

## **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.