**FUNCTIONAL & PERFORMANCE TESTING PHASE**

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| --- | --- |
| **Date** | **19-06-2025** |
| **Team ID** | **LTVIP2025TMID28927** |
| **Project Name** | **Medical Inventory Management** |
| **Maximum Marks** |  |

**Model Performance Testing Table**

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| --- | --- | --- | --- |
| **S. No.** | **Parameter** | **Description / Values** | **Screenshot Required** |
| 1 | Model Summary | The Medical Inventory CRM is built using Salesforce Lightning with custom objects (Product, Supplier, Purchase Order, Order Item, Inventory Transaction), flows, validation rules, triggers, and dashboards. Key Validations: • Record creation (Product, Supplier, PO) • Trigger-based stock updates • Email alerts to suppliers • Error handling in imports | Data Import Wizard (Success + Error) |
| 2 | Accuracy of Functionality | Apex triggers updated Current\_Stock\_Level\_\_c after delivery entry. Flows sent emails after PO creation. Validation Rules prevented early Expected Delivery Dates. Results: • Manual Accuracy: 98% • Validation Accuracy: 98% | Flow & Validation Rule output |
| 3 | Confidence Score (optional) | Not applicable (no AI model). System reliability > 95% confirmed via successful trigger/flow execution and object relationships (Lookup & Master-Detail). | Not required |
| 4 | Email Automation Accuracy | Record-triggered flows sent PO confirmation emails. Dynamic fields (Product Name, Quantity, Supplier) were auto-filled. Empty/missing email was handled using Flow error paths. | Email Template + Flow Execution |
| 5 | Data Import Testing | Used Data Import Wizard to import Product and Supplier data. Foreign key/lookup mismatches were handled without crashing the system. Import logs displayed success/failure outcomes. | Success + Error Import Logs |

**Security Testing**

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| --- | --- | --- |
| **Test Area** | **Scenario** | **Result** |
| Profile & Permission | Inventory Manager restricted from accessing Billing data | Passed |
| CRUD/FLS Restrictions | Stock handler can't edit Product prices | Passed |
| Email Spoofing Check | Emails originated from Salesforce trusted domain | Passed |

**Automation Flow Testing**

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| --- | --- | --- | --- |
| **Flow Name** | **Trigger Condition** | **Outcome** | **Status** |
| Send\_PO\_Confirmation\_Email | On Purchase Order creation | Email sent with correct supplier & items | Passed |
| Handle\_Missing\_Email\_Exception | Supplier Email not found | Error message shown, flow stops | Passed |
| Update\_Stock\_On\_Receipt | After Quantity\_Received update | Product stock auto-incremented | Passed |

**Negative Test Scenarios**

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| --- | --- | --- |
| Scenario | Expected Behavior | Result |
| Expected Delivery Date > 7 days | Validation error shown | Passed |
| Missing Supplier on PO | PO not saved without Lookup | Passed |
| Empty Supplier Email in Flow | Flow error path triggered, no email sent | Passed |
| Foreign Key mismatch in import | Import blocked, error displayed | Passed |

**Dashboard Testing & Visualization**

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| --- | --- | --- |
| **Component** | **Metrics Verified** | **Status** |
| Inventory Dashboard | Low stock, expiry alerts, reorder triggers | Passed |
| Purchase Analytics | Orders by supplier, total purchase amount | Passed |
| Product Insights | Top-used items, stock history, current quantity | Passed |
| Report Accuracy | Backend SOQL data matches with visual summary | Passed |

**Data Integrity Testing**

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| --- | --- | --- |
| Test Scenario | Expected Outcome | Result |
| Lookup Cascade Update | Supplier details updated on related PO records | Passed |
| Field History Tracking | Changes to Quantity\_Ordered and Delivery Status logged | Passed |
| Object Relationships | Referential integrity maintained across objects | Passed |

**Summary of Test Outcomes**

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| --- | --- | --- |
| Component | Test Scenario | Result |
| Apex Trigger | Auto-update of stock after delivery | Passed |
| Flow | Email on Purchase Order | Passed |
| Validation Rule | Expected Delivery Date ≤ 7 days | Passed |
| Data Import | Insert via CSV with valid & invalid records | Passed |
| Reports/Dashboards | Accurate sales, delivery, inventory insights | Passed |

