

Functional Requirements Document (FRD)

Project: Payment Transactions RCA Dashboard

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1. Data Requirements

1.1 Transaction Table Structure

| Column Name | Description |
|----------------|-------------------------------|
| transaction_id | Unique transaction identifier |
| user_id | Links to user table |
| created_at | Timestamp of transaction |
| amount | Transaction amount |
| status | SUCCESS or FAILED |
| failure_reason | Reason of failure |

1.2 User Table Structure

| User Column | Description |
|-------------|---------------------------------------|
| user_id | Unique user identifier |
| age | User age |
| city | User location |
| device | User device type |
| type | User category (new/returning/premium) |

2. KPI Requirements

| KPI | Formula | Description |
|--------------------|-----------------------|----------------------------------|
| Total Transactions | COUNT(transaction_id) | Total number of payment attempts |
| Success Count | COUNT(status=SUCCESS) | Total successful payments |
| Failure Count | COUNT(status=FAILED) | Total failed payments |

| | | |
|----------------|--------------------------|---------------------------------------|
| Success Rate % | Success Count / Total Tx | Percentage of successful transactions |
| Failure Rate % | Failure Count / Total Tx | Percentage of failed transactions |
| Avg Amount | SUM(amount) / Total Tx | Average transaction value |

3. Visual Requirements

| Visual | Description |
|--------------------------|------------------------------------|
| KPI Cards | Show success %, failure %, totals |
| Daily Trend Chart | Daily success vs failure |
| Failure Reason Bar Chart | Top failure reasons |
| Device Segmentation | Failures by device |
| City Segmentation | Failures by city |
| Hourly Heatmap | Failures by hour vs failure reason |

4. Filters / Slicers

| Filter | Field |
|----------------|----------------|
| Date Range | created_at |
| City | city |
| Device | device |
| User Type | type |
| Failure Reason | failure_reason |