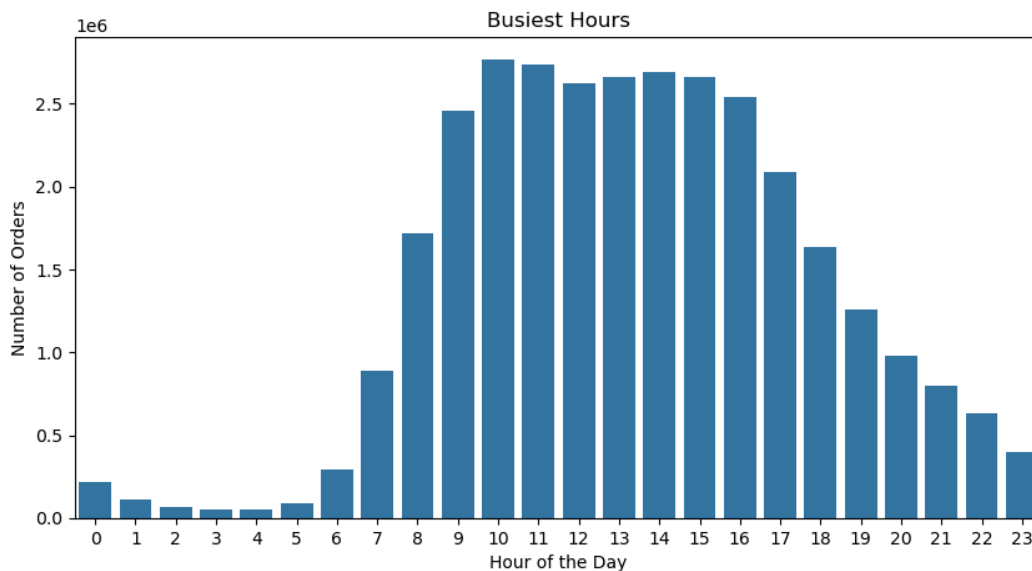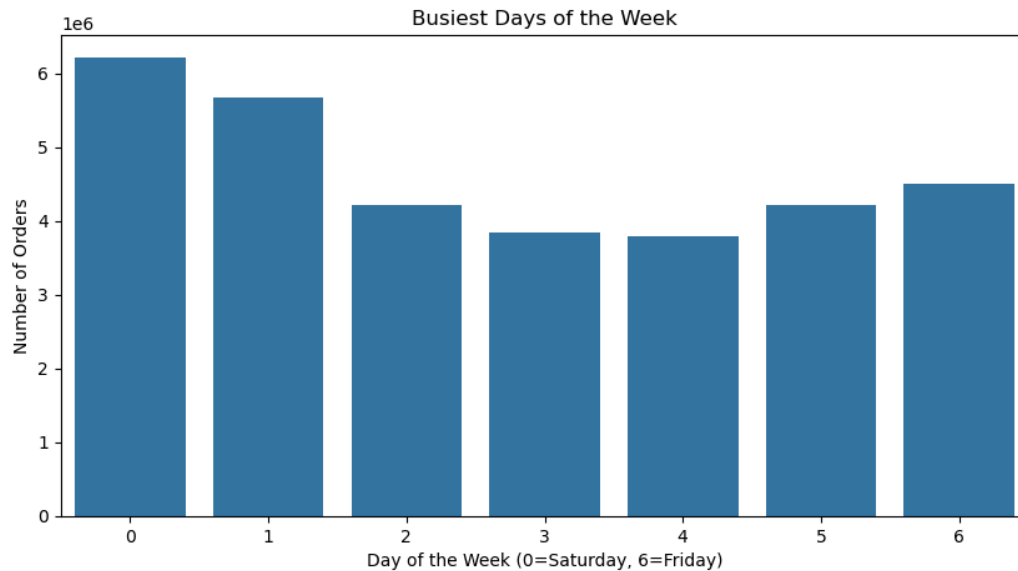1) The sales team needs to know what the busiest days of the week and hours of the day are (i.e., the days and times with the most orders) in order to schedule ads at times when there are fewer orders.

