

Business Process Model Explanation

Actors and Responsibilities

Customer: Makes purchases, automatically receives loyalty points, and may redeem accumulated points for rewards.

Cashier / POS System: Handles purchase transactions, records sale data (amount, items, customer ID), and ensures transactions are accurate before reaching the database.

Database System: Stores purchase records in the **PURCHASES** table, applies automated triggers to calculate loyalty points using **POINT_RULES**, and enforces data integrity.

Rewards Module: Updates the **REWARDS** table with earned points, processes redemption requests, and manages each customer's point balance.

Manager / Analytics: Uses system-generated reports to understand customer behavior, evaluate reward program performance, and support marketing decisions.

2. MIS Functions

The system functions as both a **CRM** and **Sales MIS** by:

- **Transaction Processing:** Recording customer purchases in real time.
- **Data Management:** Maintaining customer profiles, purchase history, and point balances.
- **Business Intelligence:** Providing insights into spending behaviors and program ROI.
- **Decision Support:** Helping managers identify high-value customers and optimize loyalty strategies.

3. Process Flow & Decision Points

- Customer purchase triggers automatic point calculation through system triggers.
- **Decision Point:** The customer chooses to redeem points immediately or save them.
- Based on this choice, the system either processes the redemption or stores the points for later use.
- Customers are notified of successful point earning or redemption in all cases.

4. Organizational Impact

Operational Efficiency:

- Removes manual tracking and reduces errors.
- Real-time updates keep point balances accurate.
- Automated triggers ensure consistent point calculation.

Customer Retention:

- Rewards encourage repeat purchases and loyalty.
- Transparent, instant point awarding increases trust.

Strategic Value:

- Analytics reveal customer segments and preference trends.
- Helps measure loyalty program value and customer lifetime value (CLV).

5. Analytics Opportunities

Customer Segmentation: Identify top revenue contributors, analyze redemption behavior, and track average points per transaction.

Trend Analysis: Monitor seasonal buying patterns, predict future purchases, and measure promotion impact.

Performance Metrics: Track retention changes, purchase frequency improvements, and determine the best point-to-reward conversion ratio.