Online Retail Store Data Analysis

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Introduction

This analysis, of our **Online Retail Store,** aims to gather insights and make decisions based on some KPIs and metrics such as **Products Popularity**, **Products and Customers Profitability**, **Customer Segmentation** … etc.

Data Exploration

Data exploration phase provided us with some information about our data

- Total number of records is **12858**.

- Period of interest is between **Dec 12, 2010** and **Dec 9, 2011**.

- **110** customers have purchased in that period.

- Total number of products sold is **2335** products.

- Our country of interest is **United Kingdom**.

- **717** invoices have been made by the **110** customers

 with different products.
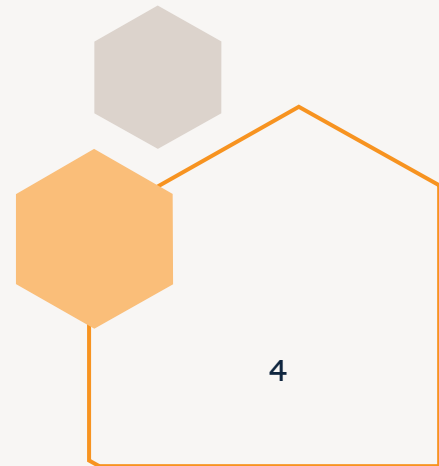
Business Questions

Seasonal Trends

Total Revenue Per Month
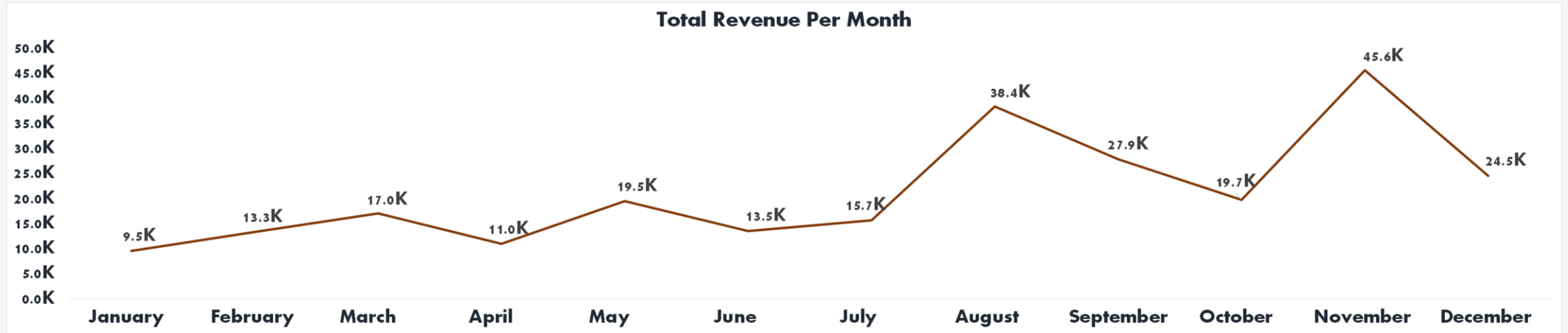
The figure illustrates the total revenue made by customer who are purchasing our products each month.

- Maximum revenue occurs in November.

- Least revenue occurs in January.

