CREATIVE SQL PROJECT

Project on ice-cream products

Hello!

My name is Unnati Awaghad.

In this project I have utilized SQL queries to solve questions that were related to ice-cream sales.

Introduction

The Ice cream Retail Database project is designed to streamline the management of an ice cream shop's operations by implementing a comprehensive and efficient database system. The Project focuses on key business areas, incuding product management , customer relations, order processing , and inventory control.

Q1. List All Products.

Retrieve all product details, including name, description, price, category, and stock quantity.

```
SELECT ProductID, ProductName, Description, Price, Category,
StockQuantity
FROM Products;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ProductID	ProductName	Description	Price	Category	StockQu
1	Vanilla Ice Cream	Creamy vanilla ice cream	5.99	Ice Cream	100
2	Chocolate Ice Cream	Rich chocolate ice cream	6.49	Ice Cream	80
3	Strawberry Ice Cream	Sweet strawberry ice cream	6.29	Ice Cream	90
4	Mint Chocolate Chip Ice Cream	Minty ice cream with chocolate chips	6.99	Ice Cream	70
5	Vanilla Ice Cream	Creamy vanilla ice cream made with real vanilla ...	5.99	Ice Cream	100
6	Chocolate Ice Cream	Rich chocolate ice cream with a smooth, velvety...	6.49	Ice Cream	80
7	Strawberry Ice Cream	Sweet strawberry ice cream with chunks of real ...	6.29	Ice Cream	90
8	Mint Chocolate Chip Ice Cream	Minty ice cream with dark chocolate chips	6.99	Ice Cream	70
9	Cookies and Cream Ice Cream	Ice cream with crushed cookies for a delightful c...	7.49	Ice Cream	85
10	Rocky Road Ice Cream	Chocolate ice cream with marshmallows and nuts	7.99	Ice Cream	60
11	Pistachio Ice Cream	Smooth pistachio ice cream with roasted pistachios	7.59	Ice Cream	75
12	Butter Pecan Ice Cream	Rich ice cream with buttery pecans	6.99	Ice Cream	65
13	Mango Sorbet	Refreshing mango sorbet made with ripe mangoes	5.49	Sorbet	50
14	Lemon Sorbet	Tart lemon sorbet for a refreshing treat	5.49	Sorbet	55
NULL	NULL	NULL	NULL	NULL	NULL

Q2. List Products by Category.

Retrieve products belonging to a specific category, such as "Ice Cream."

```
SELECT ProductID, ProductName, Price, StockQuantity
FROM Products
WHERE Category = 'Ice Cream';
```

ProductID	ProductName	Price	StockQuantity
1	Vanilla Ice Cream	7.49	100
2	Chocolate Ice Cream	6.49	80
3	Strawberry Ice Cream	6.29	90
4	Mint Chocolate Chip Ice Cream	6.99	70
5	Vanilla Ice Cream	5.99	100
6	Chocolate Ice Cream	6.49	80
7	Strawberry Ice Cream	6.29	90
8	Mint Chocolate Chip Ice Cream	6.99	70
9	Cookies and Cream Ice Cream	7.49	85
10	Rocky Road Ice Cream	7.99	60
11	Pistachio Ice Cream	7.59	75
12	Butter Pecan Ice Cream	6.99	65

Q3. Find Products with Price Greater Than a Specific Amount.

Retrieve products that have a price greater than a specified amount.

```
SELECT ProductID, ProductName, Price
FROM Products
WHERE Price > 6.00;
```

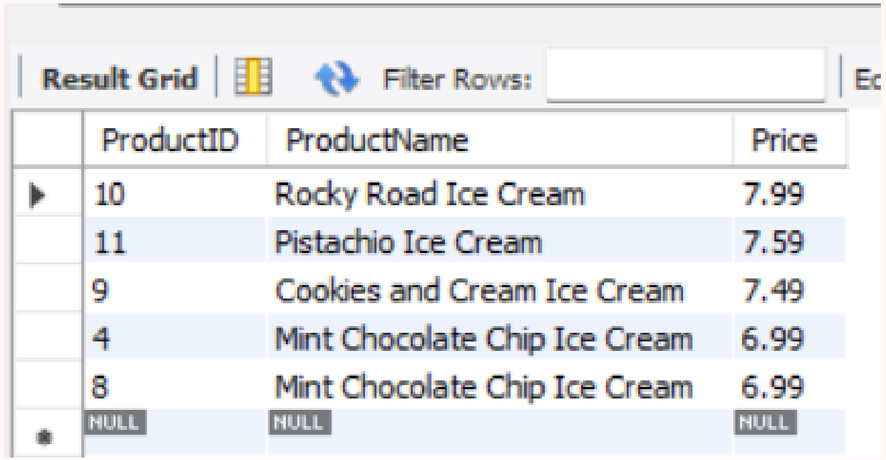
Result Grid | Filter Rows:

ProductID	ProductName	Price
1	Vanilla Ice Cream	7.49
2	Chocolate Ice Cream	6.49
3	Strawberry Ice Cream	6.29
4	Mint Chocolate Chip Ice Cream	6.99
6	Chocolate Ice Cream	6.49
7	Strawberry Ice Cream	6.29
8	Mint Chocolate Chip Ice Cream	6.99
9	Cookies and Cream Ice Cream	7.49
10	Rocky Road Ice Cream	7.99
11	Pistachio Ice Cream	7.59
12	Butter Pecan Ice Cream	6.99

Q4. Find Top 5 Most Expensive Products.

Retrieve the top 5 most expensive products.