1. **Busiest Days of the Week**:

- ○ The chart indicates that **Saturday (Day 0)** and **Sunday (Day 1)** have the highest number of orders, with Saturday being the busiest.
  - ○ Days like **Tuesday (Day 2)** and **Wednesday (Day 3)** have relatively fewer orders.
2. **Busiest Hours of the Day**:
   - ○ The busiest times of day appear to be between **10 AM and 3 PM**, with orders peaking between **11 AM and 12 PM**.
   - ○ Early morning hours (before 7 AM) and late evening hours (after 8 PM) show significantly fewer orders.

Recommendation for Ads:

The sales team should schedule ads during the periods with fewer orders:

- **Early mornings (before 7 AM)** or **late evenings (after 8 PM)** are ideal times for ads, as these hours show a lower volume of orders.
- Mid-week days like **Tuesday** and **Wednesday** also show fewer orders compared to weekends, so these could be good times for ads as well.

2) They also want to know whether there are particular times of the day when people spend the most money, as this might inform the type

of products they advertise at these times.
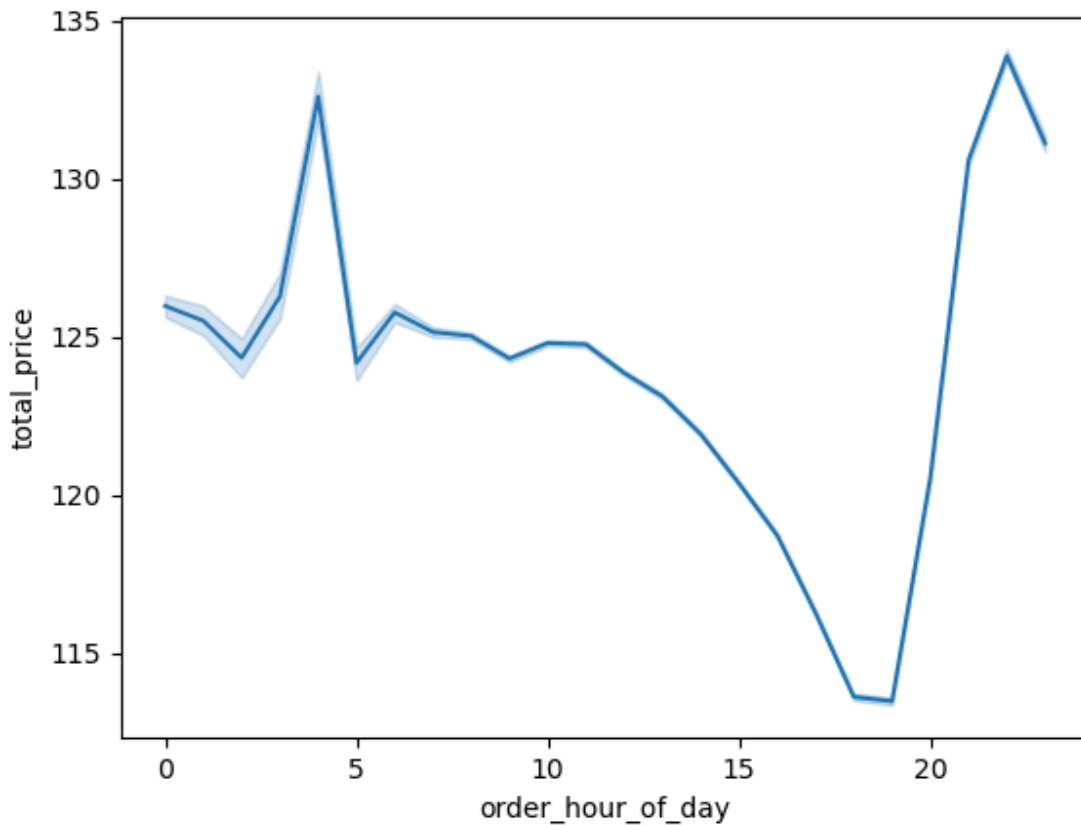
It can be inferred from the graph above that the expenditure of the users peak right before 5:00am or after 8:00pm. Therefore, we can say that this is when people spend the most money and it should be incorporated into the advertising strategy.