Quarter on Quarter (QoQ) Performance

Total Revenue Per Quarter

| Quarter	Revenue
Q4	89.9K
Q3	81.9K
Q2	44.0K
Q1	39.9K
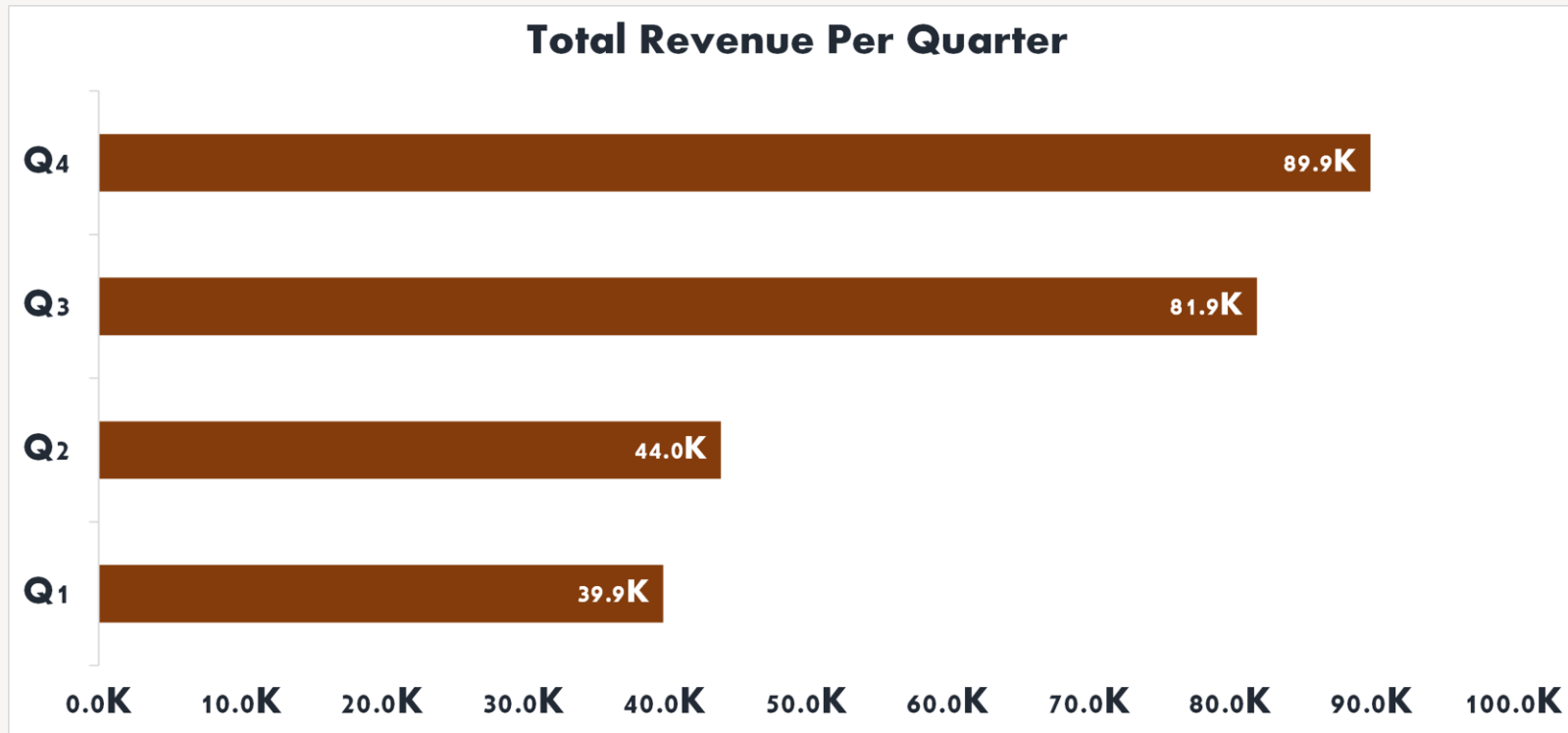
The figure illustrates that maximum revenue occurs in the fourth quarter while the least revenue occurs in the first quarter of the year.

