Here are the detailed steps for each analysis

1. Find trends of total sales by each coffee type

* Merge the orders and product data using ‘product ID’
* Calculate total sales, create a new column, total sales by multiplying quantity (from the order table) by unit price (from the product table)
* Group by coffee type, group the merged data by coffee type to calculate the sum of total sales for each coffee type
* Analyze sales trends over time
* Visualize (pivot table) plot the sales trends for each coffee type

2 Generate a table or chart highlighting the top 10 customers based on their contribution to total sales

* Merge orders and customers data using ‘customer ID’
* Calculate total sales by multiplying quantity by unit price
* Group the data by ‘customer ID’ and sum the total sales for each customer
* Sort the customers in descending orders based on their contribution to total sales
* Extract the top 10 customers
* Include customer information
* Visualize (bar chart)

1. Find total sales by each country

* Merge orders, customers and product data using customer ID and Product ID
* Calculate total sales, multiply quantity by unit price to get the total sales for each order
* Group the data by country (from the customer table) and sum the total sales for each country
* Sort by total sales
* Visualize (pivot table) plot total sales by each country

1. Find the total quantity ordered for each coffee type

* Merge orders and products data using ‘product ID’
* Group the merged dataset by coffee type
* Sum the quantity column for each coffee type to get the total amount ordered
* Sort the coffee type by total quantity ordered
* Visualize (pivot table) plot total quantity ordered for each coffee type.

INSIGHTS

1. Orders data

There are 957 distinct orders placed on 689 different dates between 2019 and 2022.

1. Customer data

204 customers do not have an email listed and 130 customers are missing phone numbers.

The dataset highlights a distinction between loyalty card members and non-members providing an opportunity for customer segmentation.

1. Product data

The coffee shop offers 48 unique products categorized by coffee type and roast type

Product prices range from $2.68 to $36.45 with profit margins varying significantly from $0.16 to $4.73

Larger product sizes tend to have lower costs per 100g, which could incentivize bulk purchases.

RECOMMENDATIONS

1. Encourage customers to provide missing contact details, such as email addresses and phone numbers, to enhance marketing efforts and communication.
2. Segment the customer base by loyalty membership and create targeted promotions or rewards to boost engagement and increase repeat purchases from loyalty members.
3. Focus marketing and promotions on products with higher profit margins, especially larger sizes that offer better value per unit weight
4. Introduce product bundles that combine smaller, less profitable items with larger, more profitable products to drive overall sales.
5. Investigate patterns in ordering behavior to identify high-demand periods, such as holidays or weekends. This will support better inventory management and promotional planning.