

# Comprehensive Sales, Product, and Customer Analysis of the XYZ Company

## SQL Server Project

This SQL project offers a comprehensive analysis of the XYZ Company, addressing critical aspects of sales, products, and customer behaviors. The insights drawn from this analysis, ranging from yearly sales and profit trends, regional market performance, to customer purchase frequencies, serve to inform and improve business strategies, enhance customer engagement, and ultimately drive profitability.

### --General Analysis--

```
--What is the total sales and profit made each year?

--FIRST I WILL CONVERT THE ORDER DATE FROM STRING TO DATE IN ORDER TO EXTRACT THE YEAR

SELECT CONVERT(DATETIME, ORDER_DATE, 103)
FROM Product$
--REPLACING THE OLD ORDER DATE
ALTER TABLE Product$
ADD New_Order_Date DATETIME;

UPDATE Product$
SET New_Order_Date = CONVERT(DATETIME, ORDER_DATE, 103);

ALTER TABLE Product$
DROP COLUMN ORDER_DATE;
```

```
-- NOW TO ANSWER THE FIRST QUESTION (What is the total sales and profit made each year?)
SELECT YEAR(NEW_ORDER_DATE) AS ORDERYEAR,
ROUND(SUM(SALES),2) AS TOTALSALES,
ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
GROUP BY YEAR(NEW_ORDER_DATE)
ORDER BY ORDERYEAR
```

Results		Messages	
	ORDERYEAR	TOTALSALES	TOTALPROFIT
1	2011	2259450.9	248940.81
2	2012	2677438.69	307415.28
3	2013	3405746.45	406935.23
4	2014	4299865.87	504165.97

--Which region and market have the highest sales?

```
SELECT REGION, ROUND(SUM(SALES), 2) AS TOTALSALES
FROM Product$
GROUP BY REGION
ORDER BY 2
```

```
SELECT Market, ROUND(SUM(SALES), 2) AS TOTALSALES
FROM Product$
GROUP BY Market
ORDER BY 2
```

Results		Messages	
	REGION	TOTALSALES	
1	Canada	66928.17	
2	Caribbean	324280.86	
3	East	678781.24	
4	West	725457.82	
5	Central Asia	752826.57	
6	Africa	783773.21	
7	EMEA	806161.31	
8	North Asia	848309.78	
9	Southeast Asia	884423.17	
10	Oceania	1100184.61	
11	North	1248165.6	
12	South	1600907.04	
13	Central	2822302.52	

Results		Messages	
	Market	TOTALSALES	
1	Canada	66928.17	
2	Africa	783773.21	
3	EMEA	806161.31	
4	LATAM	2164605.17	
5	US	2297200.86	
6	EU	2938089.06	
7	APAC	3585744.13	

--How does shipping cost affect overall sales and profit?

```
SELECT SHIPPING_COST, ROUND(SUM(SALES),2) AS TOTALSALES, ROUND(SUM(Profit), 2) AS  
TOTALPROFIT  
FROM Product$  
GROUP BY SHIPPING_COST  
ORDER BY 1
```

	SHIPPING_COST	TOTALSALES	TOTALPROFIT
1	0	74.82	4.2
2	0.01	192.09	44.43
3	0.02	252.82	-48.03
4	0.03	384.13	31.63
5	0.04	287.03	41.34
6	0.05	563.04	-69.51
7	0.06	525.07	21.63
8	0.07	379.8	-20.01
9	0.08	125.78	3.34
10	0.09	428.8	18.5
11	0.1	252.29	10.87
12	0.11	188.57	-14.85
13	0.12	131.92	-119
14	0.13	141.34	-39.24
15	0.14	381.87	23.11
16	0.15	326.45	11.67
17	0.16	826.72	84

--Which shipping mode is the most preferred?

```
SELECT SHIP_MODE, COUNT (*) AS NUMBEROFORDERS  
FROM Product$  
GROUP BY SHIP_MODE  
ORDER BY 2 DESC
```

	SHIP_MODE	NUMBEROFORDERS
1	Standard Class	30775
2	Second Class	10309
3	First Class	7505
4	Same Day	2701

