SQL PROJECT

ON

BLINKIT

DATA ANALYSIS.

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A. DATA CLEANING

QUERY:

```
SELECT* FROM BlinkIt_Grocery_Data

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

RESULT:

```
(8523 rows affected)

Completion time: 2025-05-11T11:47:26.5330222+01:00
```

QUERY TO CONFIRM CLEANED DATA

```
SELECT DISTINCT(Item_Fat_Content) FROM BlinkIt_Grocery_Data;
```

RESULT:

	Item_Fat_Content
1	Low Fat
2	Regular

B. PROJECT REQUIREMENTS

I. **KPI REQUIREMENTS** – Total sales, Average Sales, Number of items, Average Ratings.

QUERY:

```
SELECT CAST(SUM(Sales)/1000000 as DECIMAL(10,2)) as Total_Sales_Millions
FROM BlinkIt_Grocery_Data

SELECT CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sales
FROM BlinkIt_Grocery_Data

SELECT COUNT(*)AS No_of_Items FROM BlinkIt_Grocery_Data
 SELECT CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating FROM BlinkIt_Grocery_Data
```

RESULTS:

	Total_Sales_Millions
1	1.20

	Avg_Sales
1	141.0

	No_of_Items
1	8523

	Avg_Rating
1	3.97

II. GRANULAR REQUIREMENTS

- **TOTAL SALES BY FAT CONTENT:** Analyzing the impact of fat content on total sales.

QUERY:

```sql
SELECT Item_Fat_Content, Cast(SUM(Sales) as decimal(10,2)) as Total_Sales
FROM BlinkIt_Grocery_Data
GROUP BY Item_Fat_Content
ORDER BY Total_Sales DESC

SELECT Item_Fat_Content,
    CONCAT(Cast(SUM(Sales)/1000 as decimal(10,2)),'K') as Total_Sales_Thousands,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sale,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*)AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Item_Fat_Content
ORDER BY Total_Sales_Thousands DESC
```

RESULTS:

	Item_Fat_Content	Total_Sales
1	Low Fat	776319.69
2	Regular	425361.80

	Item_Fat_Content	Total_Sales_Thousands	Avg_Sale	Avg_Rating
1	Low Fat	776.32K	140.7	3.97
2	Regular	425.36K	141.5	3.97

- **TOTAL SALES BY ITEM TYPE:** Identify the performance of different items in terms of total sales.

QUERY:

```sql
SELECT TOP 5 Item_Type,
    Cast(SUM(Sales) as decimal(10,2)) as Total_Sales,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sale,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*)AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Item_Type
ORDER BY Total_Sales DESC
```

RESULTS:

	Item_Type	Total_Sales	Avg_Sale	Avg_Rating	No_of_Items
1	Fruits and Vegetables	178124.08	144.6	3.96	1232
2	Snack Foods	175433.92	146.2	3.95	1200
3	Household	135976.53	149.4	4.00	910
4	Frozen Foods	118558.88	138.5	3.97	856
5	Dairy	101276.46	148.5	3.97	682

- **FAT CONTENT BY OUTLET FOR TOTAL SALES:** Compare total sales across different outlets segmented by fat content.

QUERY:

```
SELECT Outlet_Location_Type, Item_Fat_Content,
    Cast(SUM(Sales) as decimal(10,2)) as Total_Sales,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sale,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*)AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Outlet_Location_Type, Item_Fat_Content
ORDER BY Total_Sales ASC
```

RESULTS:

	Outlet_Location_Type	Item_Fat_Content	Total_Sales	Avg_Sale
1	Tier 1	Regular	121349.90	143.1
2	Tier 2	Regular	138685.87	142.1
3	Tier 3	Regular	165326.04	139.9
4	Tier 1	Low Fat	215047.91	139.6
5	Tier 2	Low Fat	254464.78	140.7
6	Tier 3	Low Fat	306807.00	141.5

QUERY:

