**Challenge**

**Scenario: Cryptocurrency Data Visualization and Database Integration**

**Context:**

You are a data engineer tasked with fetching, processing, and visualizing cryptocurrency data from an API. The goal is to use Python to automate data extraction from a public cryptocurrency API, transform the data, and load it into a database. Additionally, you'll generate visualizations to track cryptocurrency prices, market cap, and supply for analysis. ( Build a Simple Data Pipeline in Python that Pulls Data from an API, Saves it in a Database, and is Scheduled with a CRON Job)

**Objective:**

* **Fetch data from the CoinCap API.**
* **Process the data to convert necessary columns to numeric data types, handle missing data, and round numbers to a consistent format**(optional).**.**
* **Load the data into a Microsoft SQL Server database.**
* **Visualize the data to help the team better understand trends in cryptocurrency prices and market capitalization.**

**Requirements:**

**Objective**: Build a **simple data pipeline** in **Python** that:

1. **Pulls data** from an **API** using

Link : <https://api.coincap.io/v2/assets>

provides information about the current state of **cryptocurrency assets**. Specifically, it returns data for various cryptocurrencies available on the **CoinCap** platform, such as Bitcoin, Ethereum, and many others.

1. **Cleans the data** (optional).
2. **Insert the data** into a **database** (like MySQL or PostgreSQL).
3. **Schedules the task** to run automatically using **CRON job**.
4. **visualize the cryptocurrency data you've fetched from the CoinCap API using Python**

**Conclusion:**

In this scenario, you've successfully built a process that:

1. Fetches cryptocurrency data from the **CoinCap API**.
2. Cleans and transforms the data.
3. Loads the data into a **SQL Server database** for persistent storage.
4. Generates insightful **visualizations** for decision-making, which can be shared with stakeholders.

This process can be extended to include more cryptocurrencies, real-time updates, or more detailed visualizations for deeper analysis, helping the business track cryptocurrency trends and make informed decisions