--How is the order priority affecting the shipping cost?

```
SELECT ORDER_PRIORITY, ROUND(AVG(SHIPPING_COST),2) AS AVGSHIPPINGCOST
FROM Product$
GROUP BY ORDER_PRIORITY
ORDER BY 2
```

Results		Messages
	ORDER_PRIORITY	AVGSHIPPINGCOST
1	Medium	18.44
2	Low	27.08
3	High	32.87
4	Critical	59.72

--How does the discount given affect the sales and profit?

```
SELECT DISCOUNT, ROUND(AVG(SALES),2) AS AVGSALES, ROUND(AVG(Profit), 2) AS
AVGPROFIT
FROM Product$
GROUP BY DISCOUNT
ORDER BY 1
```

Results		Messages	
	DISCOUNT	AVGSALES	AVGPROFIT
1	0	241.04	61.04
2	0.002	567.02	125.76
3	0.07	810.78	140.99
4	0.1	388.3	63.68
5	0.15	565.67	50.6
6	0.17	336.6	38.32
7	0.2	240.86	23.55
8	0.202	395.5	-14.52
9	0.25	444.72	4.04
10	0.27	230.29	-4.32
11	0.3	555.68	-57.9
12	0.32	536.79	-88.56
13	0.35	784.48	-116.14
14	0.37	427.27	-78.46
15	0.4	176.12	-45.25
16	0.402	324.36	-109.91
17	0.45	102.11	-41.61

✓ Query executed successfully.

--How does the quantity sold affect the sales and profit?

```
SELECT QUANTITY, ROUND(SUM(SALES),2) AS TOTALSALES, ROUND(SUM(Profit), 2) AS
TOTALPROFIT
FROM Product$
GROUP BY QUANTITY
ORDER BY 1
```

Results		Messages	
	QUANTITY	TOTALSALES	TOTALPROFIT
1	1	659747.14	65022.24
2	2	1827781.06	208565.97
3	3	2017842.59	235501.24
4	4	1875526.47	221716.66
5	5	1804825.42	226905.52
6	6	1308374.66	125106.83
7	7	1169779.19	159368.64
8	8	748070.74	83753.36
9	9	597769.01	73846.27
10	10	172445.38	17189.48
11	11	111136.05	12721.96
12	12	112406.05	5114.55
13	13	87983.83	12906.28
14	14	148814.31	19738.3

## --Product Analysis--

--What are the top 10 products by sales?

```
SELECT TOP 10 PRODUCT_NAME, ROUND(SUM(SALES),2) AS TOTALSALES
FROM Product$
GROUP BY PRODUCT_NAME
```

	PRODUCT_NAME	TOTALSALES
1	Hewlett Fax and Copier, Color	4820.31
2	Fellowes Trays, Industrial	5918.36
3	Jiffy Peel and Seal, Recycled	1062.83
4	Tenex Trays, Single Width	5854.67
5	Konica Card Printer, White	3604.68
6	C-Line Cubicle Keepers Polypropylene Holder With ...	137.17
7	Avery 510	21.75
8	Cuisinart Refrigerator, White	6202.46
9	SAFCO Swivel Stool, Set of Two	12395.5
10	StarTech Card Printer, Wireless	4803.63

--Which category and sub-category of products are the most profitable?

```
SELECT CATEGORY, ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
GROUP BY CATEGORY
```

```
SELECT [Sub-Category], ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
GROUP BY [Sub-Category]
```

Results Messages		
	CATEGORY	TOTALPROFIT
1	Office Supplies	518473.83
2	Furniture	285204.72
3	Technology	663778.73

  

	Sub-Category	TOTALPROFIT
1	Supplies	22583.26
2	Storage	108461.49
3	Phones	216717.01
4	Fasteners	11525.42
5	Copiers	258567.55
6	Chairs	140396.27
7	Bookcases	161924.42
8	Machines	58867.87
9	Art	57953.91
10	Envelopes	29601.12
11	Binders	72449.85
12	Labels	15010.51
13	Furnishings	46967.43
14	Accessories	129626.31
15	Appliances	141680.59
16	Paper	59207.68
17	Tables	-64083.39

✓ Query executed successfully.

