# E-COMMERCE DATABASE ANALYSIS

ANVESH NADIPELLI

# Project Objective | Business

The objective of this project is to utilize SQL to access and explore the Maven Fuzzy Factory database. We will analyze and optimize the business' marketing channels, website performance, and product portfolio.

## **Marketing Channels:**

- Analyze the performance of different marketing channels using SQL queries.
- oldentify the most effective channels based on key metrics such as order conversion rates, and Revenue.
- Optimize marketing strategies by reallocating resources to high-performing channels and optimizing underperforming ones.

#### **Website Conversion Performance:**

- Measure and test website conversion performance through SQL queries.
- Analyze key metrics such as conversion rates, bounce rates, and funnel analysis to identify web pages for improvement.
- Optimize website design, user experience, and content based on data-driven insights.

## **Product Portfolio Impact:**

- Use SQL queries to understand the impact of new product launches on the business.
- Analyze sales data, and seasonal trends.
- Optimize the product portfolio by identifying successful products, eliminating underperforming ones, and exploring new opportunities.

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**Business Patterns and Seasonality:** 

Using SQL queries to uncover business patterns and seasonality.

- Identify peak periods, trends, and fluctuations in customer behavior, sales, and website traffic.
- Use these insights to optimize inventory management, staffing, and marketing strategies to align with business cycles.

## Project Objective | SQL Concepts

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## **Multi-step SQL Queries:**

- Learn how to write complex SQL queries involving multiple steps to extract and manipulate data efficiently.
- Use these queries to perform in-depth analysis and generate actionable insights.

## Temporary Tables and Subqueries:

- Utilize temporary tables to store intermediate results and break down complex queries into smaller, manageable parts.
- Leverage subqueries to retrieve data from within the main query and perform calculations or filtering based on the results.

## **Trend Analysis Queries:**

- Develop SQL queries to analyze trends in marketing channels, website conversion performance, and product launches.
- Identify patterns, seasonality, and anomalies to understand the impact of different factors on the business.

### **CASE and Pivot Queries:**

- Employ CASE statements to create custom calculations and perform conditional operations within SQL queries.
- Utilize PIVOT to transform row-level data into columnar format, making it easier to summarize and analyze.