SQL

MySQL

BLINKIT SALES DATA ANALYSIS

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Role: Data Analyst

Objective

To analyze sales performance, customer ratings, and product distribution within Blinkit's dataset, uncovering key patterns and improvement areas using SQL-based KPIs and provide oppertunities for Power BI visualizations.

DATASET OVERVIEW

Number of Records: 8523

Item_Fat_Content	Item_Identifier	Item_Type	Outlet_Establishment_Year	Outlet_Identifier	Outlet_Location_Type	Outlet_Size	Outlet_Type	Item_Visibility	Item_Weight	Total_Sales	Rating
Regular	FDX32	Fruits and Vegetables	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.100014	15.1	145.479	5
Regular	FDR28	Frozen Foods	2010	OUT046	Tier 1	Small	Supermarket Type1	0.0258965	13.85	165.021	5
Regular	FDL50	Canned	2000	OUT013	Tier 3	High	Supermarket Type1	0.0422779	12.15	126.505	5
Regular	FDB57	Fruits and Vegetables	2017	OUT035	Tier 2	Small	Supermarket Type1	0.0188015	20.25	222.177	5
Regular	FDZ07	Fruits and Vegetables	1998	OUT027	Tier 3	Medium	Supermarket Type3	0	NULL	60.2194	5
Regular	FDC40	Dairy	2020	OUT017	Tier 2	Medium	Supermarket Type1	0.0654319	16	76.1986	5
Regular	FDO19	Fruits and Vegetables	1998	OUT027	Tier 3	Medium	Supermarket Type3	0.0165163	NULL	47.4034	5
Regular	FDL25	Breakfast	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.131128	6.92	93.1804	5
Regular	FDO45	Snack Foods	2015	OUT045	Tier 2	Medium	Supermarket Type1	0.0380297	13.15	88.6856	5
Regular	FDP51	Meat	2010	OUT046	Tier 1	Small	Supermarket Type1	0.085275	13.85	119.612	5
Regular	FDT50	Dairy	2000	OUT013	Tier 3	High	Supermarket Type1	0.108149	6.75	95.6752	5
Regular	FDQ08	Fruits and Vegetables	1998	OUT027	Tier 3	Medium	Supermarket Type3	0.0188387	NULL	62.9536	5
Regular	FDP01	Breakfast	2011	OUT010	Tier 3	Medium	Grocery Store	0.105995	20.75	150.568	5
Regular	FDU12	Baking Goods	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.0758688	15.5	261.757	5
Regular	FDZ47	Baking Goods	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.0794198	20.7	99.8042	5
Regular	FDO11	Breads	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.030312	8	247.409	5

Data Cleaning Summary

- Removed NULLs in Item_Weight
- Converted Item_Visibility & Total_Sales to float
- Ensured correct data types (e.g., INT, VARCHAR, DECIMAL)

Total Revenue

```sql
-- Total Sales: The overall revenue generated from all items sold.

SELECT
    ROUND(SUM(blinkit_data.Total_Sales), 2) AS total_revenue
FROM
    blinkit_data
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_revenue
1201681.48

Business Value: Measures customer engagement.

Total Items Sold

```sql
-- Number of Items: The total count of different items sold.

SELECT
    COUNT(Item_Type) AS total_items_sold
FROM
    blinkit_data
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_items_sold
8523

Average Rating

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

SELECT
    ROUND(AVG(Rating),2)
FROM
    blinkit_data
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	ROUND(AVG(Rating),2)
▶	3.96

Total Sales by Fat_Content

```sql
-- Total Sales by Fat Content:

SELECT
    blinkit_data.Item_Fat_Content,
    CAST(SUM(Total_sales) AS DECIMAL(10,2)) AS total_revenue
FROM
    blinkit_data
GROUP BY Item_Fat_Content
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Item_Fat_Content	total_revenue
Regular	425361.80
Low Fat	776319.68

Items Sold vary with Fat_Content

```sql
-- (Number of Items sold) vary with fat content.

SELECT
    Item_Fat_Content, COUNT(Item_Identifier) AS items_sold
FROM
    blinkit_data
GROUP BY Item_Fat_Content
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Item_Fat_Content	items_sold
Regular	3006
Low Fat	5517

Total Sales by Item Type

```sql
SELECT
    Item_Type,
    ROUND(SUM(Total_Sales), 3) AS total_revenue_by_ItemType
FROM
    blinkit_data
GROUP BY Item_Type
```

Item_Type	total_revenue_by_ItemType
Fruits and Vegetables	178124.081
Frozen Foods	118558.881
Canned	90706.727
Dairy	101276.459
Breakfast	15596.696
Snack Foods	175433.92
Meat	59449.864
Baking Goods	81894.736
Breads	35379.12
Starchy Foods	21880.027
Seafood	9077.87
Soft Drinks	58514.165
Health and Hygiene	68025.839
Household	135976.525
Hard Drinks	29334.677
Others	22451.892