--What are the average sales for each category and sub-category of products?

```
SELECT CATEGORY, ROUND(AVG(SALES),2) AS AVGSALES, ROUND(AVG(Profit), 2) AS
AVGPROFIT
FROM Product$
GROUP BY CATEGORY
```

Results Messages			
	CATEGORY	AVGSALES	AVGPROFIT
1	Office Supplies	121.1	16.58
2	Furniture	416.25	28.88
3	Technology	467.86	65.45

  

	Sub-Category	AVGSALES	AVGPROFIT
1	Supplies	100.24	9.31
2	Storage	222.79	21.44
3	Phones	508.44	64.56
4	Fasteners	34.4	4.76
5	Copiers	679.01	116.31
6	Chairs	437.3	40.88
7	Bookcases	608.28	67.16
8	Machines	524.27	39.61
9	Art	76.2	11.87
10	Envelopes	70.19	12.16
11	Binders	75.08	11.78
12	Labels	28.17	5.76
13	Furnishings	121.63	14.82
14	Accessories	243.65	42.15
15	Appliances	576.11	80.73
16	Paper	69.05	16.73
17	Tables	879.26	-74.43

--How does the discount given affect the sales and profit of each product?

```
SELECT [Product_Name], DISCOUNT, ROUND(SUM(SALES),2) AS TOTALSALES,
ROUND(SUM(Profit), 2) AS TOTALPROFIT
FROM Product$
WHERE DISCOUNT <> 0
GROUP BY [Product_Name], Discount
```

Results Messages

	Product_Name	DISCOUNT	TOTALSALES	TOTALPROFIT
1	Brother Copy Machine, Color	0.002	5755.96	2230.94
2	Brother Copy Machine, High-Speed	0.002	4013.74	756.02
3	Brother Copy Machine, Laser	0.002	1219.9	584.16
4	Brother Fax and Copier, Color	0.002	1797.08	230.48
5	Brother Fax and Copier, Digital	0.002	890.16	131.92
6	Brother Fax and Copier, High-Speed	0.002	504.83	69.79
7	Brother Fax and Copier, Laser	0.002	2165.88	234.34
8	Brother Fax Machine, Color	0.002	3406.29	1426.45
9	Brother Fax Machine, Digital	0.002	3387.13	1078.97
10	Brother Fax Machine, High-Speed	0.002	6322.13	2647.73
11	Brother Fax Machine, Laser	0.002	1483.55	145.57
12	Brother Ink, Color	0.002	989.62	315.22
13	Brother Ink, Digital	0.002	488.82	33.22
14	Brother Ink, High-Speed	0.002	1452.09	142.59
15	Brother Ink, Laser	0.002	1568.06	263.74
16	Brother Personal Copier, Color	0.002	2016.58	722.98
17	Brother Personal Copier, Digital	0.002	663.81	291.27
18	Brother Personal Copier, High-Speed	0.002	1595.82	76.7
19	Brother Personal Copier, Laser	0.002	950.69	217.09
20	Brother Wireless Fax, Color	0.002	4806.87	279.17
21	Brother Wireless Fax, Digital	0.002	4532.32	944.56
22	Brother Wireless Fax, High-Speed	0.002	3260.89	581.59
23	Brother Wireless Fax, Laser	0.002	4284.59	291.63

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM) TASNEEM\tasne (52) Sales 00:00:00 11.696 rows

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM) TASNEEM\tasne (52) Sales 00:00:00 11,696 rows

```
--What are the top 10 products by shipping cost?
SELECT TOP 10 PRODUCT_NAME, SUM(SHIPPING_COST) AS TOTALSHIPPINGCOST
FROM Product$
GROUP BY Product_Name
```

Results Messages		
	PRODUCT_NAME	TOTALSHIPPINGCOST
1	Hewlett Fax and Copier, Color	813.64
2	Fellowes Trays, Industrial	611.57
3	Jiffy Peel and Seal, Recycled	121.03
4	Tenex Trays, Single Width	743.08
5	Konica Card Printer, White	302.4
6	C-Line Cubicle Keepers Polypropylene Holder With ...	16.1
7	Avery 510	1.85
8	Cuisinart Refrigerator, White	493.86
9	SAFCO Swivel Stool, Set of Two	1139.83
10	StarTech Card Printer, Wireless	440.03

```
--Which countrIES haVE top sales?
SELECT TOP 5 COUNTRY, ROUND(SUM(SALES),2) AS TOTALSALES
FROM Product$
GROUP BY COUNTRY
```

