



Low Level Design Document

Introduction

This Low Level Design (LLD) document outlines the implementation details for **FinSight - Financial KPI Tracker**. The project aims to deliver a Power BI dashboard for tracking key financial metrics (revenue, expenses, profit margins) with DAX-based trend analysis and conditional formatting.

1. System Components

Component	Description	Key Responsibilities
Data Source	Source of financial data (CSV, DB, Excel, etc.)	Provide raw financial data
Data Model	Power BI data model (tables, relationships)	Structure and relate data
DAX Measures	Calculated fields for KPIs	Compute revenue, expenses, margins
Visualization Layer	Power BI reports and visuals	Display KPIs, trends, formatting

2. Class/Interface Overview

Class/Interface	Description	Key Methods/Attributes
DataTable	Represents financial data table	Columns: Date, Revenue, Expenses
DAXMeasure	DAX formula for KPI calculation	Methods: CalculateRevenue, CalculateExpenses, CalculateProfitMargin
DashboardView	Power BI report/dashboard	Visuals: KPI Cards, Trend Charts

Relationships:

- `DataTable` feeds into `DAXMeasure` calculations
- `DAXMeasure` outputs are visualized in `DashboardView`

3. Data Structure Overview

Table Name	Columns	Description
Financials	Date, Revenue, Expenses, Category	Raw financial data
CalculatedKPIs	Revenue, Expenses, ProfitMargin	DAX-calculated fields

4. Algorithms/Logic

KPI Calculation (DAX Pseudocode):



```
Revenue = SUM(Financials[Revenue])
Expenses = SUM(Financials[Expenses])
ProfitMargin = DIVIDE([Revenue] - [Expenses], [Revenue])
```

Trend Analysis & Conditional Formatting:

- Calculate month-over-month % change for each KPI
- Apply color formatting:
 - Green for positive trend
 - Red for negative trend

5. Error Handling

Scenario	Handling Approach
Missing/Null Data	Display "Data Unavailable" in visuals
DAX Calculation Error	Show default value (e.g., 0 or N/A)
Data Source Connection Failure	Alert user, retry or prompt for action

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