Average Purchasing Revenue

Customer Rank	Customer ID	Total Revenue	Total Number of Invoices	Average Purchase Value
1	12931	42.1K	15	2.8K
2	12939	11.6K	8	1.4K
3	12830	6.8K	6	1.1K
4	12847	0.9K	1	0.9K
5	12967	1.7K	2	0.8K
6	12749	4.1K	5	0.8K
7	12965	0.8K	1	0.8K
8	12916	3.0K	4	0.8K
9	12882	1.5K	2	0.7K
10	12886	1.4K	2	0.7K

Top 10 customers according to their Average Purchasing Revenue

Online Retail Store Data Analysis
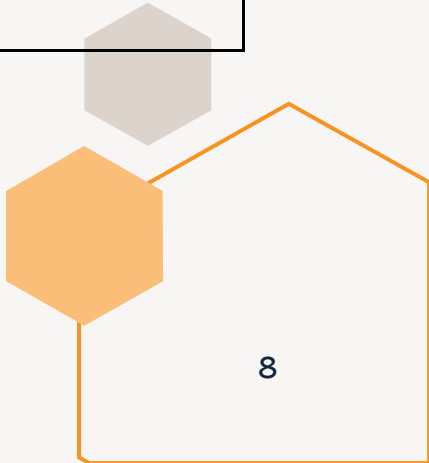
Products Popularity (Best Sellers)

| Best Seller	Product ID	Number of Purchasing
1	84879	0.1K
2	22086	0.1K
3	85099B	0.1K
4	22197	0.1K
5	22457	0.0K
5	23298	0.0K
5	47566	0.0K
5	85123A	0.0K
9	20725	0.0K
10	21034	0.0K

Top 10 products according to the number of orders they're ordered in
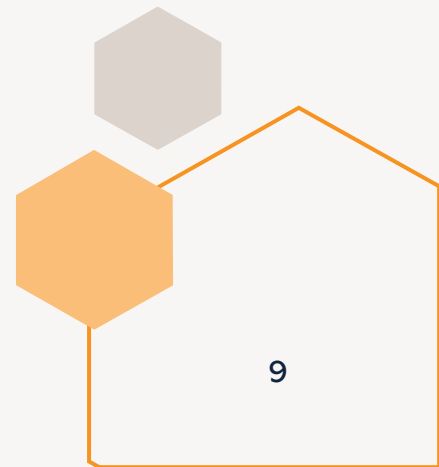
Products Profitability

| Product Rank	Product ID	Total Revenue of the Product
1	84879	9.1K
2	22197	4.3K
3	21787	4.1K
4	22191	3.5K
5	23203	3.4K
6	21479	2.7K
7	23215	2.7K
8	22970	2.5K
9	22570	2.5K
10	22992	2.3K

**Top 10 products according to their revenue**
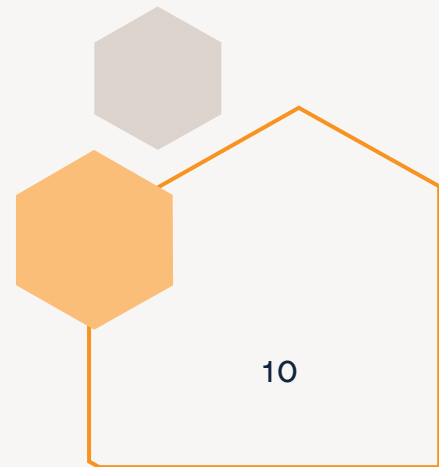
RFM Model | Customer Segmentation

Customers are segmented according to RFM (Recency, Frequency, and Monetary) Model into 10 segments:

- Champions
- Loyal Customers
- Promising
- About to Sleep
- Can't Lose Them

- Potential Loyalists
- Recent Customers
- Customers Needing Attention
- At Risk
- Lost