Results Messages		
	COUNTRY	TOTALSALES
1	Finland	20704.35
2	Martinique	5968.15
3	Rwanda	5194.08
4	South Korea	33125.38
5	Bahrain	669.18



--Which are the top 5 profit-making product types on a yearly basis

```
SELECT TOP 5 PRODUCT_NAME, ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
WHERE YEAR(NEW_ORDER_DATE) = 2011
GROUP BY PRODUCT_NAME
```

```
SELECT TOP 5 PRODUCT_NAME, ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
WHERE YEAR(NEW_ORDER_DATE) = 2012
GROUP BY PRODUCT_NAME
```

```
SELECT TOP 5 PRODUCT_NAME, ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
WHERE YEAR(NEW_ORDER_DATE) = 2013
GROUP BY PRODUCT_NAME
```

```
SELECT TOP 5 PRODUCT_NAME, ROUND(SUM(PROFIT),2) AS TOTALPROFIT
FROM Product$
WHERE YEAR(NEW_ORDER_DATE) = 2014
GROUP BY PRODUCT_NAME
```

Results Messages

	PRODUCT_NAME	TOTALPROFIT
1	#10- 4 1/8" x 9 1/2" Recycled Envelopes	21.24
2	#10- 4 1/8" x 9 1/2" Security-Tint Envelopes	11.23
3	#10 White Business Envelopes,4 1/8 x 9 1/2	73.65
4	1.7 Cubic Foot Compact "Cube" Office Refrigerators	85.35
5	1/4 Fold Party Design Invitations & White Envelop...	1.98

	PRODUCT_NAME	TOTALPROFIT
1	#10- 4 1/8" x 9 1/2" Recycled Envelopes	55.85
2	#10 Gummed Flap White Envelopes, 100/Box	2.15
3	#10 White Business Envelopes,4 1/8 x 9 1/2	4.23
4	#10- 4 1/8" x 9 1/2" Premium Diagonal Seam Envelop...	35.41
5	#6 3/4 Gummed Flap White Envelopes	8.32

	PRODUCT_NAME	TOTALPROFIT
1	Tenex Trays, Single Width	206.75
2	Hewlett Fax and Copier, Color	296.26
3	Konica Card Printer, White	-85.85
4	C-Line Cubicle Keepers Polypropylene Holder With ...	10.97
5	Jiffy Peel and Seal, Recycled	41.55

	PRODUCT_NAME	TOTALPROFIT
1	Jiffy Peel and Seal, Recycled	21.72
2	Tenex Trays, Single Width	317.37
3	Fellowes Trays, Industrial	239.56
4	Konica Card Printer, White	428.06

✔ Query executed successfully.

--How is the product price varying with sales - Is there any increase in sales with the decrease in price at a day level

```
SELECT NEW_ORDER_DATE, ROUND(SUM(SALES),2) AS TOTALSALES,
SUM(SALES)/SUM(QUANTITY) AVGPRICEPERUNIT
FROM Product$
GROUP BY NEW_ORDER_DATE
ORDER BY 1
```

Results

Messages

	NEW_ORDER_DATE	TOTALSALES	AVGPRICEPERUNIT
1	2011-01-01 00:00:00.000	808.56	42.5559473684211
2	2011-01-02 00:00:00.000	314.22	314.22
3	2011-01-03 00:00:00.000	4503.54	93.8236916666667
4	2011-01-04 00:00:00.000	2808.87	54.0167353846154
5	2011-01-05 00:00:00.000	3662.31	152.59625
6	2011-01-06 00:00:00.000	622.54	27.0668739130435
7	2011-01-07 00:00:00.000	7123.02	104.750272058824
8	2011-01-08 00:00:00.000	6293.26	136.81
9	2011-01-09 00:00:00.000	813.75	27.12498
10	2011-01-10 00:00:00.000	6794.18	101.405688955224
11	2011-01-11 00:00:00.000	6451.25	84.8848907894737
12	2011-01-12 00:00:00.000	2629.72	67.4286287179487
13	2011-01-13 00:00:00.000	2584.6	76.0175
14	2011-01-14 00:00:00.000	6280.45	49.452342519685
15	2011-01-15 00:00:00.000	2279.53	61.6089351351351
16	2011-01-16 00:00:00.000	149.95	29.99
17	2011-01-17 00:00:00.000	2309.53	40.5180568421053
18	2011-01-18 00:00:00.000	932.76	54.8684117647059
19	2011-01-19 00:00:00.000	2054.69	51.367275
20	2011-01-20 00:00:00.000	2289.24	48.7072553191489
21	2011-01-21 00:00:00.000	8485.36	84.0134415841584
22	2011-01-22 00:00:00.000	3564.12	77.4809673913043
23	2011-01-23 00:00:00.000	2163.43	127.260588235294

