

# Blinkit Analysis

## DATA CLEANING:

Cleaning the Item Fat Content field ensures data consistency and accuracy in analysis. The presence of multiple variations of the same category (e.g., LF, low fat vs. Low Fat) can cause issues in reporting, aggregations, and filtering. By standardizing these values, we improve data quality, making it easier to generate insights and maintain uniformity in our datasets.

## BUSINESS REQUIREMENT

To conduct a comprehensive analysis of Blinkit's sales performance, customer satisfaction, and inventory distribution to identify key insights and opportunities for optimization using various KPIs.

### KPI's Requirements

1. **Total Sales:** The overall revenue generated from all items sold.

```
1      -- 1. Total Sales: The overall revenue generated from all items sold.  
2 •  SELECT * FROM blinkit_data;  
3 •  SELECT CAST(SUM(`Total Sales`) AS DECIMAL (10,2)) AS Total_Sales  
4      FROM blinkit_data;  
=
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Total_Sales	1201681.48			

2. **Average Sales:** The average revenue per sale.

```
-- 2. Average Sales: The average revenue per sale.  
SELECT * FROM blinkit_data;  
SELECT CAST(AVG(`Total Sales`) AS DECIMAL (10,2)) AS Average_Sales  
FROM blinkit_data;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Average_Sales	140.99			

3. **Number of Items:** The total count of different items sold.

```
-- 3. Number of Items: The total count of different items sold.  
SELECT * FROM blinkit_data;  
SELECT COUNT(*) AS Total_Count  
FROM blinkit_data;
```

<b>Result Grid</b>		Filter Rows:	<input type="text"/>	Export:	Wrap Cell Content:

4. **Average Rating:** The average customer rating for items sold.

```
-- 4. Average Rating: The average customer rating for items sold.
```

```
SELECT * FROM blinkit_data;
SELECT CAST(AVG(`Rating`) AS DECIMAL (10,2)) AS Average_Rating
FROM blinkit_data;
```

<b>Result Grid</b>		Filter Rows:	<input type="text"/>	Export:	Wrap Cell Content:

Average\_Rating

▶ 3.97

## Granular Requirements

1. Total Sales by Fat Content:

Objective: Analyze the impact of fat content on total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

```
SELECT * FROM blinkit_data;
SELECT `Item Fat Content`,
CAST(SUM(`Total Sales`) AS DECIMAL (10,2)) AS Total_Sales,
CAST(AVG(`Total Sales`) AS DECIMAL (10,2)) AS Average_Sales,
COUNT(*) AS No_of_Items,
CAST(AVG(`Rating`) AS DECIMAL (10,2)) AS Average_Rating
FROM blinkit_data
GROUP BY `Item Fat Content`;
```

<b>Result Grid</b>		Filter Rows:	<input type="text"/>	Export:	Wrap Cell Content:
Item Fat Content	Total_Sales	Average_Sales	No_of_Items	Average_Rating	
Regular	425361.80	141.50	3006	3.97	
Low Fat	776319.68	140.71	5517	3.97	

2. Total Sales by Item Type:

Objective: Identify the performance of different item types in terms of total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

```

SELECT * FROM blinkit_data;
SELECT `Item Type`,
CAST(SUM(`Total Sales`) AS DECIMAL (10,2)) AS Total_Sales,
CAST(AVG(`Total Sales`) AS DECIMAL (10,2)) AS Average_Sales,
COUNT(*) AS No_of_Item,
CAST(AVG(`Rating`) AS DECIMAL (10,2)) AS Average_Rating
FROM blinkit_data
GROUP BY `Item Type`;

```

Result Grid   Filter Rows:   Export:   Wrap Cell Content:					
	Item Type	Total_Sales	Average_Sales	No_of_Item	Average_Rating
▶	Fruits and Vegetables	178124.08	144.58	1232	3.96
	Health and Hygiene	68025.84	130.82	520	3.99
	Frozen Foods	118558.88	138.50	856	3.97
	Canned	90706.73	139.76	649	3.99
	Soft Drinks	58514.16	131.49	445	3.92
	Household	135976.53	149.42	910	4.00
	Snack Foods	175433.92	146.19	1200	3.95
	Meat	59449.86	139.88	425	4.02
	Breads	35379.12	140.95	251	3.88
	Hard Drinks	29334.68	137.08	214	3.91
	Others	22451.89	132.85	169	3.95
	Dairy	101276.46	148.50	682	3.97
	Breakfast	15596.70	141.79	110	3.93
	Baking Goods	81894.74	126.38	648	3.98
	Seafood	9077.87	141.84	64	3.96
	Starchy Foods	21880.03	147.84	148	3.92

### 3. Fat Content by Outlet for Total Sales:

```

-- 3. Fat Content by Outlet for Total Sales:
SELECT * FROM blinkit_data;
SELECT `Item Fat Content`,
CAST(SUM(`Total Sales`) AS DECIMAL (10,2)) AS Total_Sales
FROM blinkit_data
GROUP BY `Item Fat Content`;