```
SELECT ProductID, ProductName, Price
FROM Products
ORDER BY Price DESC
LIMIT 5;
```



Result Grid | Filter Rows:

ProductID	ProductName	Price
10	Rocky Road Ice Cream	7.99
11	Pistachio Ice Cream	7.59
9	Cookies and Cream Ice Cream	7.49
4	Mint Chocolate Chip Ice Cream	6.99
8	Mint Chocolate Chip Ice Cream	6.99
NULL	NULL	NULL

Q5. Calculate Total Stock Value for Each Product.

Calculate the total stock value (price multiplied by quantity) for each product.

```
SELECT ProductID, ProductName, (Price *
StockQuantity) AS TotalStockValue
FROM Products;
```

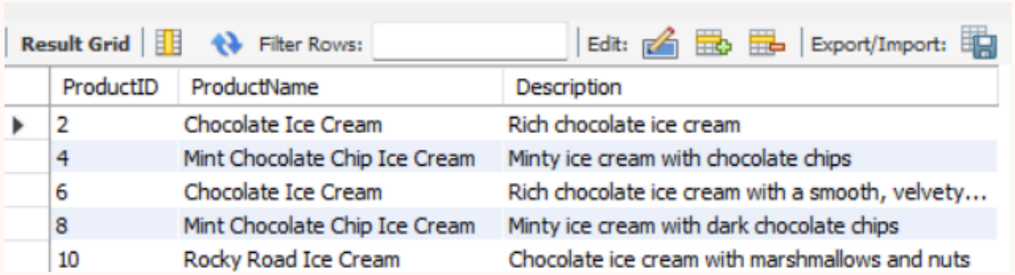
Result Grid | Filter Rows: | Export:

ProductID	ProductName	TotalStockValue
1	Vanilla Ice Cream	749.00
2	Chocolate Ice Cream	519.20
3	Strawberry Ice Cream	566.10
4	Mint Chocolate Chip Ice Cream	489.30
5	Vanilla Ice Cream	599.00
6	Chocolate Ice Cream	519.20
7	Strawberry Ice Cream	566.10
8	Mint Chocolate Chip Ice Cream	489.30
9	Cookies and Cream Ice Cream	636.65
10	Rocky Road Ice Cream	479.40
11	Pistachio Ice Cream	569.25
12	Butter Pecan Ice Cream	454.35

Q6. List Products Containing a Specific Keyword in the Description.

Find products that have a specific keyword in their description, such as "chocolate."

```
SELECT ProductID, ProductName, Description
FROM Products
WHERE Description LIKE '%chocolate%';
```



Result Grid | Filter Rows: | Edit: | Export/Import:

ProductID	ProductName	Description
2	Chocolate Ice Cream	Rich chocolate ice cream
4	Mint Chocolate Chip Ice Cream	Minty ice cream with chocolate chips
6	Chocolate Ice Cream	Rich chocolate ice cream with a smooth, velvety...
8	Mint Chocolate Chip Ice Cream	Minty ice cream with dark chocolate chips
10	Rocky Road Ice Cream	Chocolate ice cream with marshmallows and nuts

Q7. Retrieve Products with Stock Level Between Two Values.

Retrieve products that have a stock level within a specific range.

