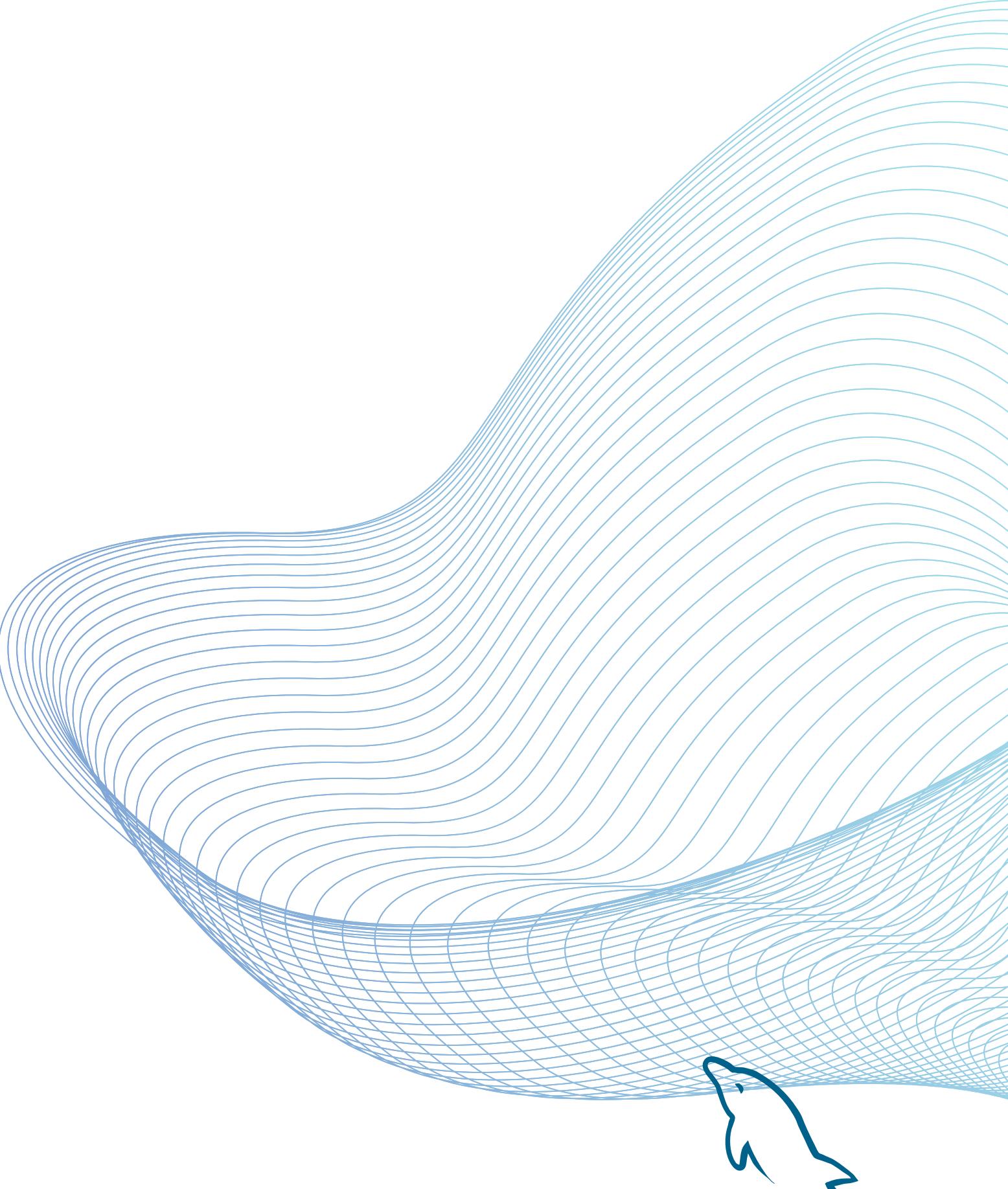




Amazon SQL Insights!



Introduction

Hello,

I'm excited to introduce my project called "Amazon SQL Insights." This project focuses on leveraging SQL to efficiently manage and analyze data related to Amazon's operations. The goal is to create a system that helps in tracking inventory, optimizing processes, and generating valuable insights from large datasets.

"Amazon SQL Insights" is designed to simplify data handling and provide clear, actionable information to improve decision-making and operational efficiency.

