

# **Jifunz Data Engineering Bootcamp**

## **SQL MINI PROJECT**

**By**

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## Question 1:

Provide the top 10 customers (full name) by revenue, the country they shipped to, the cities and their revenue (orderqty \* unitprice).

## Query

```
SELECT TOP 10
    CONCAT(c.FirstName, ' ', c.MiddleName, ' ', c.LastName) AS FullName,
    CONCAT(a.CountryRegion, ' ', a.City) AS Location,
    SUM(sod.OrderQty * sod.UnitPrice) AS Revenue
FROM SalesLT.Customer c
JOIN SalesLT.SalesOrderHeader soh ON c.CustomerID = soh.CustomerID
JOIN SalesLT.CustomerAddress ca ON c.CustomerID = ca.CustomerID
JOIN SalesLT.Address a ON ca.AddressID = a.AddressID
JOIN SalesLT.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
GROUP BY c.CustomerID, c.FirstName, c.MiddleName, c.LastName,
a.CountryRegion, a.City
ORDER BY Revenue DESC
```

## Result

Results		Messages	
	FullName	Location	Revenue
1	Terry Eminhizer	United Kingdom, Woolston	90341.5338
2	Krishna Sunkammurali	United Kingdom, London	80143.3728
3	Christopher R. Beck	United Kingdom, London	74160.228
4	Kevin Liu	United States, Union City	68142.6132
5	Jon Grande	United Kingdom, Liverpool	65218.8776
6	Jeffrey Kurtz	United States, Fullerton	60526.998
7	Rebecca Laszlo	United Kingdom, Gloucestershire	53248.692
8	Anthony Chor	United States, Sherman Oaks	47848.026
9	Frank Campbell	United States, Centos	34208.934
10	Catherine R. Abel	United States, Van Nuys	33319.986

## Question 2:

Create 4 distinct Customer segments using the total Revenue (orderqty \* unitprice) by customer. List the customer details (ID, Company Name), Revenue, and the segment the customer belongs to.

### Query

```
SELECT c.CustomerID , c.CompanyName, SUM(sod.OrderQty * sod.UnitPrice) AS
Revenue,
CASE
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 70000 THEN 'Plantinum'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 50000 THEN 'Gold'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 30000 THEN 'Silver'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) < 30000 THEN 'Bronze'
END AS [Level]
FROM SalesLT.Customer c
JOIN SalesLT.SalesOrderHeader soh ON c.CustomerID = soh.CustomerID
JOIN SalesLT.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
GROUP BY c.CustomerID, c.CompanyName
ORDER BY Revenue DESC;
```

### Result

	CustomerID	CompanyName	Revenue	Level
1	29736	Action Bicycle Specialists	90341.5338	Plantinum
2	30050	Metropolitan Bicycle Supply	80143.3728	Plantinum
3	29546	Bulk Discount Store	74160.228	Plantinum
4	29957	Eastside Department Store	68142.6132	Gold
5	29796	Riding Cycles	65218.8776	Gold
6	29929	Many Bikes Store	60526.998	Gold
7	29932	Instruments and Parts Company	53248.692	Gold
8	29660	Extreme Riding Supplies	47848.026	Silver
9	29938	Trailblazing Sports	34208.934	Silver
10	29485	Professional Sales and Service	33319.986	Silver
11	30113	Nearby Cycle Shop	30600.996	Silver
12	29922	Closest Bicycle Store	29187.2286	Bronze
13	29653	Thrilling Bike Tours	11528.844	Bronze
14	29877	Paints and Solvents Company	10585.05	Bronze
15	29531	Remarkable Bike Store	5535.2246	Bronze
16	30027	Engineered Bike Systems	2847.408	Bronze
17	29975	Sports Products Store	2778.2902	Bronze
18	29982	Discount Tours	2527.128	Bronze
19	30102	Sports Store	1929.594	Bronze
20	29568	Coalition Bike Company	1901.406	Bronze
21	29638	Aerobic Exercise Company	1732.89	Bronze
22	30019	Tachometers and Accessories	1712.946	Bronze
23	30089	Thrifty Parts and Sales	926.916	Bronze
24	29644	Vigorous Sports Store	858.90	Bronze
25	29847	Good Toys	713.796	Bronze
26	29612	Channel Outlet	524.664	Bronze
27	30033	Transport Bikes	500.304	Bronze
28	29584	Futuristic Bikes	221.256	Bronze
29	29781	The Bicycle Accessories Company	97.5688	Bronze
30	30072	West Side Mart	63.90	Bronze
31	30025	Essential Bike Works	37.758	Bronze
32	29741	Central Bicycle Specialists	31.584	Bronze