RFM Model | Customer Segmentation

Customer Segments according to RFM Model
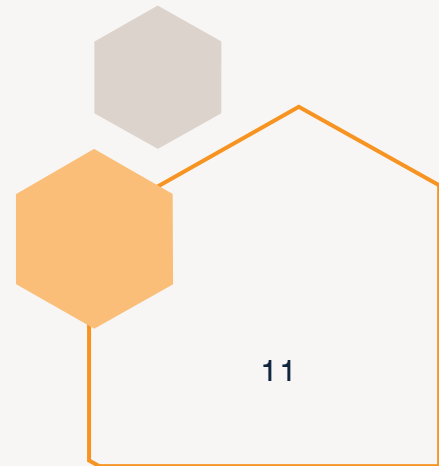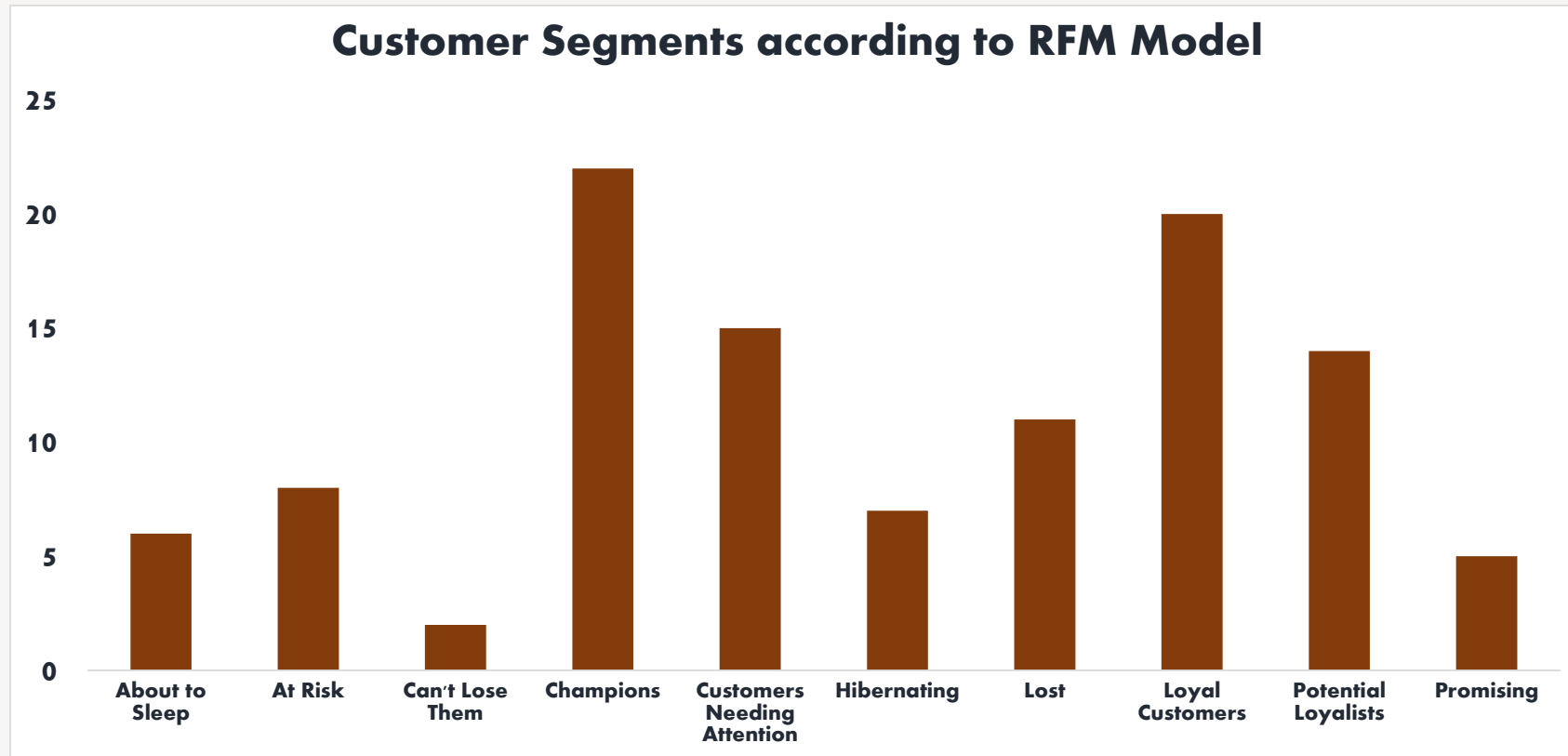
The figure shows the distribution of customers