1. Top 5 Best-Selling Products.

```
Select p.ProductName,  
SUM(od.Quantity) as TotalSold  
from OrderDetails od
```

```
join Products p on od.ProductID = p.ProductID  
group by p.ProductName  
order by TotalSold DESC  
limit 5;
```

Result Grid | Filter Rows:

	ProductName	TotalSold
▶	Adidas Ultraboost	2
	iPhone 14	1
	Samsung Galaxy S23	1
	Sony WH-1000XM4	1
	Nike Air Max 270	1

2. Total Revenue by Category.

```
Select c.Categoryname,  
sum(od.Quantity*od.Unitprice)as Totalrevenue  
from Orderdetails od  
join Products p on od.ProductID = p.ProductID  
join Categories c on p.CategoryID = c.CategoryID  
group by c.CategoryName  
order by Totalrevenue desc;
```

Categoryname	Totalrevenue
Electronics	5529.92
Office Supplies	1899.99
Home & Kitchen	1849.97
Grocery	499.99
Clothing	489.99
Computers	449.98
Garden & Outdoor	129.99
Toys	79.99
Health & Personal Care	69.99

3. Average Rating per Product.

```
Select p.ProductName,avg(r.rating) as AverageRating  
from Reviews r
```

```
join Products p on r.ProductID = p.ProductID  
group by p.ProductName  
having avg(r.rating) is not null  
order by AverageRating Desc;
```

	ProductName	AverageRating
▶	iPhone 14	5.0000
	Sony WH-1000XM4	5.0000
	Bosch 300 Series Dishwasher	5.0000
	LG OLED TV	5.0000
	Dell XPS 13	5.0000
	HP Envy 5055	5.0000
	Razer DeathAdder V2	5.0000
	Whirlpool Refrigerator	5.0000
	KitchenAid Stand Mixer	5.0000
	PlayStation 5	5.0000
	DeWalt Drill Kit	5.0000
	Samsung Galaxy S23	4.0000

4. Sales Growth Over Time(Monthly).

```
Select date_format(o.Orderdate,'%y- %m') as Month,  
sum(od.Quantity*od.UnitPrice) as MonthlySales  
from Orderdetails od  
join Orders o on od.OrderID = o.OrderID  
group by Month  
order by Month desc;
```

Month	MonthlySales
24- 08	10999.81

5. Users with Outstanding Orders (Pending Status).

```
Select u.Username, count(o.OrderID)  
    as OutstandingOrders  
    from orders o  
join Users u on o.UserID = u.UserID  
where o.status = 'Pending'  
    group by u.Username  
order by OutstandingOrders desc;
```

	Username	OutstandingOrders
▶	alicew	1
	gracek	1
	lauraj	1
	quinns	1

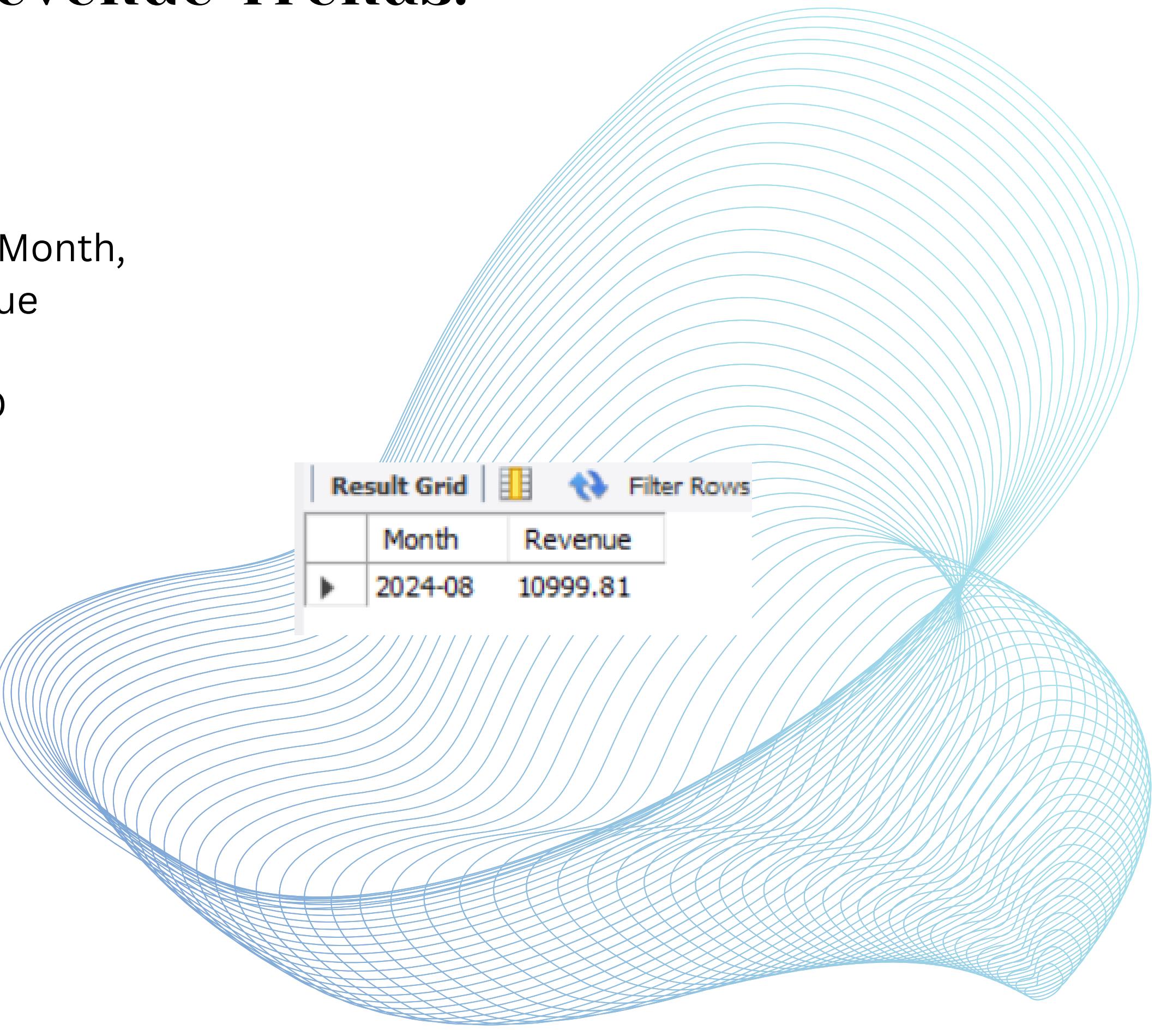
6. Products sold by each User.

```
Select u.UserName, p.ProductName,  
sum(od.Quantity) as TotalQuantitySold  
    from OrderDetails od  
join Orders o on od.OrderID = o.OrderID  
    join Users u on o.UserID = u.UserID  
join Products p on od.ProductID = p.ProductID  
    group by u.UserName, p.ProductName  
order by u.UserName, TotalQuantitySold desc;
```

