

Analyzing Customer Orders Using Python

Overview

This project analyzes customer purchase data for an e-commerce platform to extract actionable business insights. The implementation uses Python's core data structures - lists, tuples, dictionaries, and sets - along with loops and conditionals for data processing.

Key Steps Performed

- Data Storage: Organized sample customer orders in multiple formats for flexibility and quick retrieval.
- Classification: Calculated each customer's total spending and categorized customers as High-Value, Moderate, or Low-Value buyers.
- Category Analysis: Computed category-wise revenue, identified unique products, and determined customers purchasing across multiple categories.
- Insights Generation: Found the top 3 highest-spending customers; listed customers buying both Electronics and Clothing; highlighted multi-category buyers.
- Report Generation: Produced a structured, text-based report summarizing results for managers to support marketing and inventory decisions.

Outcome

The analysis identified key spending patterns, profitable categories, and overlapping customer interests, providing a foundation for data-driven decision-making in marketing campaigns and inventory planning.