Project Design Document

1. Data Model Architecture

- **Fact Table:** Sales, Revenue, Delays, Ticket Price
- **Dimensions:**
  - Date
  - Station
  - Payment Method
  - Journey Status
  - Purchase Channel

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2. Dashboard Wireframes

Page 1 – Overview

- KPI Cards (Total Revenue, On Time %, Avg Ticket Price, Refund %)
- Line + Column Combo: Revenue + Refund Rate
- Map: Performance by Departure Station
- Donut: Journey Status Breakdown

Page 2 – Trends & Insights

- Line Chart: Revenue Over Time
- Stacked Bar: Online vs Station Purchases
- Donut: Payment Method Distribution
- Stacked Column: Journey Status by Station

Page 3 – Deep Analysis

- Decomposition Tree: Revenue Explanation
- Tree Map: Delay Reasons

Page 4 – Sales Forecast

- Cards: Current Revenue, Next Month Forecast, Growth
- Forecast Line Chart: Future Revenue Projection

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3. Tutorials

Data Cleaning Steps

1. Import CSV files
2. Remove duplicates
3. Fix column types
4. Standardize status labels
5. Add calculated columns

DAX Creation Steps

1. Create KPIs
2. Create rolling averages
3. Create growth metrics
4. Add forecasting support

Dashboard Development

- Drag slicers
- Add combo charts
- Add maps and tree visual
- Apply formatting
- Test relationships

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4. Final Report (Summary)

The analysis uncovered several key findings:

Revenue Trends

- Strong monthly revenue with London Kings Cross and Liverpool Lime Street top contributing stations.
- Refund rate decreases during off-peak seasons.

Operational Insights

- Delays mainly linked to overcrowded routes.
- Stations in Northern UK show higher cancellation rates.

Customer Behavior

- 67% of purchases are online.
- Card payments dominate over cash.

Forecasting Outcome

- Expected revenue decrease next month.
- 30-day projected revenue trend downward by 1.06%.