UserName	ProductName	TotalQuantitySold
alicew	Nike Air Max 270	1
bobsmith	Adidas Ultraboost	2
charlies	Bosch 300 Series Dishwasher	1
davidb	LG OLED TV	1
emilyr	Canon EOS R5	1
frankj	Dell XPS 13	1
gracek	HP Envy 5055	1
henryt	Lenovo ThinkPad X1 Carbon	1
isabellam	Oculus Quest 2	1
jacksonw	Razer DeathAdder V2	1
janedoe	Sony WH-1000XM4	1
johndoe	iPhone 14	1

7. Monthly Revenue Trends.

```
Select Date_format(o.OrderDate,'%Y-%m') as Month,  
      sum(od.Quantity*od.UnitPrice) as Revenue  
    from OrderDetails od  
  join orders o on od.OrderID = o.OrderID  
  group by month  
order by month desc;
```



A decorative graphic consisting of several concentric blue circles of varying sizes, centered in the background of the slide. In front of this graphic, there is a small rectangular window containing a table.

	Month	Revenue
▶	2024-08	10999.81

The table displays the results of the SQL query. The first column is a navigation arrow pointing right. The second column is labeled "Month" and contains the value "2024-08". The third column is labeled "Revenue" and contains the value "10999.81".

8. Highest Rated Products in Each Category.

```
with AvgRatings As (Select p.ProductID,
p.ProductName, p.CategoryID, avg(r.Rating) as
    AvgRating
    from Reviews r
join Products p on r.ProductID = p.ProductID
    group by p.ProductID)
Select p.ProductName,
c.CategoryName, a.AvgRating from AvgRatings a
join Products p on a.ProductID = p.ProductID
join Categories c on p.CategoryID = c.CategoryID
Where a.AvgRating = (Select max(a2.AvgRating)
    from AvgRatings a2 Where a2.CategoryID =
        p.CategoryID)
order by c.CategoryName, a.AvgRating desc;
```

	ProductName	CategoryName	AvgRating
▶	Adidas Ultraboost	Clothing	4.0000
	Dell XPS 13	Computers	5.0000
	iPhone 14	Electronics	5.0000
	Sony WH-1000XM4	Electronics	5.0000
	LG OLED TV	Electronics	5.0000
	Razer DeathAdder V2	Electronics	5.0000
	PlayStation 5	Electronics	5.0000
	Garden Hose Reel	Garden & Outdoor	4.0000
	DeWalt Drill Kit	Grocery	5.0000
	Philips Sonicare Toothbrush	Health & Personal Care	4.0000
	Bosch 300 Series Dishwasher	Home & Kitchen	5.0000
	Whirlpool Refrigerator	Home & Kitchen	5.0000

