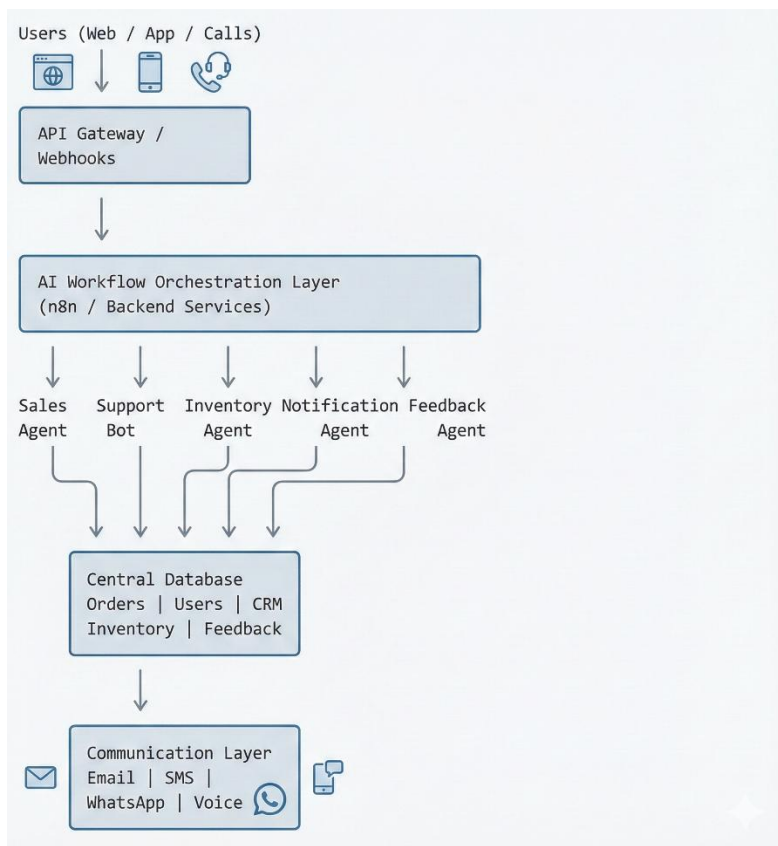# ABFRL README

1. Project Overview

This project implements a **multi-agent AI automation system for ABFRL-like retail operations**, designed to handle sales, customer support, inventory, engagement, and feedback **end-to-end without manual effort**.

Each agent works independently but shares a common database and workflow orchestration layer (e.g., n8n / backend services), ensuring **real-time updates, scalability, and reliability**.

The primary objectives are: - Reduce manual workload - Improve customer experience - Increase conversions and repeat visits - Maintain optimal inventory levels

2. High-Level System Architecture

Overall Block Diagram (Logical)

3. AI Sales Agent

Purpose

Acts as a **virtual AI sales executive**, managing customer interactions before and after purchase.

Functional Capabilities

3.1 Order Status Tracker
- Provides real-time shipping and delivery updates
- Fetches live order and logistics data
- Responds via call, WhatsApp, or chat

3.2 Product Inquiry Assistant
- Answers queries related to:
  - Product details
  - Size & fit guidance
  - Fabric and specifications
- Uses product catalog and FAQ data

3.3 Return & Exchange Handler
- Initiates return/exchange workflows
- Verifies eligibility automatically
- Updates order records in database

3.4 Technical Support
- Resolves website and account-related issues
- Handles payment and login problems

3.5 Order Confirmation Calls
- Automatically calls customers post-order
- Confirms order details
- Upsells relevant or complementary products

3.6 Abandoned Cart Recovery
- Identifies abandoned carts
- Calls customers to:
  - Remind about items
  - Resolve objections

      o   Encourage checkout

3.7 Delivery Notifications

- Notifies customers for:
  - Shipment dispatch
  - Out-for-delivery status
  - Successful delivery

3.8 Review Request Calls

- Contacts satisfied customers
- Requests product reviews
- Improves trust and brand credibility

4. Customer Support Chatbot

Purpose

A **24×7 automated customer support assistant** capable of handling complete post-purchase journeys.