Average Sales vary with Item Type

```sql
-- (Average Sales) vary with Item Type

SELECT
    Item_Type, ROUND(AVG(Total_Sales),2) AS avg_revenue_ItemType
FROM
    blinkit_data
GROUP BY Item_Type
```

Item_Type	avg_revenue_ItemType
Fruits and Vegetables	144.58
Frozen Foods	138.5
Canned	139.76
Dairy	148.5
Breakfast	141.79
Snack Foods	146.19
Meat	139.88
Baking Goods	126.38
Breads	140.95
Starchy Foods	147.84
Seafood	141.84
Soft Drinks	131.49
Health and Hygiene	130.82
Household	149.42
Hard Drinks	137.08
Others	132.85

Number of Items sold vary with Item Type

```sql
-- (Number of Items sold) vary with Item Type

SELECT
    Item_Type, COUNT(Item_Identifier) AS no_of_Items
FROM
    blinkit_data
GROUP BY Item_Type
```

Item_Type	no_of_Items
Fruits and Vegetables	1232
Frozen Foods	856
Canned	649
Dairy	682
Breakfast	110
Snack Foods	1200
Meat	425
Baking Goods	648
Breads	251
Starchy Foods	148
Seafood	64
Soft Drinks	445
Health and Hygiene	520
Household	910
Hard Drinks	214
Others	169

Average Rating vary with Item Type

```sql
-- (Average Rating) vary with Item Type

SELECT
    Item_Type, CAST(AVG(Rating) AS DECIMAL(10,2)) AS avg_rating_ItemType
FROM
    blinkit_data
GROUP BY Item_Type
```

Item_Type	avg_rating_ItemType
Fruits and Vegetables	3.94
Frozen Foods	3.96
Canned	3.99
Dairy	3.96
Breakfast	3.93
Snack Foods	3.95
Meat	4.00
Baking Goods	3.98
Breads	3.86
Starchy Foods	3.92
Seafood	3.92
Soft Drinks	3.91
Health and Hygiene	3.97
Household	4.00
Hard Drinks	3.87
Others	3.97

Fact Content by Outlet for Total Sales

```sql
-- Fat Content by Outlet for Total Sales: Compare total sales across different outlets segmented by fat content.

SELECT
    Outlet_Type,
    Outlet_Location_Type,
    Outlet_Size,
    Outlet_Identifier,
    Outlet_Establishment_Year,
    ROUND(SUM(CASE
                WHEN Item_Fat_Content = 'Low Fat' THEN Total_Sales
                ELSE 0
            END),
            2) AS Low_Fat_Sales,
    ROUND(SUM(CASE
                WHEN Item_Fat_Content = 'Regular' THEN Total_Sales
                ELSE 0
            END),
            2) AS Regular_Sales,
    ROUND(SUM(Total_Sales),2) as total_Sales
FROM
    blinkitanalysis.blinkit_data
GROUP BY Outlet_Type , Outlet_Location_Type , Outlet_Size , Outlet_Identifier , Outlet_Establishment_Year;
```

Outlet_Type	Outlet_Location_Type	Outlet_Size	Outlet_Identifier	Outlet_Establishment_Year	Low_Fat_Sales	Regular_Sales	total_Sa
Supermarket Type1	Tier 1	Medium	OUT049	2012	82416.06	48060.8	130476.
Supermarket Type1	Tier 1	Small	OUT046	2010	84603.32	47510.05	132113.
Supermarket Type1	Tier 3	High	OUT013	2000	86402.14	45406.87	131809.
Supermarket Type1	Tier 2	Small	OUT035	2017	86482.92	46620.99	133103.
Supermarket Type3	Tier 3	Medium	OUT027	1998	83774.41	46940.26	130714.
Supermarket Type1	Tier 2	Medium	OUT017	2020	10654.8	23271.07	33925.8
Supermarket Type1	Tier 2	Medium	OUT045	2015	40429.35	3693.08	44122.4
Grocery Store	Tier 3	Medium	OUT010	2011	36109.8	1068.31	37178.1
Grocery Store	Tier 1	Small	OUT019	1998	48028.54	25779.05	73807.5
Supermarket Type1	Tier 2	High	OUT045	2015	0	39556.22	39556.2
Supermarket Type1	Tier 2	High	OUT017	2020	24611.74	20444.48	45056.2
Grocery Store	Tier 3	High	OUT010	2011	11848.4	20721.72	32570.1
Supermarket Type2	Tier 3	Medium	OUT018	2022	84844.61	46633.17	131477.
Grocery Store	Tier 3	Small	OUT010	2011	3827.62	4555.71	8383.33
Supermarket Type1	Tier 2	Small	OUT017	2020	47680.5	2441.35	50121.8
Supermarket Type1	Tier 2	Small	OUT045	2015	44605.46	2658.66	47264.1

Total Sales by Outlet Establishment Year

```sql
SELECT
    Outlet_Establishment_Year,
    ROUND(SUM(Total_Sales), 3) AS total_revenue
FROM
    blinkit_data
GROUP BY Outlet_Establishment_Year
ORDER BY Outlet_Establishment_Year ASC
```

