Ideation Phase

Brainstorm & Idea Prioritization Template

Date	0 1.11.2025
Team ID	NM2025TMID04299
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Medical Inventory Management:

This guided project demonstrates how to implement a comprehensive medical inventory management system in Salesforce. It begins by creating custom objects for Products, Purchase Orders, Order Items, Inventory Transactions, and Suppliers. Automated workflows are then implemented to enforce business rules like delivery date validation, cost calculation, and expiration tracking. This ensures important data integrity is preserved and prevents stock-outs that could compromise patient care.

The workflow includes validation scenarios to ensure the system handles real-world situations correctly. Tests verify that negative stock levels are blocked, zero pricing is prevented, and delivery dates are validated within 7 days. The Apex trigger automatically calculates total order costs, and the Flow automation sets expected delivery dates. This process helps healthcare administrators maintain accurate inventory records while enforcing necessary safeguards for patient safety and regulatory compliance.

Step-1: Team Gathering, Collaboration and Select the Problem Statement

The team gathered to discuss the critical challenges healthcare facilities face in managing medical supplies. Through collaboration sessions with pharmacists, inventory managers, procurement staff, and administrators, the team identified that manual, error-prone inventory tracking leads to stock-outs, expired medication waste, compliance risks, and inefficient procurement.

After analyzing stakeholder feedback and conducting facility observations, the team selected the problem statement: "Healthcare facilities need an automated inventory management system to prevent stock-outs, reduce waste, ensure compliance, and improve operational efficiency."

Step-2: Brainstorm, Idea Listing and Grouping

Idea Listing:

1ST PARTICIPANT'S NAME: Lead Developer

2ND PARTICIPANT'S NAME: Business Analyst

3RD PARTICIPANT'S NAME: Healthcare Domain Expert

Participant 1 (Lead Developer) - Initial Ideas:

Initial Idea: Create custom Salesforce objects for Product, Purchase Order, Order Item, Inventory Transaction, Supplier

Initial Idea: Implement Apex trigger to automatically calculate Total Order Cost when order items change

Initial Idea: Build Flow automation to calculate Expected Delivery Date (Order Date + 3 days)

Initial Idea: Design validation rules to prevent negative stock, zero pricing, invalid dates

Initial Idea: Develop formula fields for automatic unit price lookup and amount calculation

Initial Idea: Create Lightning App with custom tabs for easy navigation

Participant 2 (Business Analyst) - Builds on Initial Ideas:

Teammate builds on initial idea: Add page layouts with organized sections for user-friendly data entry

Teammate builds on initial idea: Create compact layouts for quick data preview in related lists

Teammate builds on initial idea: Design summary reports grouping Purchase Orders by Supplier with cost aggregation

Teammate builds on initial idea: Build real-time dashboard with 6-8 widgets (stock status, expiring items, order totals)

Teammate builds on initial idea: Define custom profiles (Inventory Manager, Purchase Manager) with appropriate permissions

Teammate builds on initial idea: Create permission sets for specialized access (e.g., Purchase Manager Create Access)

Participant 3 (Healthcare Expert) - Builds on Initial Ideas:

Teammate builds on initial idea: Add expiration date tracking on products with automated alerts at 30, 60, 90 days

Teammate builds on initial idea: Implement minimum stock level field with dashboard gauge showing % above threshold

Teammate builds on initial idea: Create inventory transaction types: Receipt, Issue, Adjustment, Transfer, Disposal

Teammate builds on initial idea: Build comprehensive audit trail logging user, timestamp, quantity changes for compliance

Teammate builds on initial idea: Add supplier performance tracking and contact management features

Teammate builds on initial idea: Include lot number and batch tracking for medication recalls

Teammate builds on initial idea: Design FIFO (First In, First Out) rotation recommendations

Teammate builds on initial idea: Create role hierarchy (Purchasing Manager, Inventory Manager) for data access control

Brainstorm Process:

Brainstorm:

Team members share ideas freely to explore solutions without judgment, encouraging creativity and participation. All suggestions are welcomed, from technical implementations to user experience enhancements.

Idea Listing:

All ideas from the session are written down to capture every suggestion and ensure no input is overlooked. This resulted in 20+ unique ideas covering objects, automation, security, reporting, and compliance.

Grouping:

Similar ideas are organized into categories to identify patterns, highlight priorities, and simplify decision-making. Ideas were grouped into: Data Model, Automation, Security, User Interface, Analytics, and Compliance.

Action Planning:

Chosen ideas are turned into clear steps with assigned responsibilities and timelines. Development was organized into 6 sprints covering object creation, field configuration, automation, security, reporting, and testing.

Step-3: Idea Prioritization

Prioritization Process:

Idea prioritization helps break down complex projects into clear, focused components. In this project, the main goal is to create a comprehensive medical inventory management system that prevents stock-outs, reduces waste, ensures compliance, and improves efficiency. This approach ensures that patient safety and data integrity are maintained throughout healthcare workflows.

By prioritizing ideas, we can separate critical features (stock tracking, purchase orders, validation rules) from nice-to-have enhancements (advanced analytics, EHR integration). It also helps in highlighting the importance of compliance features like audit trails and expiration tracking. Each step, from object creation to automation implementation, becomes easier to plan and execute when properly prioritized.

Priority Matrix (High to Low):

Priority 1: CRITICAL (Must Have for MVP)

- Custom Objects: Product, Purchase Order, Order Item, Inventory Transaction, Supplier
- Core Fields: Product Name, Current Stock, Unit Price, Order Date, Supplier
- Validation Rules: Prevent negative stock, zero pricing, invalid delivery dates
- Apex Trigger: Calculate Total Order Cost automatically
- Flow: Calculate Actual Delivery Date
- Basic Page Layouts: Organized field arrangement
- Custom Profiles: Inventory Manager, Purchase Manager
- Lightning App: Medical Inventory Management with tabs

Priority 2: HIGH (Important for Usability)

- Formula Fields: Unit Price lookup, Amount calculation
- Roll-Up Summary: Order Count on Purchase Orders
- Compact Layouts: Quick data preview
- Roles & Permission Sets: Hierarchical access control
- Reports: Purchase Orders by Supplier summary
- Dashboard: 6-8 widgets with real-time metrics
- Inventory Transactions: Receipt, Issue, Adjustment tracking

Priority 3: MEDIUM (Enhances Functionality)

- Expiration Date Tracking: 30, 60, 90-day alerts
- Minimum Stock Level: Gauge charts showing % above threshold
- Supplier Management: Contact info, performance tracking
- Audit Trail: Complete transaction history
- Lot Number Tracking: For medication recalls
- Email Alerts: Low stock and expiration notifications

Priority 4: LOW (Future Enhancements)

- EHR Integration: Automatic consumption based on patient procedures
- Temperature Monitoring: IoT sensors for cold storage
- Advanced Analytics: AI-powered demand forecasting
- Supplier Portal: External access for order tracking
- Barcode Scanning: Mobile app integration
- Multi-language Support: Beyond English

Prioritization Rationale:

Clear visual representations like diagrams and flowcharts simplify communication across technical and business teams. The priority matrix ensures the development team focuses on core functionality first (objects, validations, automation) before adding advanced features. This approach delivers value quickly - the MVP can be deployed in 6-8 weeks, with Priority 2 and 3 features added incrementally.

Overall, idea prioritization strengthens project clarity, ensures efficient resource allocation, reduces scope creep, and supports smooth execution. The team can demonstrate working functionality early, gather user feedback, and iterate based on real-world usage rather than theoretical requirements.