Blink It Analysis

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 and visualizations in Power BI.

KPI's Requirements

1. **Total Sales**: The overall revenue generated from all items sold.
2. **Average Sales**: The average revenue per sale.
3. **Number of Items**: The total count of different items sold.
4. **Average Rating**: The average customer rating for items sold.

By : SHAIKH SOHEL

To See All Imported Data:-

```
Select * From  BLINKIT;
```

Data Cleaning:-

DATA CLEANING (Humanized Version)

To make sure our analysis is accurate and consistent, we need to clean the Item_Fat_Content field.
Right now, the dataset contains multiple variations of the same category — for example, "LF", "low fat", and "Low Fat" all mean the same thing. These inconsistencies can create problems in reporting, aggregations, and filtering.

By standardizing these values, we improve the overall data quality, reduce confusion, and make our insights more reliable.

SQL Query Used for Cleaning :-

```
UPDATE BLINKIT
SET  Item_Fat_Content =
CASE
WHEN Item_Fat_Content IN ('low fat', 'LF') THEN 'Low Fat'
WHEN Item_Fat_Content = 'reg' THEN 'Regular'
ELSE
Item_Fat_Content

END;
```

After executing this query the item_Fat_Content column will be cleaned.

A.KPI'S:-

1)Total Sales:- The overall revenue generated from all items sold

```
SELECT CAST(SUM(Total_Sales)/1000000 AS DECIMAL(10,2))AS
Total_Overall_Sales FROM BLINKIT;
```

TOTAL_OVERALL_SALES
1.20

2)Average Sales:- The average revenue per sale.

```
SELECT CAST (AVG(Total_Sales) AS SIGNED ) AS Average_allover_Sales
FROM  BLINKIT;
```

Average_allover_Sales
141

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

```
SELECT COUNT(item_identifier) AS no_of_items FROM BLINKIT;
```

NO_Of_Items
8523

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

```
SELECT CAST(AVG(rating)AS DECIMAL(10,1)) AS AVG_OVERALL_RATING FROM
BLINKIT;
```

AVG_OVERALL_RATING
4.0

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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.
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.
3. **Total Sales by Outlet Establishment**:
   - Objective: Evaluate how the age or type of outlet establishment influences total sales.

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1)TOTAL SALES BY FAT CONTENT:-

```
SELECT Item_Fat_Content , CAST(SUM(TOTAL_SALES)AS DECIMAL(10,2)) AS
TOTAL_OVERALL_SALES
FROM BLINKIT
GROUP BY ITEM_FAT_CONTENT;
```

ITEM_FAT_CONTENT	TOTAL_OVERALL_SALES
Regular	425362.08
Low Fat	776320.22

2)TOTAL SALES BY ITEM TYPE:-

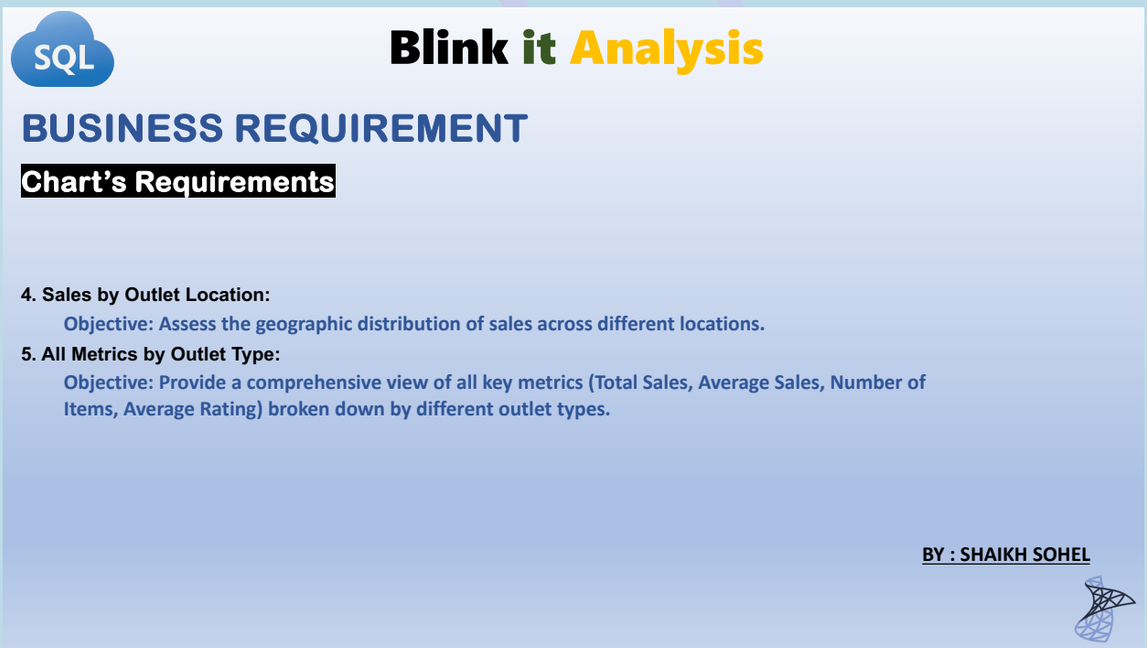
```
SELECT Item_Type, CAST (SUM(total_sales) AS SIGNED)AS Total_Overall_Sales
FROM BLINKIT
GROUP BY Item_Type
ORDER BY Total_Overall_Sales DESC;
```

