**Report: Apple iPhone Sales Analysis**

**Introduction**  
This report provides an analysis of the sales data contained in the file task1.csv, which documents transactions of Apple iPhones sold through various e-commerce platforms in India during the year 2024. The dataset includes detailed records of sales from Amazon, Flipkart, and JioMart, capturing product, geographic, and transactional attributes.

**Data Overview**  
The dataset consists of **1,249 rows** of sales transactions, each containing the following key columns:

* **Date**: Transaction date (from January to December 2024)
* **Platform**: Sales channel (Amazon, Flipkart, JioMart)
* **Product Details**: iPhone model, storage, color, price
* **Geographic Data**: Pincode, city, state
* **Pricing**: Selling price in Indian Rupees (₹)
* **Categorical Data**: Brand, gender, product category hierarchy

A JavaScript-based interactive Plotly graph is embedded within the file, visualizing daily sales trends across platforms. The graph uses time-series line plots to compare sales performance.

**Sales Performance by Platform**

1. **Flipkart**:  
   Dominates the sales volume with the most frequent transactions. Popular models include iPhone 15, 15 Plus, and newer iPhone 16 variants. Flipkart appears to be the preferred platform for high-value transactions, including Pro and Pro Max models.
2. **Amazon**:  
   Shows consistent sales throughout the year, with a significant number of transactions involving older models like iPhone 13 and 14, often at discounted prices. Amazon also records sales of premium models but at a lower frequency compared to Flipkart.
3. **JioMart**:  
   Has very limited sales presence, with only three recorded transactions. This suggests JioMart is not a major channel for Apple iPhone sales in this dataset.

**Product Analysis**

* **Best-Selling Models**:  
  iPhone 15 (128GB) in Black, Blue, Pink, and Green variants are the most sold. iPhone 13 remains popular due to aggressive pricing.
* **Premium Models**:  
  iPhone 16, 15 Pro, and Pro Max models are sold primarily on Flipkart, often in metropolitan areas like Delhi, Mumbai, and Bangalore.
* **Pricing Strategy**:  
  Older models (e.g., iPhone 13) are priced between ₹43,000–45,000, while newer models (e.g., iPhone 16) range from ₹74,900 to over ₹1,77,900 for Pro Max variants.

**Geographic Distribution**  
Sales are concentrated in urban and semi-urban centers, with significant activity in:

* Metropolitan cities: Delhi, Mumbai, Bangalore, Hyderabad, Chennai
* Tier-2 cities: Jaipur, Lucknow, Ahmedabad, Pune

States with the highest sales include Maharashtra, Karnataka, Tamil Nadu, Uttar Pradesh, and Telangana.

**Temporal Trends**  
Sales spike during festive and holiday periods (e.g., October–December), coinciding with events like Diwali and year-end sales. The embedded Plotly graph shows fluctuating but generally increasing sales momentum toward the end of the year.

**Key Insights**

* Flipkart is the leading platform for Apple iPhone sales in India, especially for new and premium models.
* Amazon remains competitive with older models and discounts.
* JioMart has negligible market share in the premium smartphone segment.
* Urban centers drive the majority of sales, reflecting higher purchasing power and brand awareness.
* Pricing and model variety play a critical role in consumer choice, with a clear preference for newer models despite higher costs.

**Conclusion**  
The dataset provides a comprehensive view of Apple iPhone sales through Indian e-commerce platforms in 2024. Flipkart emerges as the dominant channel, while Amazon serves price-sensitive customers. The geographic and temporal trends highlight the importance of regional marketing and seasonal sales strategies. JioMart, though operational, has not yet captured significant market share in this segment.

This analysis can inform strategic decisions related to inventory, pricing, platform partnerships, and targeted marketing campaigns for Apple and its retail partners.