Daily Purchasing Transactions Analysis

Daily Customers Purchasing

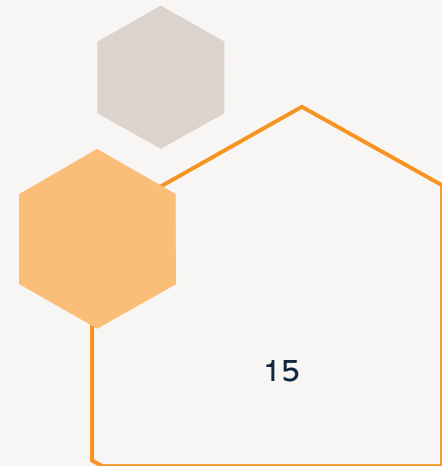| Customer ID	Max Number of Consecutive Days
100010376	5
100011085	10
100014033	46
100018482	3
100020880	46
100035887	13
100054374	8
100070652	1
100077596	2
100087785	61

- Maximum number of consecutive days of purchasing our products for each customer indicates to the **Engagement Level** of our Retail Store.

- The figure shows a sample of random customers with their maximum number of consecutive days of purchasing.
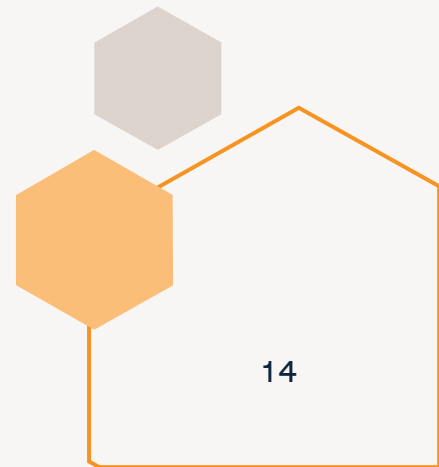
Daily Customers Purchasing
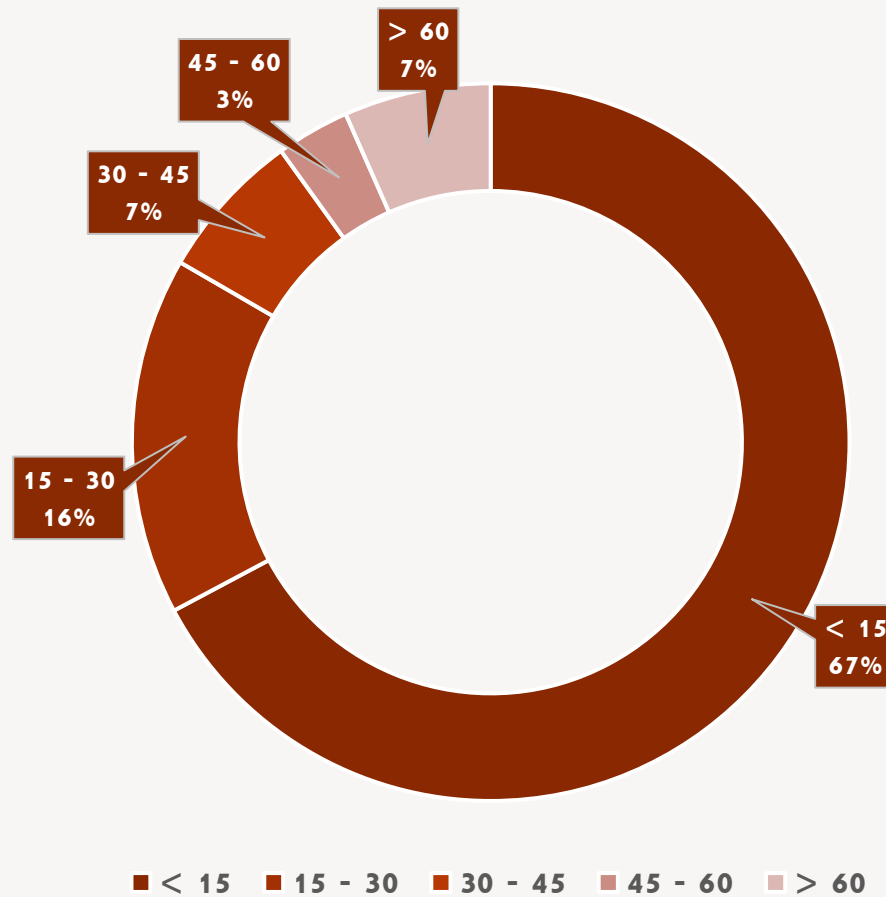
- The figure shows the percentage of customers who have maximum number of consecutive days of purchasing after grouping them.