Outlet_Establishment_Year	total_revenue
1998	204522.257
2000	131809.016
2010	132113.37
2011	78131.564
2012	130476.86
2015	130942.778
2017	133103.907
2020	129103.956
2022	131477.772

Percentage of Sales by Outlet Size

```sql
SELECT
    Outlet_Size,
    ROUND(SUM(Total_Sales), 2) AS total_sales,
    ROUND(100 * SUM(Total_Sales) / (SELECT SUM(Total_Sales) FROM blinkitanalysis.blinkit_data), 2) AS sales_percentage
FROM
    blinkitanalysis.blinkit_data
GROUP BY
    Outlet_Size;
```

Outlet_Size	total_sales	sales_percentage
Medium	507895.73	42.27
Small	444794.17	37.01
High	248991.58	20.72

Sales by Outlet Location

```sql
SELECT
    Outlet_Location_Type,
    ROUND(SUM(Total_Sales), 2) AS total_sales
FROM
    blinkit_data
GROUP BY Outlet_Location_Type
```

Outlet_Location_Type	total_sales
Tier 1	336397.81
Tier 3	472133.03
Tier 2	393150.64

Total Sales broken down by different outlet types

```sql
SELECT
    Outlet_Type, ROUND(SUM(Total_Sales), 2) AS total_sales
FROM
    blinkit_data
GROUP BY Outlet_Type
```

Outlet_Type	total_sales
Supermarket Type1	787549.89
Supermarket Type3	130714.67
Grocery Store	151939.15
Supermarket Type2	131477.77

Average Sales broken down by different outlet types

```sql
SELECT
    Outlet_Type, ROUND(AVG(Total_Sales), 2) AS avg_sales
FROM
    blinkit_data
GROUP BY Outlet_Type
```

Outlet_Type	avg_sales
Supermarket Type1	141.21
Supermarket Type3	139.8
Grocery Store	140.29
Supermarket Type2	141.68

Average Rating broken down by different outlet types

```sql
SELECT
    Outlet_Type, ROUND(AVG(Rating), 2) AS avg_rating
FROM
    blinkit_data
GROUP BY Outlet_Type
```

Outlet_Type	avg_rating
Supermarket Type1	3.95
Supermarket Type3	3.95
Grocery Store	3.98
Supermarket Type2	3.95

Number of Items broken down by different outlet types

```sql
SELECT
    Outlet_Type, COUNT(Item_Identifier) AS NumberOfItems
FROM
    blinkit_data
GROUP BY Outlet_Type
```

Outlet_Type	NumberOfItems
Supermarket Type1	5577
Supermarket Type3	935
Grocery Store	1083
Supermarket Type2	928

Insights & Observations

Low Fat items generated more total sales than Regular items, indicating a growing preference for healthier products.

Snack Foods and Fruits & Vegetables were among the top-selling item types.

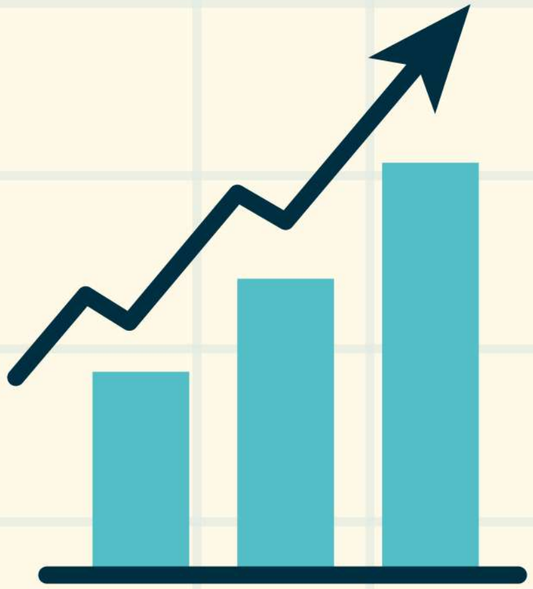
Outlets in Tier 1 cities showed significantly higher sales than those in Tier 2 and Tier 3.

Medium-sized outlets contributed the highest percentage of total sales, followed by large outlets.

Outlets established after 2000 showed steady growth in performance, suggesting newer outlets are performing competitively.

The average rating across all products is around 4.0, reflecting overall customer satisfaction.

Business Recommendations



01 Increase inventory and promotional focus on **Low Fat product lines**, especially in Tier 1 locations.

02 Expand high-performing **item categories** like Snack Foods and Fruits & Vegetables in underperforming locations.

03 Invest in **medium-sized outlets** across emerging cities, as they show better return on sales performance.

04 Improve product visibility and customer engagement in **Tier 2** and **Tier 3** cities using location-specific campaigns.

05 Conduct further **product-level analysis** to identify low-rated items that may need quality or packaging improvement.

THANK YOU