```
SELECT Outlet_Location_Type,
        ISNULL([Low Fat],0) AS Low_Fat,
        ISNULL([Regular],0) AS Regular
FROM
(
    SELECT Outlet_Location_Type, Item_Fat_Content,
        CAST(SUM(Sales) as DECIMAL(10,2)) as Total_Sales
        FROM BlinkIt_Grocery_Data
        GROUP BY Outlet_Location_Type, Item_Fat_Content
) AS SourceTable
PIVOT
(
        SUM(Total_Sales)
        FOR Item_Fat_Content IN ([Low Fat],[Regular])
) AS PivotTable
ORDER BY Outlet_Location_Type;
```

RESULTS:

	Outlet_Location_Type	Low_Fat	Regular
1	Tier 1	215047.91	121349.90
2	Tier 2	254464.78	138685.87
3	Tier 3	306807.00	165326.04

- **TOTAL SALES BY OUTLET ESTABLISHMENT**

QUERY:

```
SELECT Outlet_Establishment_Year,
```

```
    Cast(SUM(Sales) as decimal(10,2)) as Total_Sales,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sales,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*) AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Outlet_Establishment_Year
ORDER BY Total_Sales DESC
```

RESULTS:

	Outlet_Establishment_Year	Total_Sales	Avg_Sales	Avg_Rating
1	2018	204522.26	139.8	3.97
2	2017	133103.91	143.1	3.94
3	2016	132113.37	142.1	3.96
4	2014	131809.02	141.4	3.95
5	2022	131477.78	141.7	3.97
6	2015	130942.78	141.0	3.96
7	2012	130476.86	140.3	3.99
8	2020	129103.96	139.4	3.98
9	2011	78131.57	140.8	3.98

- **PERCENTAGE OF SALES BY OUTLET SIZE**

QUERY:

```
SELECT Outlet_Size,
    CAST(SUM(Sales) as DECIMAL(10,2)) AS Total_Sales,
    CAST((SUM(Sales)* 100/SUM(SUM(Sales)) OVER()) AS decimal(10,2)) AS
      Sales_Percentage
FROM BlinkIt_Grocery_Data
GROUP BY Outlet_Size
ORDER BY Total_Sales DESC;
```

RESULT:

	Outlet_Size	Total_Sales	Sales_Percentage
1	Medium	507895.74	42.27
2	Small	444794.17	37.01
3	High	248991.59	20.72

- **SALES BY OULET LOCATION**

QUERY:

```
SELECT Outlet_Location_Type,
    Cast(SUM(Sales) as decimal(10,2)) as Total_Sales,
    CAST((SUM(Sales)* 100/SUM(SUM(Sales)) OVER()) AS decimal(10,2)) AS
      Sales_Percentage,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sales,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*) AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Outlet_Location_Type
ORDER BY Total_Sales DESC
```

RESULT:

	Outlet_Location_Type	Total_Sales	Sales_Percentage	Avg_Sales
1	Tier 3	472133.03	39.29	140.9
2	Tier 2	393150.65	32.72	141.2
3	Tier 1	336397.81	27.99	140.9

- **ALL METRICS BY OUTLET TYPE**

QUERY:

```sql
SELECT Outlet_Type,
    Cast(SUM(Sales) as decimal(10,2)) as Total_Sales,
    CAST((SUM(Sales)* 100/SUM(SUM(Sales)) OVER()) AS decimal(10,2)) AS
      Sales_Percentage,
    CAST(AVG(Sales) as DECIMAL(10,1)) as Avg_Sales,
    CAST(AVG(Rating) AS DECIMAL(10,2)) AS Avg_Rating,
    COUNT(*) AS No_of_Items
FROM BlinkIt_Grocery_Data
GROUP BY Outlet_Type
ORDER BY Total_Sales DESC
```

RESULT:

	Outlet_Type	Total_Sales	Sales_Percentage	Avg_Sales	Avg_Rating
1	Supermarket Type1	787549.89	65.54	141.2	3.96
2	Grocery Store	151939.15	12.64	140.3	3.99
3	Supermarket Type2	131477.78	10.94	141.7	3.97
4	Supermarket Type3	130714.67	10.88	139.8	3.95