3) Instacart has a lot of products with different price tags. Marketing and sales want to use simpler price range groupings to help direct their efforts.
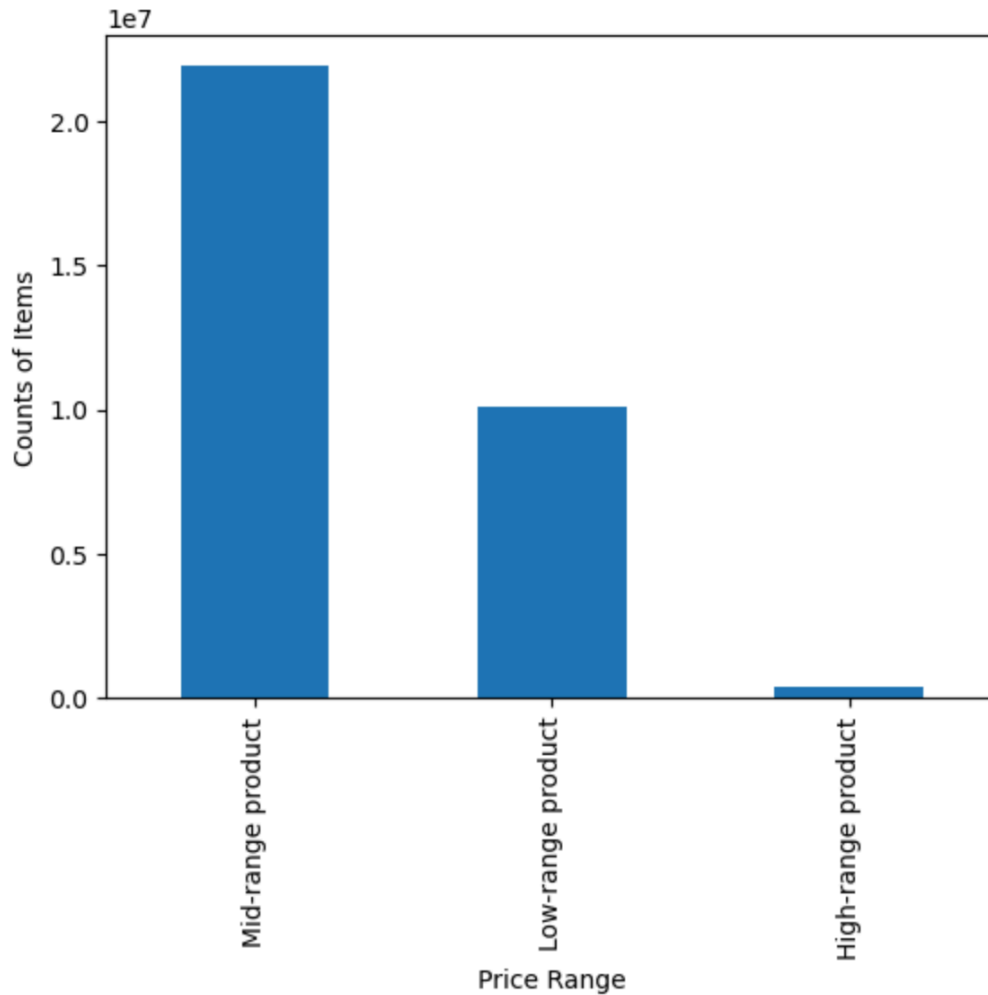
The following calculations could help the teams to help direct their efforts.

| |
|---|
| if price > 15, then 'High-range product' |
| if price <= 15 & if price > 5, then 'Mid-range product' |
| if price <= 5, then 'Low-range product' |

Here's a recommendation for stakeholders based on the price range calculations:

Recommendation for Stakeholders:

To help the marketing and sales teams optimize their efforts, we suggest segmenting products based on the following price ranges:

- **High-range products** (Price > $15): Focus on premium customers by highlighting the value, quality, and unique selling points of these products. Consider personalized promotions or loyalty rewards to encourage repeat purchases.
- **Mid-range products** ($5 < Price ≤ $15): These products appeal to a broader audience. Implement strategies such as bundling or discounts to drive higher sales volumes. Mid-range items can be featured in cross-promotions with both high-range and low-range products.
- **Low-range products** (Price ≤ $5): These products are often high-frequency purchases. Leverage them for impulse buys or in promotions that increase basket size. Additionally, consider including these products in budget-friendly campaigns to attract price-sensitive customers.

4) Are there certain types of products that are more popular than others? The marketing and sales teams want to know which departments have the highest frequency of product orders.