Core Features

- Order tracking
- Complaint registration and tracking
- Viewing past complaint history
- Order cancellation
- Refund processing
- Exchange handling
- Website and policy FAQs

Key Advantage

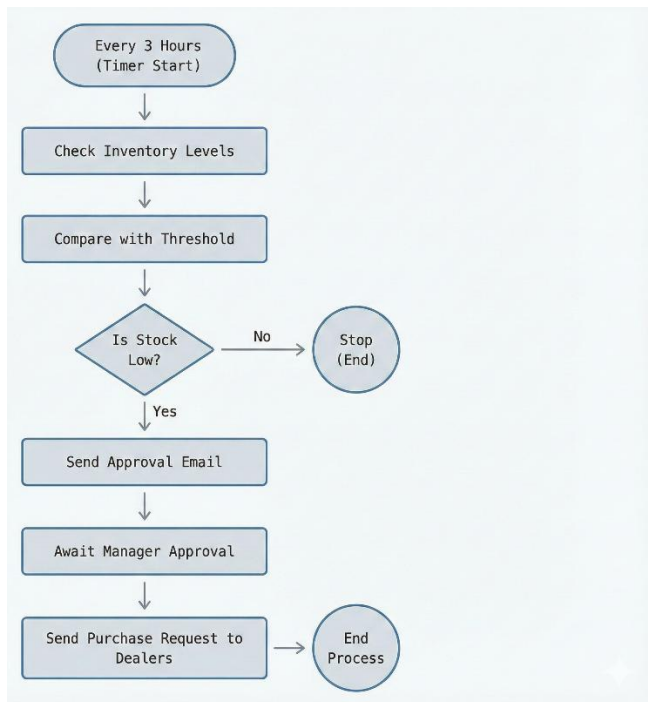All actions **automatically update the central database**, eliminating manual CRM operations.

5. Inventory Management Agent

Trigger Mechanism

- Automatically executes **every 3 hours**

Logical Workflow

Benefits
- Prevents stock-out scenarios
- Maintains optimal stock levels
- Includes human approval for control

6. Notification / Engagement Agent

Trigger
- Runs automatically **every 7 hours**

Functionality
- Sends short, playful teaser messages

- Acts like a friendly brand reminder

Message Characteristics

- Contextual (time, season, user behavior)
- Festive and relatable
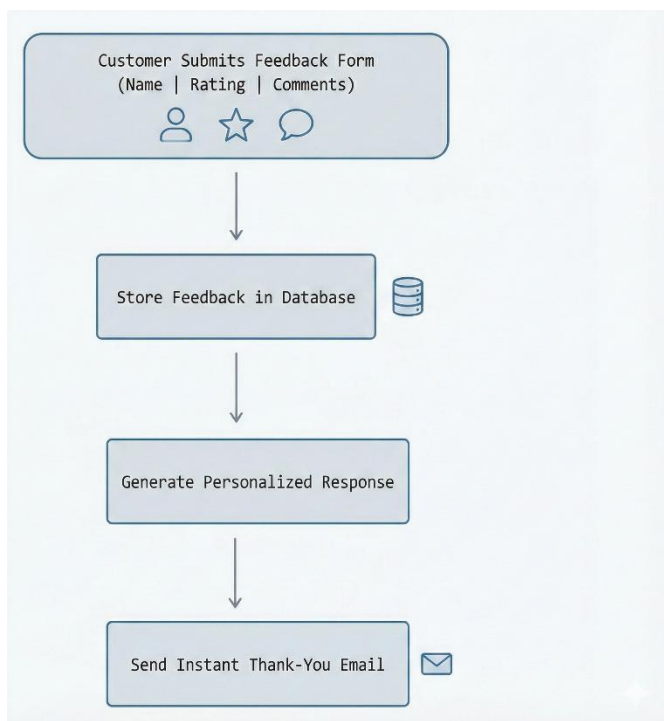- Curiosity-driven (not hard selling)

Outcome

- Increased website traffic
- Higher user engagement
- Better repeat visits

7. Customer Feedback Agent

Purpose

Collects customer feedback and **responds instantly** to build trust.

Workflow

Impact

- Faster brand response
- Improved customer satisfaction

- Structured feedback data

8. Central Database

Stores
- User profiles
- Orders and delivery status
- Inventory data
- Complaints and resolutions
- Feedback records

Acts as the **single source of truth** for all agents.

9. Key Business Benefits
- 24×7 autonomous operations
- Reduced operational cost
- Faster response time
- Higher conversion and retention rates
- Modular and scalable architecture

10. Conclusion

This AI Agent Suite transforms traditional retail workflows into a **smart, automated, and customer-centric system**, suitable for enterprise-scale brands like ABFRL.