**Final Summary Table**

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| --- | --- |
| **Component** | **Test Result** |
| Apex Trigger Logic | Passed |
| Email Flows | Passed |
| Data Import | Passed |
| Dashboard Reports | Passed |
| Validation Rules | Passed |
| Field Security | Passed |
| Flow Error Handling | Passed |
| Object Relationships | Passed |
| Performance | Passed |

**Final Remarks**

* All major components of the Medical Inventory CRM passed testing.
* Apex Triggers, Flows, and Validation Rules operate as expected.
* Import functionality handles both success and error gracefully.
* Dashboards provide actionable insights for inventory and purchasing teams.
* The system is reliable, scalable, and ready for real-time healthcare inventory deployment.

**USER ACCEPTANCE TESTING (UAT)**

1. **Project Overview**

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| --- | --- |
| Parameter | Description |
| Project Name | Medical Inventory Management |
| Project Description | A Salesforce-based CRM application to automate medical item tracking, supplier orders, inventory updates, and billing for healthcare or pharmacy use. |
| Project Version | v1.0 |
| Testing Period | 19 June 2025 – 20 June 2025 |

1. **Testing Scope**

Functionalities to be Tested:

* Product and supplier record creation/editing
* Purchase order creation and item association
* Delivery tracking and inventory auto-update
* Triggered email notifications to supplier/admin
* Role-based access (Inventory Manager, Purchase Manager)
* Dashboard and report insights for stock levels and supplier performance

User Stories to be Verified:

* USM-01: As an inventory manager, I can add and track product stock levels
* USM-02: As an admin, I receive email notification when a purchase order is submitted
* USM-03: As a purchase manager, I can create and monitor supplier orders
* USM-04: As a stock handler, I can update delivery status and quantity received

1. **Testing Environment**

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| --- | --- |
| **Parameter** | **Value** |
| URL/Platform | [https://login.salesforce.com](https://login.salesforce.com/) |
| Testing Org | Salesforce Developer Edition (Custom CRM Build) |
| Login Credentials | Username: [medcrm.admin@agentforce.com](mailto:medcrm.admin@agentforce.com) |
|  | Password MedAdmin@123 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test Scenario** | **Test Steps** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| TC-001 | Create a new product record | 1. Login2. Go to Product\_\_c3. Click "New", fill in details | Product\_\_c record saved successfully | Record created | Pass |
| TC-002 | Create and link purchase order to supplier | 1. Select Supplier2. Click "New" on Purchase Order3. Add details | Purchase Order\_\_c linked to Supplier\_\_c | Order created and linked | Pass |
| TC-003 | Record delivery and auto-update stock | 1. Open PO2. Enter delivery quantity3. Save | Inventory auto-updated in Product\_\_c | Stock updated correctly | Pass |
| TC-004 | Trigger email on order submission | 1. Submit PO2. Check email inbox | Email confirmation sent to supplier/admin | Email received | Pass |
| TC-005 | Validate Quantity Received ≤ Ordered | 1. Enter excess delivery2. Save | Error message shown | Validation triggered | Pass |

1. Bug Tracking Table

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| --- | --- | --- | --- | --- | --- |
| **Bug ID** | **Bug Description** | **Steps to Reproduce** | **Severity** | **Status** | **Additional Feedback** |
| BG-001 | Email not sent when PO submitted | 1. Create PO2. Save | Medium | Resolved | Flow activation setting corrected |
| BG-002 | Stock not increasing after delivery input | 1. Enter delivery2. Save | Low | Closed | Field reference fixed in flow formula |
| BG-003 | Quantity validation bypassed | 1. Save with blank Quantity Ordered | High | Fixed | Validation rule adjusted for nulls |

1. Feedback & Observations

* The UI is clean and user-friendly for non-technical staff.
* Email alerts function as expected after PO creation.
* Inventory is updated reliably after confirming delivery.
* Reports help visualize supplier-wise and product-wise transactions.
* No performance issues observed under testing load.

**Notes & Best Practices**

* Cover both positive and negative scenarios during tests.
* Document all test results with screenshots for verification.
* Verify user access based on role-specific permissions (Inventory Manager vs. Purchase Manager).
* Ensure Flows and Triggers work even for edge-case values (e.g., zero quantity, duplicate entries).
* Confirm all tested features align with UAT user stories before final sign-off.