Number of Orders by Department
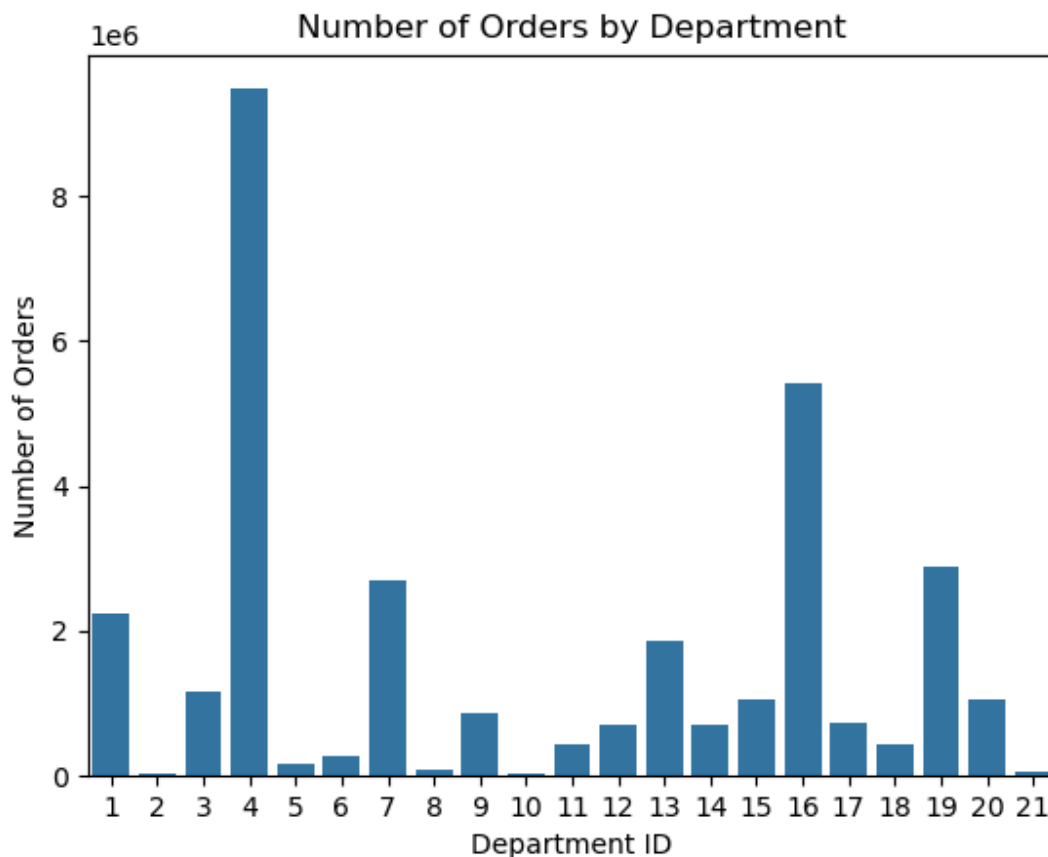
According to this graph, **"produce"**, **"dairy eggs"**, "**snacks**" and **"beverages"** are the most lucrative departments.

Top Department Focus: Boost promotions and visibility for popular departments like Produce and Dairy & Eggs to drive more sales.
Cross-Promotions: Bundle products from mid-tier departments with bestsellers to increase sales across categories.
**Niche Marketing**: Launch targeted campaigns for specialty categories to engage specific customer segments.

5) What different classifications does the demographic information suggest? Age? Income? Certain types of goods? Family status?
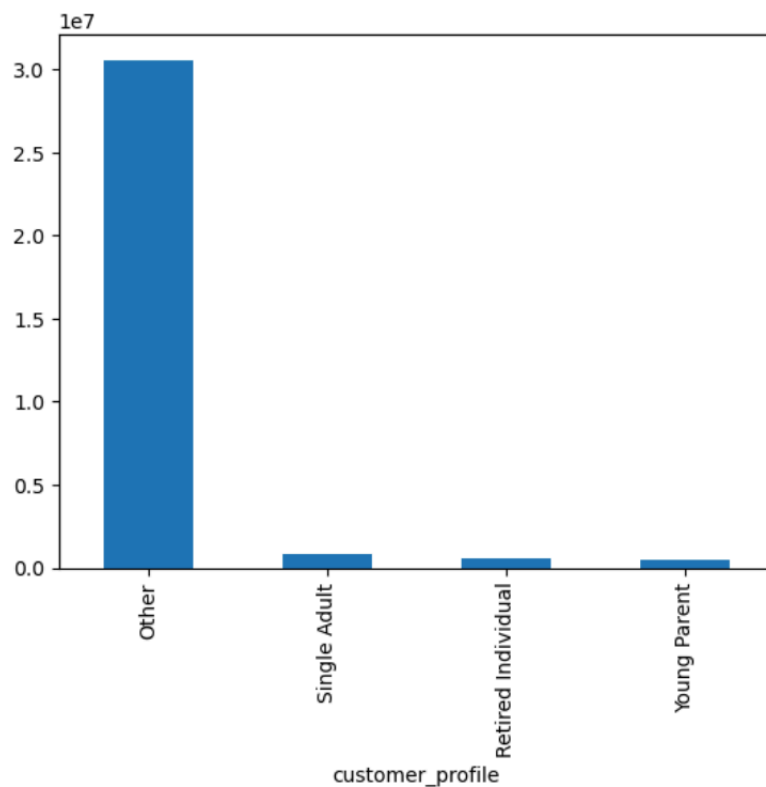
As can be seen in the graph above, most of the customer circle does not fall within a specific category. Therefore, more profiling, more categorization and deeper research will be needed to answer this question.