9. Inventory Changes by Product.

```
Select p.ProductName, ic.ChangeType,  
sum(ic.ChangeQuantity) as TotalChange  
from InventoryChanges ic  
join Products p on ic.ProductID = p.ProductID  
group by p.ProductName,  
        ic.ChangeType  
Order by p.ProductName,  
        ic.ChangeType;
```

ProductName	ChangeType	TotalChange
Adidas Ultraboost	Restock	15
Bosch 300 Series Dishwasher	Sale	5
Canon EOS R5	Sale	3
Dell XPS 13	Sale	7
DeWalt Drill Kit	Sale	6
Fisher-Price Little People	Restock	4
Garden Hose Reel	Restock	9
HP Envy 5055	Restock	10
iPhone 14	Restock	10
KitchenAid Stand Mixer	Sale	3
Lenovo ThinkPad X1 Carbon	Sale	12
LG OLED TV	Restock	8

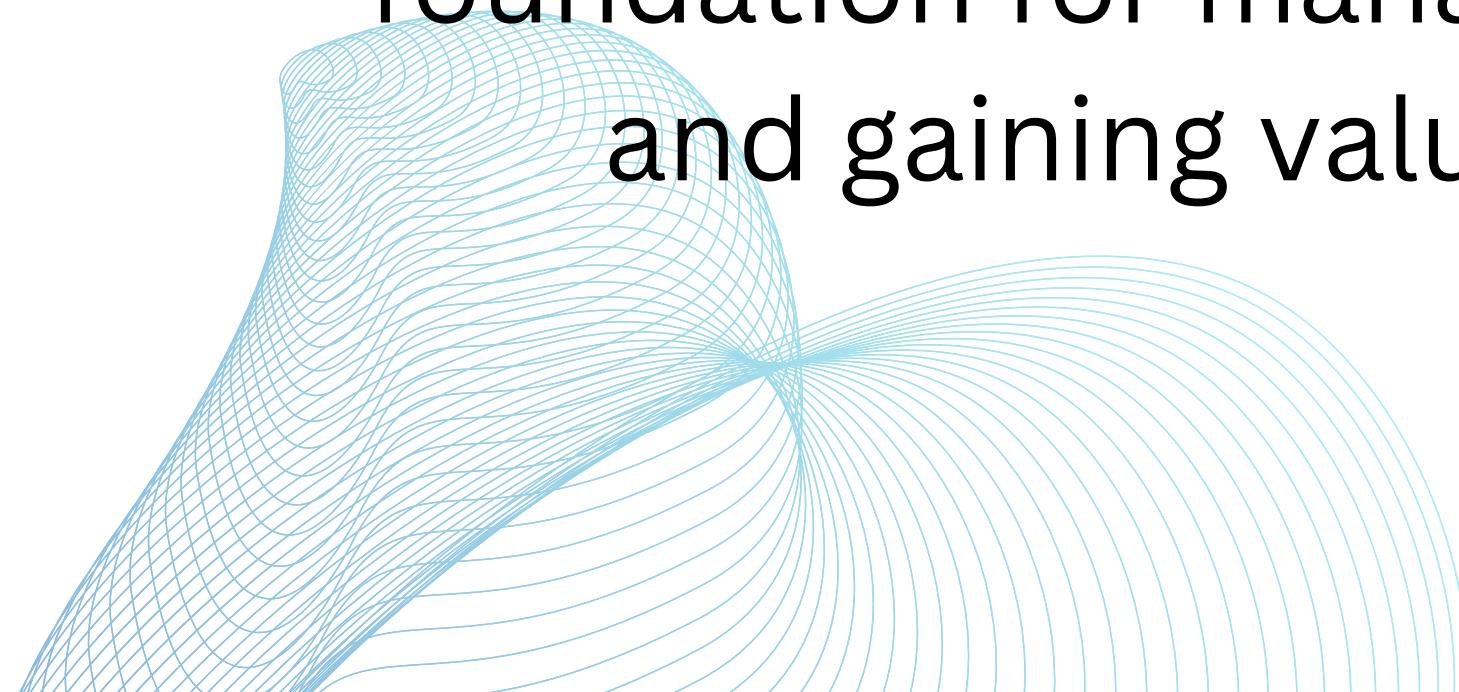
10. Most Reviewed Products.

