Grocery Store Data (SQL Data Analysis)

Source: Kaggle

Grocery Data (Real Canadian Superstore Grocery Product Data)

Description:

This dataset provides a comprehensive collection of grocery product information from Real Canadian Superstore, a prominent supermarket chain in Canada. The dataset encompasses a wide range of grocery items, including fresh vegetables, fruits, packaged goods, and more.

Content:

The dataset contains essential product details, including:

- **Product Name**: The name or title of the grocery product.
- **Current Price**: The current price of the product.
- **Previous Price**: The previous price of the product (if applicable).
- **Price Per Each product**: The price per unit or each item.
- **Category**: The category or department to which the product belongs.
- **Product ID**: A unique identifier for each product.
- **Product URL**: A direct link to the product's webpage on the Real Canadian Superstore website.
- **Quantity**: The quantity or amount of the product.
- **Units**: The units of measurement for the product (e.g., ea, kg, lb).
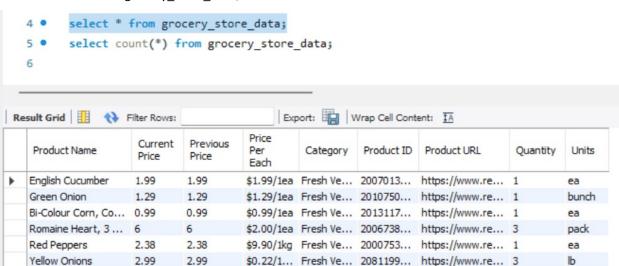
Use Cases:

This dataset is a valuable resource for various data-driven applications, including:

- Price Comparison: Analyzing price variations between current and previous prices.
- Market Analysis: Studying customer purchasing patterns.
- Inventory Management: Optimizing inventory levels based on product popularity.
- Data Visualization: Creating visualizations to explore grocery product trends.
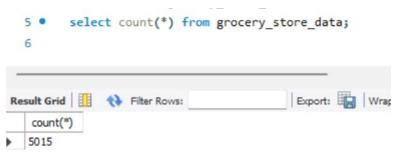
SQL Queries: -

- select * from grocery_store_data;

```
4 •   select * from grocery_store_data;
5 •   select count(*) from grocery_store_data;
6
```

	Product Name	Current Price	Previous Price	Price Per Each	Category	Product ID	Product URL	Quantity	Units
▶	English Cucumber	1.99	1.99	$1.99/1ea	Fresh Ve...	2007013...	https://www.re...	1	ea
	Green Onion	1.29	1.29	$1.29/1ea	Fresh Ve...	2010750...	https://www.re...	1	bunch
	Bi-Colour Corn, Co...	0.99	0.99	$0.99/1ea	Fresh Ve...	2013117...	https://www.re...	1	ea
	Romaine Heart, 3 ...	6	6	$2.00/1ea	Fresh Ve...	2006738...	https://www.re...	3	pack
	Red Peppers	2.38	2.38	$9.90/1kg	Fresh Ve...	2000753...	https://www.re...	1	ea
	Yellow Onions	2.99	2.99	$0.22/1...	Fresh Ve...	2081199...	https://www.re...	3	lb
	Celery Stalks	3.49	3.49	$3.49/1ea	Fresh Ve...	2016311...	https://www.re...	1	ea

- select count (*) from grocery_store_data;

```
5 •   select count(*) from grocery_store_data;
6
```

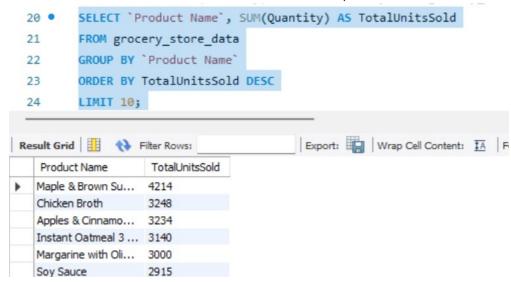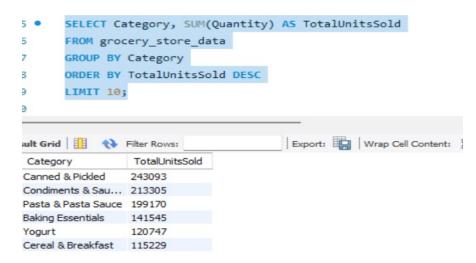|	count(*)
▶	5015

- select *from grocery_store_data where Category = 'Fresh Fruits';
- select count(*) from grocery_store_data where Category = 'Fresh Fruits';
- select * from grocery_store_data where Category= "Fresh Vegetables" or Category= "Rice";
- select *from grocery_store_data order by Quantity ASC;
- SELECT * FROM grocery_store_data WHERE `Product Name` LIKE 'B%';
- SELECT `Product ID`, `Product Name`, `Previous Price`, `Current Price`, (`Previous Price` - `Current Price`) AS 'PriceDifference'
- FROM grocery_store_data;
- select `Product Name`, `Previous Price`, `Current Price` From grocery_store_data where `Previous Price` > `Current Price`;
- select count(`Product Name`), count(`Previous Price`), count(`Current Price`) From grocery_store_data where `Previous Price` > `Current Price`;
- select `Product Name`, `Quantity` FROM grocery_store_data WHERE `Quantity` > 100;

- select count(`Product Name`), count(`Quantity`) FROM grocery_store_data WHERE `Quantity` > 100;

