. |
| **EXPECTED RESULT** | బంగాళదుంప\_\_\_ప్రారంభ\_ముడత |
| **ACTUAL RESULT** | బంగాళదుంప\_\_\_ప్రారంభ\_ముడత |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | dispt2 |
| **OBJECTIVE** | Validate Disease Prediction on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Disease Prediction”.  7. Select: tamil.  8. click “Choose File”. Path for my file(C:/Users/prems/Downloads/leaf1.jpg)  9. click “PREDICT DISEASE”.  10. click “Logout”. |
| **EXPECTED RESULT** | தக்காளி\_\_\_ஏர்லி\_பிளைட் |
| **ACTUAL RESULT** | தக்காளி\_\_\_ஏர்லி\_பிளைட் |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | dispt2 |
| **OBJECTIVE** | Validate Disease Prediction on Input parameters |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Disease Prediction”.  7. Select: english.  8. click “Take Photo”.  9. click “Capture”.  10. click “Predict Disease”.  11. click “Logout”. |
| **EXPECTED RESULT** | Blueberry\_\_healthy |
| **ACTUAL RESULT** | Blueberry\_\_healthy |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. Partially (need a close button to close the modal for “take photo”). |

|  |  |
| --- | --- |
| **TEST CASE ID** | Ecommercet1 |
| **OBJECTIVE** | Validate Ecommerce Test add to cart functionality |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Ecommerce Store”.  7. Select: $1150 - $1600.  8. Select: Seed.  9. Navigate to Chia Seeds.  10. click “Add to Cart”.  11. click “Logout”. |
| **EXPECTED RESULT** | Filtered Product list  Selected Product in Cart |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Ecommercet2 |
| **OBJECTIVE** | Validate Ecommerce Test add to cart, Submit review functionalities. |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Ecommerce Store”.  7. Select: $1150 - $1600.  8. Select: Seed.  9. Navigate to Chia Seeds.  10. click “Chia Seeds”.  11. click “Add to Cart”.  12. click on “Write your review here…”.  13. Input “very good good item will buy from here daily”.  14. Select “4Star”.  15. click “Submit Review”.  16. click “Logout”. |
| **EXPECTED RESULT** | Clicked Product to navigate to page details page  Selected Product in Cart  Review written should be reflected on screen. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Cartt1 |
| **OBJECTIVE** | Validate Ecommerce cart Functionality and test Remove button. |
| **PRECONDITION** | The user needs to be signed in.  User needs to click Add to cart Button. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Ecommerce Store”.  7. Select: $1150 - $1600.  8. Select: Seed.  9. Navigate to Chia Seeds.  10. click “Chia Seeds”.  11. click “Add to Cart”.  12. Update Quantity  13. click “Remove”  16. click “Logout”. |
| **EXPECTED RESULT** | Product Quantity updating.  Product need to be removed. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | admint1 |
| **OBJECTIVE** | Validate admin dashboard add product functionality. |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Admin Dashboard”.  7. click “Products”.  8. input ProductName.  9. input Descripition.  10. input Price.  11. input Farmer ID  12. input Location  13. input Stock  14. input unit  15. input Harvest Date  16. input Category  17. input Image URL  18. input Brand  19. click “Add Product”  20. click “Logout”. |
| **EXPECTED RESULT** | Product need to be added in Ecommerce |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | admint2 |
| **OBJECTIVE** | Validate admin dashboard Modify and delete product functionality. |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Admin Dashboard”.  7. click “Products”.  8. navigate desired product.  9.click “Modify”  10. input Price.  11. input Farmer ID  12. input Location  13.click “Save”.  20. click “Logout”. |
| **EXPECTED RESULT** | Modification of selected conditions |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | admint3 |
| **OBJECTIVE** | Validate admin dashboard Search, Modify and delete product functionality. |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Admin Dashboard”.  7. click “Products”.  8. input “chillies”  9. navigate “chillies”.  10.click “Modify”  11. input Price.  12. input Farmer ID  13. input Location  14.click “Save”.  15. click “delete”.  20. click “Logout”. |
| **EXPECTED RESULT** | Search item in Products ,Modification of selected conditions and deletion of the product. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

|  |  |
| --- | --- |
| **TEST CASE ID** | Admint4 |
| **OBJECTIVE** | Validate admin dashboard Search, Modify and delete User Information functionality. |
| **PRECONDITION** | The user needs to be signed in. |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter a valid username and password.  4. click “Sign In”.  5. click “Home”  6. click “Admin Dashboard”.  7. click “User Information”.  8. click “Modify Role”.  9. Select “USER TO ADMIN”.  10.click “Save”  12.click “Delete”.  13. click “Logout”. |
| **EXPECTED RESULT** | Search item in Users, Modification of selected conditions and deletion of the product. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **(P/F)** | Passed. |

**ISSUES HISTORY**

|  |  |
| --- | --- |
| **ISSUE TITLE** | rent |
| **DESCRIPTION** | Validate user sign-in process with wrong input values |
| **STATUS** | The user is registered in the system |
| **STEPS** | 1. Launch browser  2. Navigate to the login page.  3. Enter:  a. email  b. name  c. password  d. confirm password  e. Select role: Farmer  4. click “Sign In”. |
| **EXPECTED RESULT** | Throws an error showing that entering valid information is required. |
| **ACTUAL RESULT** | Matched the expected result |
| **TESTING METHOD** | Automated |
| **PRIORITY** | Passed. |
| **ASSIGNED** |  |