6) Are there differences in ordering habits based on a customer's region?

Total Orders by Region
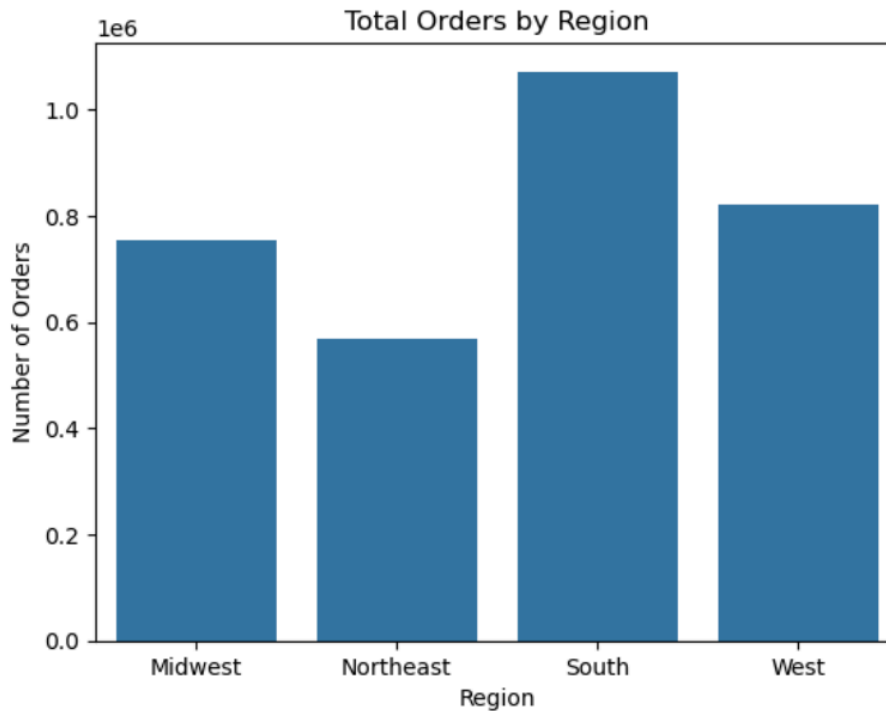
The South leads by a considerable margin, with over a million orders, indicating strong customer engagement or market size in that region. In contrast, the Northeast lags behind, suggesting either a smaller customer base, lower engagement, or fewer marketing efforts directed toward that region.

Recommendation:

1. **Leverage South's Strength:**
   ○ Focus marketing and sales efforts on the Southern region to maximize existing customer engagement. Since this region generates the most orders, consider increasing promotions, personalized deals, and advertisements targeted at this audience.
   ○ Enhance retention and loyalty programs in the South to maintain the momentum and further grow the customer base.
2. **Expand Efforts in the Northeast:**
   ○ Investigate potential reasons for the lower order volume in the Northeast. This could be due to lower market penetration, reduced marketing efforts, or different customer preferences.
   ○ Launch targeted campaigns to increase awareness and customer engagement in the Northeast. This might include region-specific promotions, partnerships with local influencers, or customized product offerings based on regional preferences.
   ○ Consider cross-promotions with popular items from the South or West regions to boost visibility and demand in the Northeast.