**DATASPARK PROJECT REPORT**

**Execution Summary for Dataspark Project**

**1. Sales Analysis:**

* **Sales Trend Over Time:** Analyzed the sales data over different periods to identify trends. Insights revealed peak sales seasons and overall growth patterns.
* **Sales by Quantity:** Evaluated the total quantity of products sold, providing insights into customer purchasing behavior and product popularity.
* **Sales by Product:** Analyzed sales distribution across various products, identifying top-performing items and those that underperformed.
* **Sales by Revenue:** Assessed revenue generation per product, highlighting key revenue drivers within the product line.
* **Top sales by City, State and Country:**

**2. Store Analysis:**

* **Total Sales by Store Key:** Compiled total sales figures associated with each store, enabling comparisons of performance across locations.
* **Store Key and Number of Orders:** Analyzed the number of orders processed per store, indicating transaction volume and customer engagement at each location.
* **City and Total Sales:** Evaluated total sales figures by city, identifying geographic areas with high sales potential.
* **Top 10 Stores by Total Sales:** Identifies the top 10 cities, states, and top 5 countries with the highest sales, highlighting key geographical regions driving revenue.

**3. Product Analysis:**

* **Top 10 Most Popular Products:** Identified the most purchased products, assisting in inventory management and marketing focus.
* **Least Popular Products:** Highlighted products with low sales volumes, providing insights for potential discontinuation or promotional strategies.
* **Revenue by Category:** Assessed revenue generation across different product categories, identifying which categories contribute most to overall revenue.

**4. Customer Analysis:**

* **Customer by Gender:** Analyzed customer demographics by gender, providing insights into purchasing behavior and preferences.
* **Customer by Age:** Evaluated the age distribution of customers, identifying key age demographics and their respective purchasing patterns.
* **Customer Distribution by Country and City:** Mapped customer distribution geographically, revealing concentrations of customers and potential markets for expansion.
* **Preferred Products by Customers:** Identified products preferred by different customer segments, aiding in targeted marketing efforts.

**1. What are the top 10 most popular products by quantity sold?**

- The top-selling product is the "WW1 Wireless Bluetooth Stereo Headphones," with a quantity of **359** sold.

- Other popular products include multiple variants of the "WW1 Wireless Bluetooth Stereo Headphones" and "WW1 Wireless Bluetooth Transmitters," with quantities ranging from **319** to **220**.

**2. Which products are the least popular by quantity sold?**

- The least popular products are various types of "WW1 Wall Lamps" and "WW1 Projector 720p LCD56 White."

- The "WW1 Projector 720p LCD56 White" has the highest quantity in this category with **34** sold, while others like the "WW1 Wall Lamp E315 White" and "E315 Grey" sold between **1** and **8** units.

**3. What is the revenue distribution by category?**

- The **Computers** category leads in revenue, contributing **34.62%** with **$19.3M.**

- Following this are **Home Appliances** with **19.36% ($10.8M)** and **Cameras and Camcorders** with **11.69% ($6.52M).**

- Other notable categories include **Cell Phones (11.09%),**  **TV and Video (10.63%),** **and Games and Toys (1.3%).**

**4. How does sales distribution look across different stores?**

- **Store 0** has the highest total sales, significantly surpassing all other stores.

- The number of orders also peaks at Store 0, indicating its role as a **primary sales driver.**

- Stores from key numbers **10** onward have relatively consistent sales and order volumes with lower peaks.

**5. What is the geographic distribution of total sales?**

- Sales are distributed globally, with notable activity in North America, Europe, and Australia.

- Specific cities show varying levels of total sales, with the highest concentrated in North America and Western Europe.

**6. What does the sales trend over time show?**

- Sales have steadily increased year-over-year, with a peak in 2019, contributing **32.76%** of total sales.

- Other significant years include 2018 (22.94%) and 2020 (16.67%), showing a consistent upward trend.

- The least sales occurred in the year **2021**, contributing only **1.86%** of total sales.

**7. Which products generate the highest sales quantity and revenue?**

- The **"WW1 Desktop PC2.33 X2330 Black"** **and "WW1 Desktop PC1.80 E1800 White"** top the list in both sale quantity and revenue.

- The highest revenue-generating product, **"WW1 Desktop PC2.33 X2330 Black,"** earned over **$0.5M**.

**8. What are the sales figures for different products by Store Key?**

- Product sales are spread across various Store Keys, with Store Key **57** and **63** leading.

- Sales volume per product varies, with Store Key **57** contributing **2.43%** of total sales and Store Key **63** around **2.34%.**

**9. What is the gender distribution among customers?**

- Male customers make up **51.2%** of the total, while female customers account for **48.8%**.

**10. Which age group has the highest representation among customers?**

- The most common age group is 21 years, making up 9.0% of customers.

**11. How is the customer distribution spread geographically?**

-Customers are spread globally, with high concentrations in North America, Europe, and Australia.

**12. Which store has the highest total sales?**

-Store Key 0 leads with $11.4M, comprising 48.63% of the total sales among the top 10 stores.

**13. Which city has the highest total sales?**

-The United States leads in total sales with $29.87M, accounting for 59.98%.