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM)

TASNEEM\tasne (52)

Superstore

00:00:00

1,430 rows

--What is the average delivery time across the counties?

```
SELECT COUNTRY, AVG(DATEDIFF(DAY, NEW_ORDER_DATE, CONVERT(DATETIME,
SHIP_DATE,103))) AS AVGDELIVERYTIME
FROM Product$
GROUP BY COUNTRY
ORDER BY 2
```

Results	Messages
COUNTRY	AVGDELIVERYTIME
1 Bahrain	2
2 Liberia	2
3 Guinea-Bissau	2
4 Namibia	2
5 Guadeloupe	2
6 Estonia	2
7 Chad	2
8 Swaziland	2
9 Djibouti	2
10 Czech Republic	3
11 Zambia	3
12 Lesotho	3
13 Iran	3
14 Chile	3
15 Taiwan	3
16 Kazakhstan	3
17 Paraguay	3
18 South Africa	3
19 Turkey	3
20 Papua New Guinea	3
21 Eritrea	3
22 Spain	3
23 Pakistan	3

Query executed successfully. | TASNEEM\SQLEXPRESS (16.0 RTM) | TASNEEM\tasne (52) | Superstore | 00:00:00 | 147 rows

## --Customer Analysis--

-Customer Analysis--

--Who are the top 10 customers by sales?

```
SELECT TOP 10 CUSTOMER_NAME, ROUND(SUM(SALES),2) AS TOTALSALES
FROM [dbo].[Customer$]
GROUP BY CUSTOMER_NAME
```

Results Messages		
	CUSTOMER_NAME	TOTALSALES
1	Tamara Chand	37457.33
2	Brian Moss	17458.1
3	Michael Chen	15939.61
4	Justin MacKendrick	9026.06
5	John Huston	25945.73
6	Sheri Gordon	13816.95
7	Liz Carlisle	20127.53
8	Jesus Ocampo	8206.67
9	Doug Bickford	12855.61
10	Sean Miller	35170.93

--What segment of customers contributes the most to the sales?

```
SELECT SEGMENT, ROUND(SUM(SALES),2) AS TOTALSALES
FROM [dbo].[Customer$]
GROUP BY SEGMENT
ORDER BY 2 DESC
```

Results Messages		
	SEGMENT	TOTALSALES
1	Consumer	6507949.42
2	Corporate	3824697.52
3	Home Office	2309854.97

--What are the preferred shipping modes for each customer segment?

```
WITH SHIPPINGCOUNT AS (  
SELECT SEGMENT, SHIP_MODE, COUNT(*) AS NUMBEROFORDERS  
FROM [dbo].[Customer$]  
GROUP BY SEGMENT, SHIP_MODE  
)  
MAXSHIPPINGCOUNT AS (  
SELECT SEGMENT, MAX(NUMBEROFORDERS) AS MAXNUMBEROFORDERS  
FROM SHIPPINGCOUNT  
GROUP BY SEGMENT  
)  
SELECT SC.SEGMENT, SC.SHIP_MODE, SC.NUMBEROFORDERS  
FROM SHIPPINGCOUNT SC  
JOIN MAXSHIPPINGCOUNT MS  
ON SC.SEGMENT = MS.SEGMENT  
AND SC.NUMBEROFORDERS = MS.MAXNUMBEROFORDERS;
```

Results		Messages	
	SEGMENT	SHIP_MODE	NUMBEROFORDERS
1	Home Office	Standard Class	5641
2	Corporate	Standard Class	9258
3	Consumer	Standard Class	15876

