



Smart ATM Cash Forecasting & Real-Time Refill System

ACCEPTANCE CRITERIA



Business Analyst Project Report
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PROJECT NAME: SMART ATM CASH FORECASTING & REAL-TIME REFILL SYSTEM

1. ATM Cash Monitoring:

AC-01: Real-Time Cash Level Update

Given the system receives live ATM cash data

When cash levels are updated

Then the dashboard must refresh within 5 minutes

AC-02: ATM Status Classification

Given the ATM cash percentage is known

When the value is processed

Then the system must classify status as:

- Normal (>50%)
- Warning (20–50%)
- Critical (<20%)

AC-03: Last Refill Timestamp

Given a refill is completed

When the system receives the refill log

Then the “Last Refill Time” must update instantly

2. Forecasting Engine

AC-04: 24-Hour Cash Prediction

Given withdrawal history for 90 days

When the forecasting engine runs

Then the system must show next-day cash usage prediction

AC-05: Hourly Consumption Forecast

Given hourly withdrawal data

When forecasting is executed

Then system must generate hourly usage predictions

AC-06: Special Event Adjustment

Given a salary day, festival, or holiday is detected
When forecasting occurs
Then prediction must adjust for increased demand

AC-07: Forecast Accuracy Score

Given previous prediction results
When accuracy is calculated
Then system must show a confidence score (%)

3. Alerts & Notifications:

AC-08: Critical Cash Alert

Given the ATM cash falls below 20%
When system evaluates thresholds
Then a critical alert must trigger immediately

AC-09: Warning Cash Alert

Given the ATM cash is between 20% and 50%
When system checks threshold
Then a warning alert must be generated

AC-10: Alert Delivery Time

Given an alert is triggered
When delivery is sent
Then the alert must reach SMS/Email/App within 5 seconds

AC-11: Alert Content Verification

Given a user receives an alert
When they open it
Then alert must show:

- ATM ID
- Location
- Current cash %
- Forecasted depletion time
- Priority score

4. Denomination Calculation:

AC-12: Correct Note Breakdown

Given the predicted refill amount

When denomination logic runs

Then the system must calculate required 100/200/500/2000 notes

AC-13: Pattern-Based Adjustment

Given ATM has defined usual withdrawal patterns

When calculating note ratios

Then denomination must adjust accordingly

5. Priority Scoring:

AC-14: Generate Priority Score

Given ATM cash, forecast, and footfall data

When priority logic runs

Then system must generate a score from 1 to 100

AC-15: Color Coding

Given the priority score

When displayed in dashboard

Then the color codes must be:

- Red (High)
- Yellow (Medium)
- Green (Low)

6. Route Optimization:

AC-16: Route Generation

Given a list of critical ATMs

When route optimization runs

Then system must generate shortest-time route

AC-17: Real-Time Re-Optimization

Given traffic delay or new critical alert
When system recalculates
Then updated route must be shown immediately

AC-18: Route Details Delivery

Given a route is generated
When Cash Van Team opens app
Then system must show ATM list, order, distance, and ETA

7. Dashboard:

AC-19: Dashboard Load Time

Given a user opens dashboard
When data loads
Then it must render within 3 seconds

AC-20: Filter Functionality

Given filters like branch, city, status
When user applies filters
Then dashboard must update results accurately

AC-21: Drill Down Display

Given a user clicks an ATM
When detailed view opens
Then system must show full history, predictions, graph, and refill data

8. Reporting:

AC-22: Daily Report Generation

Given system time is 6 AM
When scheduler runs
Then daily ATM summary report must be generated

AC-23: Weekly Forecast Report

Given a new week
When weekly report logic triggers
Then system must generate 7-day forecast + trend analysis

9. User Access & Security:

AC-24: Role-Based Access

Given different user roles
When login occurs
Then system must restrict features based on permissions

AC-25: Secure Login

Given user credentials
When authentication occurs
Then system must validate via encrypted login method