### Question 3:

What products with their respective categories did our customers buy on our last day of business? List the CustomerID, Product ID, Product Name, Category Name, and Order Date.

### Query

```
SELECT soh.CustomerID, sod.ProductID, p.Name AS ProductName, pc.Name AS
CategoryName, soh.OrderDate
FROM SalesLT.SalesOrderHeader soh
JOIN SalesLT.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
JOIN SalesLT.Product p ON sod.ProductID = p.ProductID
JOIN SalesLT.ProductCategory pc ON p.ProductCategoryID = pc.ProductCategoryID
WHERE soh.OrderDate = (SELECT MAX(OrderDate)
FROM SalesLT.SalesOrderHeader);
```

### Result

	CustomerID	ProductID	ProductName	CategoryName	OrderDate
1	29485	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
2	29957	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
3	29736	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
4	29796	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
5	29929	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
6	30050	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
7	29546	707	Sport-100 Helmet, Red	Helmets	2004-06-01 00:00:00.000
8	29485	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
9	29957	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
10	29736	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
11	29796	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
12	29929	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
13	29546	708	Sport-100 Helmet, Black	Helmets	2004-06-01 00:00:00.000
14	29485	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
15	29957	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
16	29736	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
17	29796	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
18	29975	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
19	29929	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
20	29546	711	Sport-100 Helmet, Blue	Helmets	2004-06-01 00:00:00.000
21	29485	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
22	29957	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
23	29736	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
24	29796	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
25	30027	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
26	29653	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
27	29877	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
28	29929	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
29	29546	712	AWC Logo Cap	Caps	2004-06-01 00:00:00.000
30	29485	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
31	29957	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
32	29736	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
33	29796	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
34	29568	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
35	29929	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
36	29546	714	Long-Sleeve Logo Jersey, M	Jerseys	2004-06-01 00:00:00.000
37	29485	715	Long-Sleeve Logo Jersey, L	Jerseys	2004-06-01 00:00:00.000
38	29957	715	Long-Sleeve Logo Jersey, L	Jerseys	2004-06-01 00:00:00.000
39	29736	715	Long-Sleeve Logo Jersey, L	Jerseys	2004-06-01 00:00:00.000
40	29796	715	Long-Sleeve Logo Jersey, L	Jerseys	2004-06-01 00:00:00.000
41	30027	715	Long-Sleeve Logo Jersey, L	Jerseys	2004-06-01 00:00:00.000

Query executed successfully.

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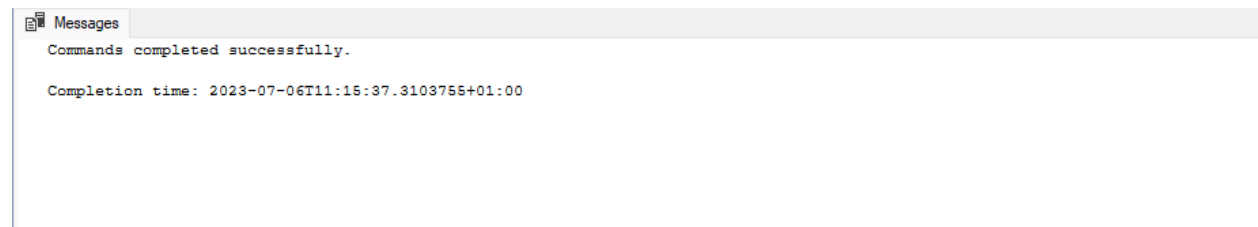
#### Question 4:

Create a View called customer segments that stores the details (id, name, revenue) for customers and their segment (from Question 2).