--How does the quantity purchased by each customer segment affect the sales and profit?

```
SELECT SEGMENT, ROUND(SUM(QUANTITY),2), ROUND(SUM(SALES),2), ROUND(SUM(PROFIT),2)  
FROM [dbo].[Customer$]  
GROUP BY SEGMENT
```

Results

Messages

	SEGMENT	(No column name)	(No column name)	(No column name)
1	Corporate	53565	3824697.52	441208.33
2	Home Office	32590	2309854.97	277009.18
3	Consumer	92157	6507949.42	749239.78

```
--What is the average discount availed by each customer segment?
SELECT SEGMENT, AVG(DISCOUNT)
FROM [dbo].[Customer$]
GROUP BY SEGMENT
```

Results Messages		
	SEGMENT	(No column name)
1	Corporate	0.142931103765636
2	Home Office	0.140897142245534
3	Consumer	0.143602157025405

```
--How does the order priority vary across different customer segments?
SELECT SEGMENT, ORDER_PRIORITY, COUNT(ORDER_ID) AS NUMBEROFORDERS
FROM [dbo].[Customer$]
GROUP BY SEGMENT, ORDER_PRIORITY
```

Results Messages			
	SEGMENT	ORDER_PRIORITY	NUMBEROFORDERS
1	Corporate	Medium	9069
2	Corporate	Low	744
3	Corporate	High	4431
4	Corporate	Critical	1185
5	Consumer	Medium	15017
6	Consumer	High	8257
7	Home Office	Low	507
8	Home Office	High	2813
9	Home Office	Medium	5347
10	Consumer	Low	1173
11	Home Office	Critical	676
12	Consumer	Critical	2071

```
--Profile the customers based on their frequency of purchase - calculate
frequency of purchase for each customer
SELECT CUSTOMER_ID, CUSTOMER_NAME, COUNT(DISTINCT(ORDER_ID)) AS PURCHASEFREQUENCY
FROM [dbo].[Customer$]
GROUP BY CUSTOMER_ID, CUSTOMER_NAME
ORDER BY 3 DESC
```

Results Messages			
	CUSTOMER_ID	CUSTOMER_NAME	PURCHASEFREQUENCY
1	PO-18850	Patrick O'Brill	41
2	MP-17965	Michael Paige	39
3	KH-16690	Kristen Hastings	39
4	JH-15985	Joseph Holt	38
5	AR-10825	Anthony Rawles	38
6	CK-12205	Chloris Kastensmidt	38
7	WB-21850	William Brown	38
8	ZC-21910	Zuschuss Carroll	37
9	NS-18640	Noel Staavos	37
10	SZ-20035	Sam Zeldin	37
11	SC-20380	Shahid Colliester	37
12	TP-21130	Theone Pippenger	37
13	DW-13585	Dorothy Wardle	37
14	BE-11335	Bill Eplett	37
15	JG-15805	John Grady	37
16	EM-13960	Eric Murdock	37
17	FO-14305	Frank Olson	37

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM) | TASNEEM\tasne (54) | Superstore | 00:00:00 | 1,590 rows

```
--Do the high frequent customers are contributing more revenue
SELECT CUSTOMER_ID, CUSTOMER_NAME, COUNT(DISTINCT(ORDER_ID)) AS
PURCHASEFREQUENCY, ROUND(SUM(Sales),2) AS TOTALSALES
FROM [dbo].[Customer$]
GROUP BY CUSTOMER_ID, CUSTOMER_NAME
ORDER BY 3 DESC
```

Results Messages			
	CUSTOMER_ID	CUSTOMER_NAME	PURCHASEFREQUENCY
1	PO-18850	Patrick O'Brill	41
2	MP-17965	Michael Paige	39
3	KH-16690	Kristen Hastings	39
4	JH-15985	Joseph Holt	38
5	AR-10825	Anthony Rawles	38
6	CK-12205	Chloris Kastensmidt	38
7	WB-21850	William Brown	38
8	ZC-21910	Zuschuss Carroll	37
9	NS-18640	Noel Staavos	37
10	SZ-20035	Sam Zeldin	37
11	SC-20380	Shahid Colliester	37
12	TP-21130	Theone Pippenger	37
13	DW-13585	Dorothy Wardle	37
14	BE-11335	Bill Eplett	37
15	JG-15805	John Grady	37
16	EM-13960	Eric Murdock	37
17	FO-14305	Frank Olson	37

