High Level Design Document

Introduction

This High Level Design (HLD) document outlines the architecture and core design for **FinSight - Financial KPI Tracker**. The project aims to deliver a Power BI dashboard for tracking key financial metrics—revenue, expenses, and profit margins—using DAX measures and conditional formatting for trend analysis.

---

1. System Architecture Overview

Architecture Description:
FinSight is a data analytics solution leveraging Power BI. Financial data is ingested from source files or databases, processed and modeled within Power BI, and visualized through interactive dashboards.

Component	Role/Responsibility
Data Source	Stores raw financial data (e.g., Excel, SQL database)
Data Ingestion Layer	Imports data into Power BI
Data Model	Defines tables, relationships, and DAX measures
Visualization Layer	Power BI dashboards with KPIs and trend analysis
User Interface	End-user access via Power BI Service or Desktop

---

2. Component Interactions

Sequence Step	Interaction Description
1	Data Source provides financial data to Data Ingestion Layer
2	Data Ingestion Layer loads data into Power BI Data Model
3	Data Model processes data, applies DAX measures, and prepares for visualization
4	Visualization Layer renders dashboards with KPIs and conditional formatting
5	Users interact with dashboards via Power BI interface

---

3. Data Flow Overview

Source	Transformation/Processing	Destination
Financial Data	Data import, cleansing, modeling	Power BI Data Model
Data Model	DAX calculations, aggregations	Dashboard Visualizations
Dashboards	User filtering, drill-down	End User Interface

4. Technology Stack

Layer/Function	Technology/Tool
Data Storage	Excel, CSV, SQL Server
Data Analytics & BI	Power BI Desktop/Service
Data Modeling	Power BI, DAX
Visualization	Power BI Dashboards
Security & Access	Power BI Permissions

5. Scalability & Reliability

- **Scalability:** Power BI supports scaling from small datasets to large enterprise data sources. Data refresh schedules can be configured for up-to-date reporting.
- **Reliability:** Power BI Service ensures high availability and data redundancy. Data source connections should be monitored for reliability.
- **Security:** Access is managed via Power BI's role-based permissions; sensitive data is protected through dataset-level security.

End of Document