Item_Type	Total_Overall_Sal...
Fruits and Vegetables	178124
Snack Foods	175434
Household	135977
Frozen Foods	118559
Dairy	101277
Canned	90707
Baking Goods	81895
Health and Hygiene	68026
Meat	59450
Soft Drinks	58514
Breads	35379
Hard Drinks	29335
Others	22452
Starchy Foods	21880
Breakfast	15597
Seafood	9078

3)TOTAL SALES BY OUTLET ESTABLISHMENT:-

```
SELECT Outlet_Est_Year ,CAST(SUM(TOTAL_SALES)AS SIGNED)AS
TOTAL_OVERALL_SALES
FROM BLINKIT
GROUP BY Outlet_Est_Year
ORDER BY TOTAL_OVERALL_SALES DESC;
```

OUTLET_EST_YEAR	TOTAL_OVERALL_SALES
1998	204522
2017	133104
2010	132114
2000	131809
2022	131478
2015	130943
2012	130477
2020	129104
2011	78132



4) SALES BY OUTLET LOCATION:-

```
SELECT Outlet_Location_Type,CAST(SUM(TOTAL_SALES) AS SIGNED) AS
TOTAL_OVERALL_SALES
FROM BLINKIT
GROUP BY Outlet_Location_Type;
```

OUTLET_LOCATION_TYPE	TOTAL_OVERALL_SALES
Tier 1	336398
Tier 3	472133
Tier 2	393151

5)ALL METRICS BY OUTLET TYPE :-

```
SELECT OUTLET_TYPE,
CAST(SUM(TOTAL_SALES) AS DECIMAL(10,2)) AS TOTAL_OVERALL_SALES,
CAST(AVG(TOTAL_SALES) AS SIGNED)AS AVG_OVERALL_SALES,
COUNT(*) AS NO_OF_ITEMS,
CAST(AVG(RATING) AS DECIMAL(10,1)) AS AVG_OVERALL_RATING
FROM BLINKIT
GROUP BY OUTLET_TYPE;
```

OUTLET_TYPE	TOTAL_OVERALL_SALES	AVG_OVERALL_SALES	NO_OF_ITEMS	AVG_OVERALL_RATING
Supermarket Type1	787550.42	141	5577	4.0
Supermarket Type2	131477.89	142	928	4.0
Grocery Store	151939.25	140	1083	4.0
Supermarket Type3	130714.74	140	935	3.9

CONCLUSION:-Z

This SQL project helped uncover meaningful patterns in Blinkit's sales and product performance across different outlet types. By cleaning and standardizing the data, we removed inconsistencies that could have influenced the results. After that, analyzing KPIs such as total sales, average sales, number of items, and customer ratings made it easier to compare how each outlet performs.

Overall, the project shows that structured data cleaning and SQL-based analysis can turn raw, messy data into clear insights that support better business decisions. It provides a solid foundation for understanding customer behavior, improving inventory planning, and optimizing outlet performance.