Business Problem  
Effective inventory and sales management are critical for optimizing profitability in the retail and wholesale industry. Companies need to ensure that they are not incurring losses due to inefficient pricing, poor inventory turnover, or vendor dependency. The goal of this analysis is to:

* ﻿﻿Identify underperforming brands that require promotional or pricing adjustments.
* ﻿﻿Determine top vendors contributing to sales and gross profit.
* ﻿﻿Analyze the impact of bulk purchasing on unit costs.
* ﻿﻿Assess inventory turnover to reduce holding costs and improve efficiency.
* Investigate the profitability variance between high-performing and low-performing vendors.

# Exploratory Data Analysis

* The purchases table contains actual purchase data, including the date of purchase, products (brands) purchased by vendors, the amount paid (in dollars), and the quantity purchased
* ﻿﻿The purchase price column is derived from the purchase\_prices table, which provides product-wise actual and purchase prices. The combination of vendor and brand is unique in this table.
* ﻿﻿The vendor\_invoice table aggregates data from the purchases table, summarizing quantity and dollar amounts, along with an additional column for freight. This table maintains uniqueness based on vendor and PO number.
* ﻿﻿The sales table captures actual sales transactions, detailing the brands purchased by vendors, the quantity sold, the selling price, and the revenue earned.

As the data that we need for analysis is distributed in different tables, we need to create a summary table containing:

1. purchase transactions made by vendors
2. sales transaction data
3. freight costs for each vendor
4. ﻿﻿actual product prices from