```
SELECT ProductID, ProductName, StockQuantity
FROM Products
WHERE StockQuantity BETWEEN 30 AND 70;
```

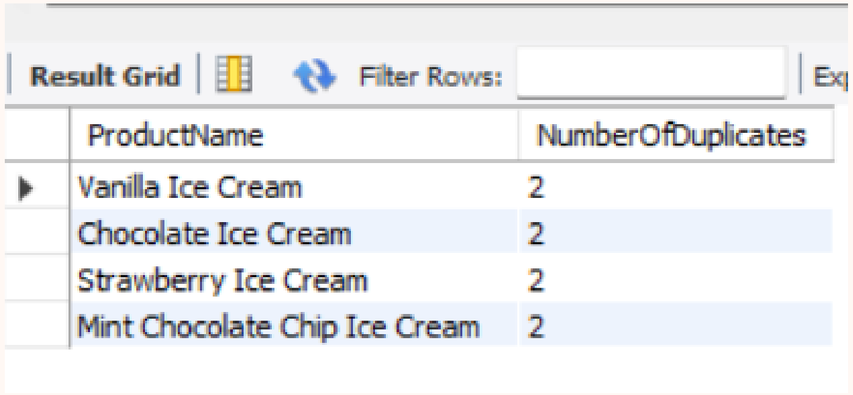
Result Grid | Filter Rows: | Edit:

ProductID	ProductName	StockQuantity
4	Mint Chocolate Chip Ice Cream	70
8	Mint Chocolate Chip Ice Cream	70
10	Rocky Road Ice Cream	60
12	Butter Pecan Ice Cream	65
13	Mango Sorbet	50
14	Lemon Sorbet	55

Q8. Find Duplicate Products by Name.

Identify products that have the same name in the database.

```
SELECT ProductName, COUNT(ProductID) AS NumberOfDuplicates
FROM Products
GROUP BY ProductName
HAVING COUNT(ProductID) > 1;
```



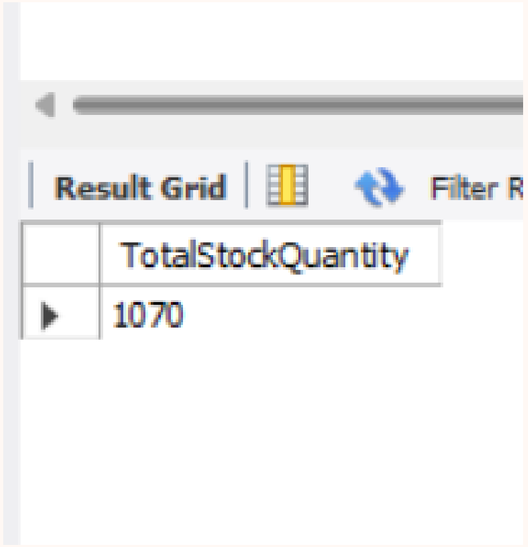
Result Grid | Filter Rows: | Ex

ProductName	NumberOfDuplicates
Vanilla Ice Cream	2
Chocolate Ice Cream	2
Strawberry Ice Cream	2
Mint Chocolate Chip Ice Cream	2

Q9. Calculate Total Stock Quantity for All Products.

Calculate the total quantity of stock available across all products.

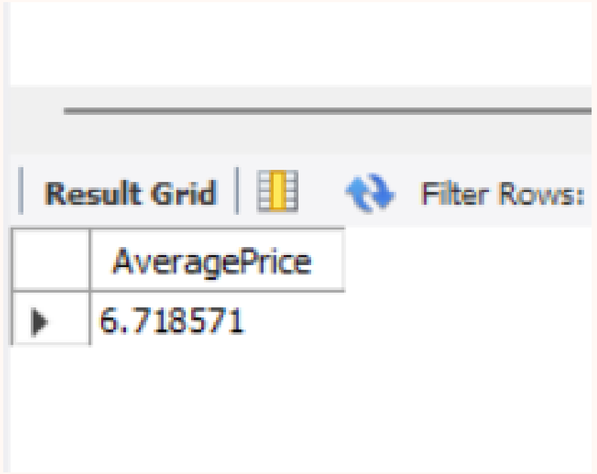
```
SELECT SUM(StockQuantity) AS TotalStockQuantity
FROM Products;
```



Q10. Calculate the Average Price of All Products.

Calculate the average price of all products in the database.

```
SELECT AVG(Price) AS AveragePrice
FROM Products;
```



Summary.

These queries cover a variety of tasks related to the Products table (ice cream), enabling efficient product management and insights. You can use these examples to tailor them to your specific business needs and further optimize your operations.

Feel free to modify these queries based on additional fields or requirements you might have! If you need more complex scenarios or additional assistance, just let me know!

Thank you!