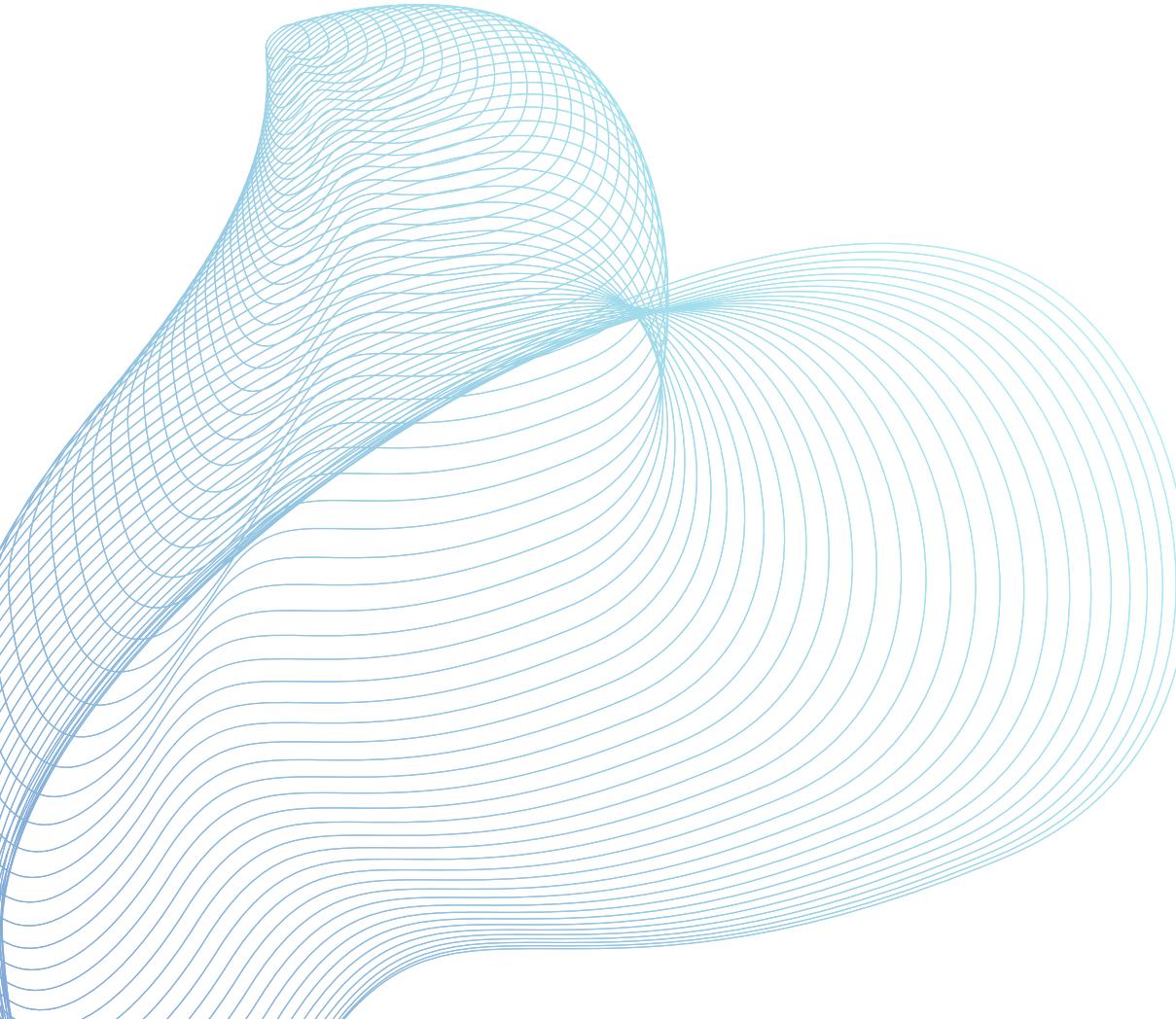
```
Select p.ProductName,  
count(r.ReviewID) as Number_of_Reviews  
from Reviews r  
join Products p on r.ProductID = p.ProductID  
group by p.ProductName  
order by Number_of_Reviews desc  
limit 5;
```

	ProductName	Number_of_Reviews
▶	iPhone 14	1
	Samsung Galaxy S23	1
	Sony WH-1000XM4	1
	Nike Air Max 270	1
	Adidas Ultraboost	1

Conclusion

This project demonstrates the application of advanced database management and querying techniques to manage and analyze data in a complex e-commerce environment. By implementing a well-structured schema and leveraging advanced SQL queries, this project aims to provide a solid foundation for managing an e-commerce platform's data and gaining valuable insights into its operations.





**Thank you for taking
the time to explore
“Amazon SQL Insights.”**

