

## Description

As one of the Business Intelligence Analysts in the Superstore, you are asked to support analysis needs, both from the internal BI team itself and from other teams such as Marketing, Business Development, Sales, etc. Here are some analysis requests from other teams that are most urgent to complete. As a member of the BI Analyst, you are asked to help with the following problems!

### Case 1

Same day ship mode is a service where the product ordered by the customer can be sent directly on the same day as the day of order. But in reality, not all customers who order ship mode same day receive the benefits of this service well. In other words, there are also some same day orders that are not delivered on the same day as the order day. The Operations Team would like to further analyze this to be followed up. You are asked to display the number of orders same day which is delayed in delivery.

	total_delayed_sameday bigint	
1		24

The same day ship mode has 24 orders are delayed, this finding will be an evaluation for the operational team to pay attention to the same day ship mode service, so that consumers get the true benefits of the same day service

## Case 2

The Sales team asked the Business Intelligence Analyst for help to analyze the performance of the Category and Subcategory of the products owned by the company. You are asked to display the following metrics for each of the existing Category-Subcategory pairs:

- Average discount
- Average profit

Don't forget to display the full Category and Subcategory names and not just display the Product ID so that the Sales Team easy to understand the results of your analysis!

	Data Output	Explain	Messages	Notifications
	category character varying	subcategory character varying	avg_discount double precision	avg_profit double precision
1	Technology	Copiers	0.16176470588235295	817.9091897058823
2	Technology	Accessories	0.07845161290322622	54.111787999999905
3	Technology	Phones	0.1545568053993343	50.07393768278964
4	Furniture	Chairs	0.17017828200972449	43.095893517017856
5	Office Supplies	Appliances	0.16652360515021464	38.9227583690987
6	Technology	Machines	0.30608695652173884	29.43266869565208
7	Office Supplies	Envelopes	0.0803149606299211	27.41801850393702
8	Office Supplies	Storage	0.07470449172576875	25.152277068557904
9	Office Supplies	Paper	0.07489051094890578	24.856619927007277
10	Office Supplies	Binders	0.3722915298752447	19.843574064346672
11	Office Supplies	Labels	0.06868131868131852	15.236961538461534
12	Furniture	Furnishings	0.13834900731452457	13.645918077324959
13	Office Supplies	Art	0.07487437185929686	8.200737437185929
14	Office Supplies	Fasteners	0.08202764976958511	4.375659907834099
15	Office Supplies	Supplies	0.0768421052631578	-6.258418421052627
16	Furniture	Bookcases	0.211140350877193	-15.230508771929834
17	Furniture	Tables	0.26128526645768047	-55.56577147335423

Technology category products with copiers subcategory are products that have the highest average profit, and furniture category products with tables subcategory are products that have the lowest average profit. So the sales team can consider these findings to get more profit than before.

### Case 3

The Business Development team is considering a more in-depth expansion in State California, Texas, and Georgia. For their consideration, you are asked to display the performance of each customer segment in the three States for 2016 only. The requested performance metrics are as follows:

- Total sales
- Average profit

	Data Output	Explain	Messages	Notifications
	segment character varying		total_sales double precision	avg_profit double precision
1	Home Office		34897.953000000001	34.66199395973155
2	Corporate		50951.910999999999	33.57349056603775
3	Consumer		90982.319600000002	30.32965562913905

The customer segment for State California, Texas and Georgia that has the highest profit is Home Office, and the customer segment that has the lowest profit is Consumer. So Business Development team can use this analysis for consideration in expanding their business.

## Case 4

The Business team is interested in seeing which region has the highest number of discount-loving customers. Therefore, the Business Team asks you as a Business Intelligence Analyst to display the number of people/customers who have an average discount above 0.4 for each existing region.

Data Output		Explain	Messages	Notifications
	region character varying		total_cust_avgdisc_morethan_40 bigint	
1	South			2
2	West			3
3	East			2
4	Central			3

West and central regions are regions that have more discount-loving customers than the south and east region. So that the business team can consider the discount strategy in the future for each region