**Project Statement:**

**Real-Time Cryptocurrency Price Tracking and Storage Using Binance API**

This project focuses on building a real-time cryptocurrency price tracking system by interacting with the Binance public API. The system will fetch live price data for selected cryptocurrency pairs (e.g., BTC-USDT) at regular intervals. The fetched data will be processed using Pandas to calculate additional metrics such as rolling averages (e.g., 5-minute and 15-minute averages), as well as the highest and lowest prices within each 5-minute window. This enriched dataset will then be stored in a SQL Server database for future analysis and reporting.

The project emphasizes not just storing the latest price, but adding analytical value by capturing trends and volatility in short time frames. Key technologies involved include API interaction (via libraries such as requests or ccxt), JSON parsing, data manipulation with Pandas, database operations with SQL Server (using pyodbc or SQLAlchemy), and workflow scheduling using Airflow.

**Sample stored data fields:**

* Timestamp
* Cryptocurrency Pair (e.g., BTC-USDT)
* Latest Price
* 5-Minute Average Price
* 15-Minute Average Price
* Highest Price in Last 5 Minutes
* Lowest Price in Last 5 Minutes