- SELECT Units, COUNT(*) AS TotalProducts FROM grocery_store_data GROUP BY Units ORDER BY TotalProducts;
- SELECT `Product Name`, `Current Price`, Category FROM grocery_store_data WHERE `Product Name` LIKE '%C%';
- SELECT Category, COUNT(*) AS TotalProducts FROM grocery_store_data GROUP BY Category;
- SELECT Units, SUM(Quantity) AS TotalQuantity FROM grocery_store_data GROUP BY Units;

- SELECT `Product Name`, SUM(Quantity) AS TotalUnitsSold FROM grocery_store_data GROUP BY `Product Name` ORDER BY TotalUnitsSold DESC LIMIT 10;
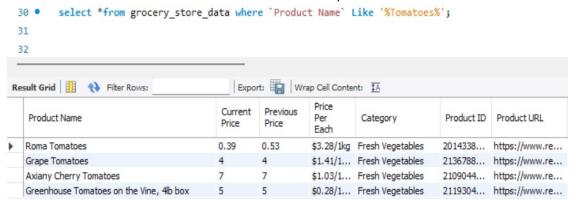
```
20  ●    SELECT `Product Name`, SUM(Quantity) AS TotalUnitsSold
21       FROM grocery_store_data
22       GROUP BY `Product Name`
23       ORDER BY TotalUnitsSold DESC
24       LIMIT 10;
```

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

Product Name	TotalUnitsSold
Maple & Brown Su...	4214
Chicken Broth	3248
Apples & Cinnamo...	3234
Instant Oatmeal 3 ...	3140
Margarine with Oli...	3000
Soy Sauce	2915

Here, **Maple & Brown Sugar Flavor Instant oatmeal** is the highest sold product.

- SELECT Category, SUM(Quantity) AS TotalUnitsSold FROM grocery_store_data GROUP BY Category ORDER BY TotalUnitsSold DESC LIMIT 10;

```
5  ●    SELECT Category, SUM(Quantity) AS TotalUnitsSold
5       FROM grocery_store_data
7       GROUP BY Category
8       ORDER BY TotalUnitsSold DESC
9       LIMIT 10;
9
```

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

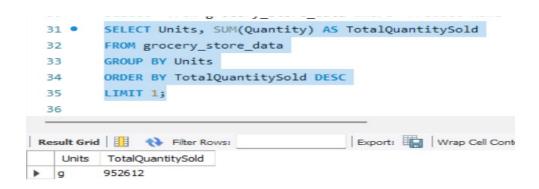| Category	TotalUnitsSold
Canned & Pickled	243093
Condiments & Sau...	213305
Pasta & Pasta Sauce	199170
Baking Essentials	141545
Yogurt	120747
Cereal & Breakfast	115229

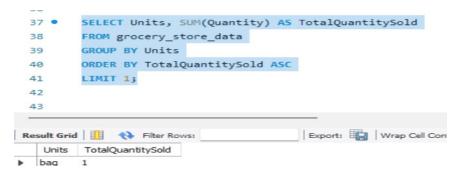Total Units sold were highest in the **Canned & Pickled category**.

- select *from grocery_store_data where `Product Name` Like '%Tomatoes%'; (Gives a list of Product Names which have Tomatoes included in them.)

```
30 •    select *from grocery_store_data where `Product Name` Like '%Tomatoes%';
31
32
```

Product Name	Current Price	Previous Price	Price Per Each	Category	Product ID	Product URL
Roma Tomatoes	0.39	0.53	$3.28/1kg	Fresh Vegetables	2014338...	https://www.re...
Grape Tomatoes	4	4	$1.41/1...	Fresh Vegetables	2136788...	https://www.re...
Axiany Cherry Tomatoes	7	7	$1.03/1...	Fresh Vegetables	2109044...	https://www.re...
Greenhouse Tomatoes on the Vine, 4lb box	5	5	$0.28/1...	Fresh Vegetables	2119304...	https://www.re...

- SELECT Units, SUM(Quantity) AS TotalQuantitySold FROM grocery_store_data GROUP BY Units

  ORDER BY TotalQuantitySold DESC LIMIT 1; (Gives max quantity of measurement based on Total Quantity sold)

```
31 •    SELECT Units, SUM(Quantity) AS TotalQuantitySold
32      FROM grocery_store_data
33      GROUP BY Units
34      ORDER BY TotalQuantitySold DESC
35      LIMIT 1;
36
```

Units	TotalQuantitySold
g	952612

- SELECT Units, SUM(Quantity) AS TotalQuantitySoldFROM grocery_store_data

  GROUP BY Units ORDER BY TotalQuantitySold ASC LIMIT 1; (Gives least quantity of measurement based on Total Quantity sold)

```
37 •    SELECT Units, SUM(Quantity) AS TotalQuantitySold
38      FROM grocery_store_data
39      GROUP BY Units
40      ORDER BY TotalQuantitySold ASC
41      LIMIT 1;
42
43
```

Units	TotalQuantitySold
bag	1

Observations: -

- This Grocery store has various categories, and each category has its own set of products.
- Total Units sold were highest in the Canned & Pickled category.
- Here, Maple & Brown Sugar Flavor Instant oatmeal is the highest selling product.

Recommendations: -

- Explore new product categories to attract a wider customer base.
- Ensure ample stock for the high-selling Canned & Pickled category.
- Market the Maple & Brown Sugar Flavor Instant oatmeal for increased sales.
- Gather customer feedback to tailor offerings and improve satisfaction.