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM) | TASNEEM\tasne (54) | Superstore | 00:00:00 | 1,590 rows

```
--what is the profit margin across the buckets
-- TO FIND THE MARGIN PROFIT WE NEED TO SUBTRACT COST FROM SALES THEN DIVDE BY
SALES ASSUMING THAT THIS IS THE PROFIT COLUMN WE DIVIDE PROFIT/SALES
```

```
SELECT
    Product_Name,
SUM(Profit) AS TotalProfit,
    SUM(Sales) AS TotalSales,
    (SUM(Profit) / NULLIF(SUM(Sales), 0)) * 100 AS ProfitMargin
FROM
    [dbo].[Customer$]
GROUP BY
    Product_Name
ORDER BY
    ProfitMargin DESC;
```

Results Messages				
	Product Name	TotalProfit	TotalSales	ProfitMargin
1	Adams Telephone Message Book w/Frequently-Called Nu...	111.72	223.44	50
2	Tops Green Bar Computer Printout Paper	171.29	342.58	50
3	Avery 475	133.2	266.4	50
4	Canon imageCLASS MF7460 Monochrome Digital Laser ...	1995.99	3991.98	50
5	Southworth Structures Collection	36.4	72.8	50
6	Xerox 1890	122.35	244.7	50
7	Avery 5	2.8224	5.76	49
8	Xerox 1918	75.9696	155.04	49
9	Xerox 1987	45.3152	92.48	49
10	Alva V4110MDD Micro-Cut Shredder	3772.9461	7699.89	49
11	Strathmore #10 Envelopes, Ultimate White	309.9348	632.52	49
12	Hewlett-Packard Deskjet 6988DT Refurbished Printer	1668.205	3404.5	49
13	Avery 478	43.3062	88.38	49
14	Xerox 193	38.0926	77.74	49
15	Color-Coded Legal Exhibit Labels	7.2177	14.73	49
16	Xerox 1983	14.651	29.9	49
17	Xerox 1004	6.3604	13.06	49

Query executed successfully

TACNEEMACON EYDRESC (16.0 RTM) | TACNEEMItasca (54) | Sunetova | 000000 | 3788 mm

--Which customer segment is most profitable in each year?

```

WITH YearlySegmentProfit AS (
    SELECT
        YEAR(NEW_Order_Date) AS Year,
        Segment,
        SUM(Profit) AS TotalProfit
    FROM
        [dbo].[Customer$]
    GROUP BY
        YEAR(NEW_Order_Date),
        Segment
),
RankedYearlySegmentProfit AS (
    SELECT
        Year,
        Segment,
        TotalProfit,
        RANK() OVER(PARTITION BY Year ORDER BY TotalProfit DESC) AS ProfitRank
    FROM
        YearlySegmentProfit
)
SELECT
    Year,
    Segment,
    TotalProfit
FROM
    RankedYearlySegmentProfit
WHERE
    ProfitRank = 1;

```

Results		Messages	
	Year	Segment	TotalProfit
1	2011	Consumer	117337.49406
2	2012	Consumer	165799.19094
3	2013	Consumer	208427.733980001
4	2014	Consumer	257675.36308

```
--How the customers are distributed across the countries- -
SELECT COUNTRY, COUNT(DISTINCT(CUSTOMER_NAME)) AS CUSTOMERS
FROM [dbo].[Customer$]
GROUP BY COUNTRY
ORDER BY 2 DESC
```

Results		Messages	
	COUNTRY	CUSTOMERS	
1	United States	793	
2	France	679	
3	Mexico	670	
4	Australia	660	
5	Germany	582	
6	China	549	
7	United Kingdom	529	
8	India	494	
9	Brazil	472	
10	Indonesia	468	
11	Turkey	463	
12	Italy	376	
13	Spain	337	
14	Nigeria	332	
15	Dominican Republic	303	
16	El Salvador	299	
17	Costa Rica	296	

Query executed successfully.

TASNEEM\SQLEXPRESS (16.0 RTM) | TASNEEM\tasne (54) | Superstore | 00:00:00 | 147 rows