**Project Introduction**

**Project Name:** Stocks Strategic Dashboard  
**Aim:** The project aims to develop a strategic dashboard for stock analysis, enabling users to identify daily patterns and trends in the stock market. By providing real-time data visualization and analysis, the dashboard will assist investors and business analysts in making informed decisions based on market behavior.

**Aim of Stocks Strategic Dashboard**

The aim of the "Stocks Strategic Dashboard" project is to create an advanced analytical tool that tracks and visualizes stock market patterns on a daily basis. This tool will empower investors and business analysts by providing actionable insights into market trends, enabling them to make informed decisions, optimize investment strategies, and predict potential market shifts.

**Business Process Documentation**

**1. Overview**

* The Stocks Strategic Dashboard is designed to provide users with an intuitive interface for analyzing stock market data. The dashboard integrates data from various sources, processes it into a star schema, and presents it through visualizations that highlight daily stock patterns.

**2. Key Business Goals**

* **Data-Driven Decision-Making:** Empower users to make data-driven decisions based on real-time stock market analysis.
* **Market Trend Identification:** Provide tools to identify and analyze daily stock market trends.
* **User Accessibility:** Ensure the dashboard is user-friendly and accessible to investors and business analysts.

**3. Target Users**

* **Investors:** Looking to optimize their stock portfolios.
* **Business Analysts:** Seeking to understand market trends and provide insights for strategic business decisions.

**4. Process Flow**

* **Data Collection:** API keys are generated from AlphaVantage, and data is collected daily using a Python script that scrapes and saves data as CSV files.
* **Data Processing:** Transformation scripts convert the raw data into a star schema, with business metrics in fact tables and time-related data in dimension tables.
* **Data Storage:** The processed data is stored in a PostgreSQL database, organized in a star schema format.
* **Data Visualization:** Power BI connects to the PostgreSQL database to create visualizations and dashboards for end-users.
* **Deployment:** The system is deployed on an in-house local system using Docker containers, ensuring scalability and ease of management.