# Blinkit Analysis Project Documentation

## 1. Project Overview

The Blinkit Analysis project is designed to analyze sales, outlet performance, item categories, and customer preferences. Using real-time data, we leverage Excel's analytical capabilities to create an interactive dashboard.

### Objectives

- Analyze sales by outlet location, size, and item type.  
- Visualize key metrics such as total sales, average ratings, and item counts.  
- Provide actionable insights into outlet establishment trends, fat content distribution, and tier-based sales.

## 2. Dataset Overview

### Data Used

Dataset Name: Blinkit Outlet Sales Data  
Key Columns:  
- Outlet Location: Tier 1, Tier 2, Tier 3  
- Outlet Size: Small, Medium, High  
- Item Type: Categories such as Dairy, Frozen Foods, Snacks, etc.  
- Fat Content: Regular or Low Fat  
- Establishment Year: Year the outlet was established  
- Sales: Sales revenue in USD  
- Ratings: Customer ratings for the outlet

### Data Source

Real-time sales and outlet data collected from Blinkit's operations.

## 3. Steps to Build the Project

### Step 1: Data Collection and Cleaning

1. Import Data:  
- Use 'Data > Get External Data' to import CSV/Excel data into Excel.  
- Ensure all data columns are correctly mapped (e.g., date formats, numeric formats).  
  
2. Data Cleaning:  
- Remove duplicates using 'Data > Remove Duplicates'.  
- Fill missing values in columns like 'Sales' and 'Ratings' with averages or medians.  
- Standardize categorical values (e.g., 'Regular' vs. 'regular').

### Step 2: Data Analysis

1. Calculate Metrics:  
- Use formulas such as SUM, AVERAGE, and COUNT to calculate:  
 - Total Sales per Outlet  
 - Average Sales per Tier  
 - Average Ratings by Store Type  
  
2. Group Data:  
- Use Pivot Tables to group data by:  
 - Outlet Location  
 - Item Type  
 - Fat Content  
 - Year of Establishment

### Step 3: Data Visualization

1. Create Charts:  
- Pie Chart: Visualize Fat Content Sales distribution.  
- Bar Chart: Display Item Type Sales and Outlet Location Sales.  
- Line Chart: Show Outlet Establishment Year Trends.  
  
2. Interactive Features:  
- Add slicers for Outlet Location, Outlet Size, and Item Type to enable filtering.  
- Use conditional formatting to highlight sales performance.  
  
3. Key Figures Section:  
- Use Text Boxes and formatted cells to highlight:  
 - Total Sales  
 - Average Sales  
 - Average Ratings  
 - Item Counts

### Step 4: Building the Dashboard

1. Dashboard Layout:  
- Left Panel: Filters for Outlet Location, Size, and Item Type.  
- Top Section: Key metrics like Total Sales, Item Count, Average Sales, and Ratings.  
- Main Section: Visualizations for Fat Content Sales, Item Type Sales, and Outlet Location Sales.  
- Bottom Section: Outlet Size Sales and Yearly Establishment Trends.  
  
2. Formatting:  
- Use consistent colors (e.g., yellow and green for Blinkit branding).  
- Apply data labels to all charts for clarity.  
- Ensure alignment and spacing for a professional look.

## 4. Insights and Suggestions

- Tier 3 locations have the highest sales ($472K).  
- Low-fat items contribute to 65% of total sales.  
- Medium-sized outlets generate the highest sales ($508K).  
- Fruits and Vegetables are the top-performing item type ($178K).

## 5. Tools and Techniques Used

- Excel Features:  
 - Pivot Tables  
 - Charts (Bar, Pie, Line)  
 - Slicers  
 - Conditional Formatting  
- Formulas:  
 - SUM, AVERAGE, COUNTIF, IF  
 - VLOOKUP/INDEX-MATCH for data mapping

## 6. Final Output

- Interactive Dashboard:  
 - Displays key metrics and trends in an intuitive format.  
 - Allows filtering by location, size, and item type for custom views.

## 7. Benefits of the Analysis

- Helps decision-makers identify high-performing outlets and item categories.  
- Highlights sales trends by outlet size, location, and year of establishment.  
- Supports data-driven decisions for future outlet expansion.

## 8. Limitations and Future Enhancements

### Limitations:

- Limited granularity for customer demographic analysis.  
- Static data; real-time integration is not implemented.

### Future Enhancements:

- Integrate with Power BI for advanced visualizations.  
- Incorporate customer demographics and feedback analysis.

## 9. Conclusion

The Blinkit Analysis Project provides a comprehensive overview of sales performance and outlet trends. By leveraging Excel's features, we created an interactive dashboard to derive actionable insights, empowering stakeholders to make data-driven decisions.

