1. Data Analysis:

* **Completeness:**

We found that the Postal Code column has 11 missing entries in Postal Codes (Figure 1).

A screenshot of a computer

Description automatically generated

Figure 1: Missing Values (Postal Codes)

* **Consistency:**

There were inconsistencies for Postal code as there were postal codes with only 4 digits when the codes should have 5 digits.

* **Redundancies:**

There were redundancies discovered wherein the order IDs were found in multiple rows.

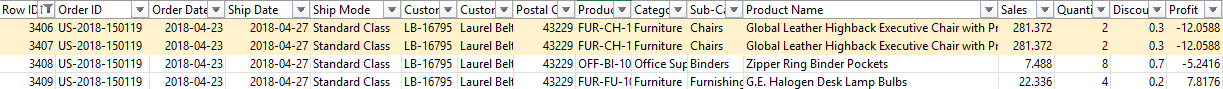
* **Duplicates:**There is duplicate data which show the same order twice (Figure 2).  
  

Figure 2: Duplicate Data

2. Target Audience:

* **Operational Report:**   
  This report is addressed to the sales team who are in charge of sales performance within their respective regional offices. The sales report will aid in monitoring and control, assuring its efficiency.
* **Executive Report:**   
  The executive report is intended for regional managers. By providing information on sales, profitability, and areas that require improvement such as the returns. This report would aid in decision-making.

3. Context and Additional Assumptions:

* **Assumptions:**

The profits for some orders were negative because of the discounts on the products.

Both reports will be produced on a regular basis, either monthly or quarterly.

The data in the Sample Superstore spreadsheet is taken to be an accurate representation of the sales data for the business.

Reports will be kept up to date with recent information on a regular basis.

* **Context:**

High-level management will consult executive reports when making strategic decisions.

Employees immediately involved in sales and order processing will use operational reports.

Executive and operational reports will be created for each designated region.

4. Operational and Executive Reports:

Report on Operations: The information shown includes the region, state, city, sub-category, item name, quantity, sales (in $), profit (in $).

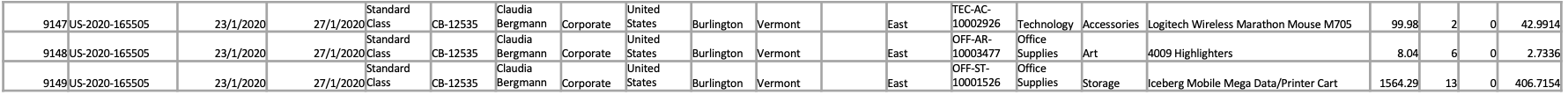
Customer satisfaction rating, order fulfillment rate, and average order processing time are all bespoke KPIs.

Average order processing time is calculated as follows: (Sum of processing times) / (Number of orders processed). (are these necessary?) (they are great, any other **necessary** suggestions?)

Executive Summary

Displayed data: Monthly/quarterly sales revenue, profit margins, and regional

Supplementary 1: The example of missing values in the dataset (postal code column).



Supplementary 2: The example of the duplication in the dataset. 

**Executive Report**

Gross Sales by Quarter

Report date:

Region:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| State | Sales Current Quarter ($) | Sales Last quarter ($) | Sales Comparison Last quarter vs. Current quarter (%) | Sales Same quarter last year ($) | Sales Comparison Last year vs. Actual (%) | KPIs: Net Profit Margin Ratio (%) | KPIs: Discount Effective Rate (%) |
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| **Total** |  |  |  |  |  |  |  |

**Operational Report**

Monthly Sales

Report month: January

\*Assuming that the salesperson is responsible for the whole state.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Region | State | City | Sub-category | Item Name | Quantity | Sales ($) | Profit ($) |
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|  |  |  |  |
| **Sub-total** | |  |  |  |
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