```

Result Grid   Filter Rows:   Export:   Wrap Cell Content:		
	Item Fat Content	Total_Sales
▶	Regular	425361.80
	Low Fat	776319.68

Objective: Compare total sales across different outlets, segmented by fat content.

```

SELECT * FROM blinkit_data;
SELECT `Outlet Location Type`,
ROUND(SUM(CASE WHEN `Item Fat Content` = 'Regular' THEN `Total Sales` ELSE 0 END),2) AS Regular,
ROUND(SUM(CASE WHEN `Item Fat Content` = 'Low Fat' THEN `Total Sales` ELSE 0 END),2) AS 'Regular Fat'
FROM blinkit_data
GROUP BY `Outlet Location Type`;

```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Outlet Location Type	Regular	Regular Fat		
▶	Tier 1	121349.9	215047.91		
	Tier 3	165326.03	306806.99		
	Tier 2	138685.87	254464.77		

- Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

```
SELECT * FROM blinkit_data;
SELECT `Item Fat Content`,
CAST(AVG(`Total Sales`) AS DECIMAL (12,2)) AS Average_Sales,
COUNT(*) AS No_of_Items,
CAST(AVG(`Rating`) AS DECIMAL (12,2)) AS Average_Rating
FROM blinkit_data
GROUP BY `Item Fat Content`;
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Item Fat Content	Average_Sales	No_of_Items	Average_Rating	
▶	Regular	141.50	3006	3.97	
	Low Fat	140.71	5517	3.97	

#### 4. Total Sales by Outlet Establishment:

Objective: Evaluate how the age or type of outlet establishment influences total sales.

```
-- 4. Total Sales by Outlet Establishment:
-- Objective: Evaluate how the age or type of outlet establishment influences total sales.
SELECT * FROM blinkit_data;
SELECT `Outlet Establishment Year`,
CAST(SUM(`Total Sales`) AS DECIMAL (10,2)) AS Total_Sales
FROM blinkit_data
GROUP BY `Outlet Establishment Year`
ORDER BY `Outlet Establishment Year` asc;
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	Outlet Establishment Year	Total_Sales			
▶	1998	204522.26			
	2000	131809.02			
	2010	132113.37			
	2011	78131.56			
	2012	130476.86			
	2015	130942.78			
	2017	133103.91			
	2020	129103.96			
	2022	131477.77			

## 5. Percentage of Sales by Outlet Size:

Objective: Analyze the correlation between outlet size and total sales.

```
-- 5. Percentage of Sales by Outlet Size:  
SELECT * FROM blinkit_data;  
SELECT `Outlet Size`,  
ROUND(SUM(`Total Sales`),2) AS Total_Sales,  
ROUND((SUM(`Total Sales`) * 100 ) / (SELECT SUM(`Total Sales`) FROM blinkit_data),2) AS Total_Percentage  
FROM blinkit_data  
GROUP BY `Outlet Size`;
```

Result Grid			
	Outlet Size	Total_Sales	Total_Percentage
▶	Medium	507895.73	42.27
	Small	444794.17	37.01
	High	248991.58	20.72

## 6. Sales by Outlet Location:

Objective: Assess the geographic distribution of sales across different locations.

```
-- 6. Sales by Outlet Location:  
SELECT * FROM blinkit_data;  
SELECT `Outlet Type`,  
CAST(SUM(`Total Sales`) AS DECIMAL (12,2)) AS Total_Sales  
FROM blinkit_data  
GROUP BY `Outlet Type`;
```

Result Grid		
	Outlet Type	Total_Sales
▶	Supermarket Type1	787549.89
	Supermarket Type2	131477.77
	Grocery Store	151939.15
	Supermarket Type3	130714.67

## 7. All Metrics by Outlet Type:

Objective: Provide a comprehensive view of all key metrics (Total Sales, Average Sales, Number of Items, Average Rating) broken down by different outlet types.

```

SELECT * FROM blinkit_data;
SELECT `Outlet type`,
CAST(SUM(`Total Sales`) AS DECIMAL (12,2)) AS Total_Sales,
CAST(AVG(`Total Sales`) AS DECIMAL (12,2)) AS Average_Sales,
COUNT(*) AS No_of_Items,
CAST(AVG(`Rating`) AS DECIMAL (12,2)) AS Average_Rating
FROM blinkit_data
GROUP BY `Outlet Type`;

```

Result Grid    Filter Rows: <input type="text"/> Export:  Wrap Cell Content:					
	Outlet type	Total_Sales	Average_Sales	No_of_Items	Average_Rating
▶	Supermarket Type1	787549.89	141.21	5577	3.96
	Supermarket Type2	131477.77	141.68	928	3.97
	Grocery Store	151939.15	140.29	1083	3.99
	Supermarket Type3	130714.67	139.80	935	3.95