#### Query

```
SELECT c.CustomerID , c.CompanyName, SUM(sod.OrderQty * sod.UnitPrice) AS
Revenue,
CASE
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 70000 THEN 'Platinum'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 50000 THEN 'Gold'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) >= 30000 THEN 'Silver'
    WHEN SUM(sod.OrderQty * sod.UnitPrice) < 30000 THEN 'Bronze'
END AS [Level]
FROM SalesLT.Customer c
JOIN SalesLT.SalesOrderHeader soh ON c.CustomerID = soh.CustomerID
JOIN SalesLT.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
GROUP BY c.CustomerID, c.CompanyName
ORDER BY Revenue DESC;
```

#### Result



## Question 5:

What are the top 3 selling products (include product name) in each category (include category name) by revenue? Tip: Use ranknum.

## Query

```
SELECT CategoryName, ProductName, Revenue
FROM (
    SELECT pc.Name AS CategoryName, p.Name AS ProductName,
        SUM(sod.OrderQty * sod.UnitPrice) AS Revenue,
        RANK() OVER (PARTITION BY pc.Name ORDER BY SUM(sod.OrderQty *
sod.UnitPrice) DESC) AS RankNum
    FROM SalesLT.SalesOrderDetail sod
    JOIN SalesLT.Product p ON sod.ProductID = p.ProductID
    JOIN SalesLT.ProductCategory pc ON p.ProductCategoryID =
pc.ProductCategoryID
    GROUP BY pc.Name, p.Name
) ranked
WHERE RankNum <= 3;
```

## Result

	CategoryName	ProductName	Revenue
1	Bike Racks	Hitch Rack - 4-Bike	2304.00
2	Bottles and Cages	Water Bottle - 30 oz.	159.4804
3	Bottom Brackets	HL Bottom Bracket	1093.41
4	Bottom Brackets	LL Bottom Bracket	226.758
5	Brakes	Front Brakes	766.80
6	Brakes	Rear Brakes	63.90
7	Caps	AWC Logo Cap	278.5102
8	Chairs	Chain	97.152
9	Cleaners	Bike Wash - Dissolver	255.5925
10	Cranksets	HL Crankset	2915.928
11	Cranksets	LL Crankset	1052.94
12	Derailleurs	Front Derailleur	713.622
13	Derailleurs	Rear Derailleur	583.008
14	Gloves	Half-Finger Gloves, M	382.044
15	Gloves	Half-Finger Gloves, L	279.186
16	Gloves	Half-Finger Gloves, S	176.328
17	Handlebars	ML Mountain Handlebars	445.824
18	Handlebars	HL Road Handlebars	288.648
19	Handlebars	HL Mountain Handlebars	216.486
20	Helmets	Sport-100 Helmet, Black	1046.201
21	Helmets	Sport-100 Helmet, Blue	771.5295
22	Helmets	Sport-100 Helmet, Red	734.79
23	Hydration Packs	Hydration Pack - 70 oz.	1649.70
24	Jerseys	Short-Sleeve Classic Je...	1805.9...
25	Jerseys	Short-Sleeve Classic Je...	1597.0...
26	Jerseys	Long-Sleeve Logo Jers...	1487.2...
27	Mountain Bikes	Mountain-200 Black, 42	37178...
28	Mountain Bikes	Mountain-200 Black, 38	35801...
29	Mountain Bikes	Mountain-200 Silver, 42	20879.91
30	Mountain Frames	HL Mountain Frame - Si...	13099.20
31	Mountain Frames	HL Mountain Frame - Bl...	9717.12
32	Mountain Frames	HL Mountain Frame - Si...	8187.00
33	Pedals	ML Road Pedal	707.826
34	Pedals	HL Road Pedal	680.316
35	Pedals	HL Mountain Pedal	583.128
36	Road Bikes	Road-350-W Yellow, 48	38612...
37	Road Bikes	Road-350-W Yellow, 40	20411.88
38	Road Bikes	Road-350-W Yellow, 42	18949...
39	Road Frames	HL Road Frame - Black...	5153.40
40	Road Frames	ML Road Frame-W - Y...	4282.776
41	Road Frames	ML Road Frame-W - Y...	4282.776

Query executed successfully.

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