- It's clear that the more the maximum number of consecutive days of purchasing the less the number of customers.

Online Retail Store Dashboard

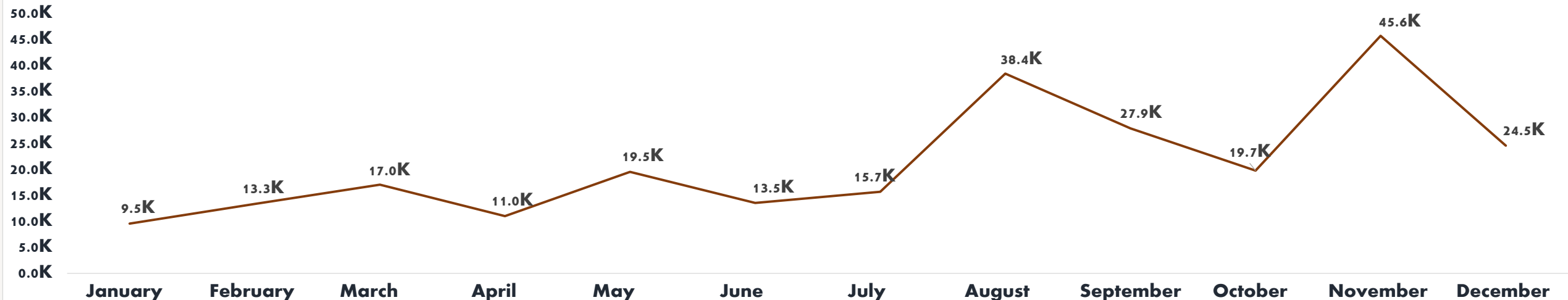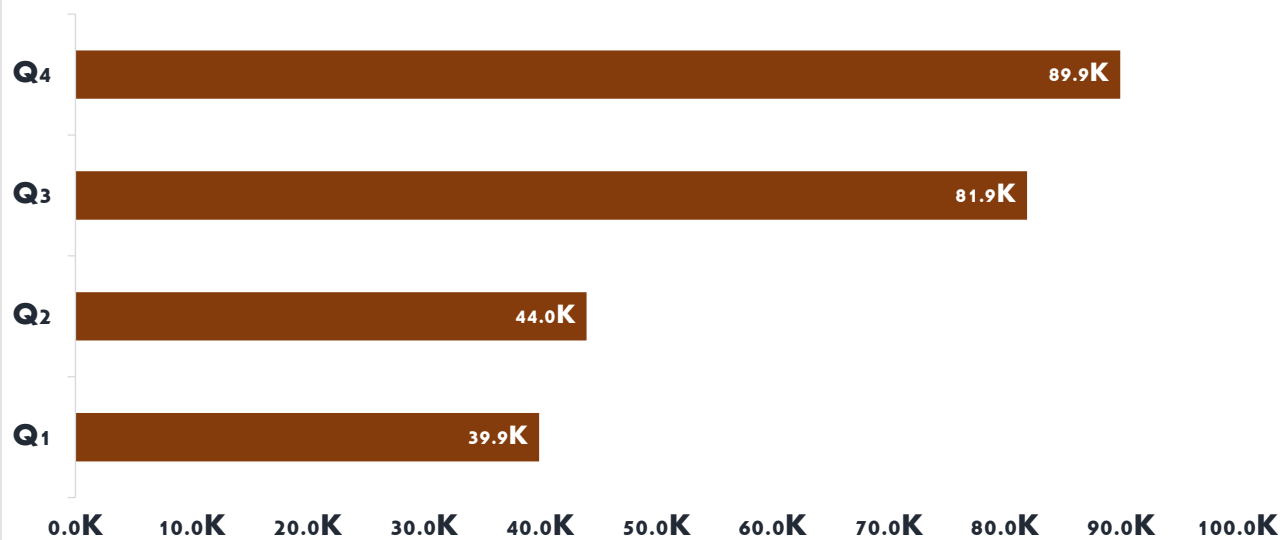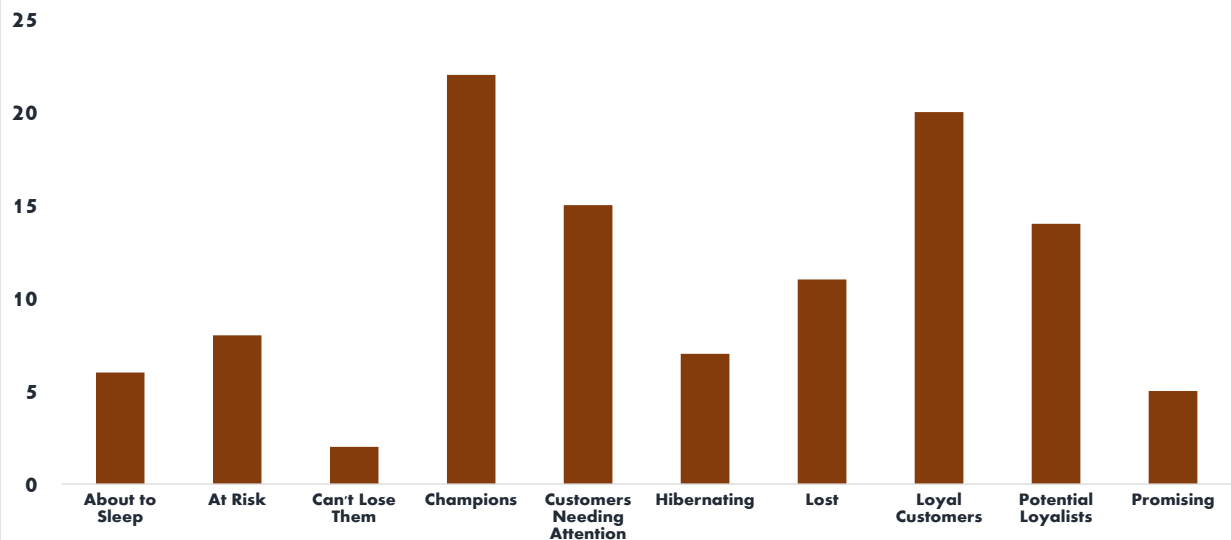| Quantity Sold	Customers	Products	Country	Total Sales
176653	110	2335	United Kingdom	255.7K

Total Revenue Per Month

Monthly values:
- January: 9.5K
- February: 13.3K
- March: 17.0K
- April: 11.0K
- May: 19.5K
- June: 13.5K
- July: 15.7K
- August: 38.4K
- September: 27.9K
- October: 19.7K
- November: 45.6K
- December: 24.5K

Total Revenue Per Quarter

- Q4: 89.9K
- Q3: 81.9K
- Q2: 44.0K
- Q1: 39.9K

Customer Segments according to RFM Model

Segments: About to Sleep, At Risk, Can't Lose Them, Champions, Customers Needing Attention, Hibernating, Lost, Loyal Customers, Potential Loyalists, Promising

Thank you

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