

Business Questions and Answers

1. Total revenue

```
SELECT FORMAT(SUM([revenue]), 'N0') AS total_revenue  
FROM [dbo].[customer_shopping_data]
```

total_revenue
251,478,997

2. Total revenue for each year

```
SELECT [year], FORMAT(SUM([revenue]), 'N0') AS total_revenue  
FROM [dbo].[customer_shopping_data]  
GROUP BY [year]
```

year	total_revenue
2021	114,548,134
2022	115,424,734
2023	21,506,129

3. Number of shopping malls

```
SELECT DISTINCT ([shopping_mall])  
FROM [dbo].[customer_shopping_data]
```

	shopping_mall
1	Metropol AVM
2	Forum Istanbul
3	Viaport Outlet
4	Metrocity
5	Kanyon
6	Mall of Istanbul
7	Cevahir AVM
8	Zorlu Center
9	Istinye Park
10	Emaar Square Mall

4. Revenue by shopping mall

```
SELECT [shopping_mall] , FORMAT(SUM ([revenue]), 'N0') AS 'revenue generated'  
FROM [dbo].[customer_shopping_data]  
GROUP BY [shopping_mall]  
ORDER BY 'revenue generated' DESC
```

	shopping_mall	revenue generated
1	Mall of Istanbul	50,867,162
2	Kanyon	50,548,901
3	Metrocity	37,298,757
4	Metropol AVM	25,377,193
5	Istinye Park	24,616,289
6	Zorlu Center	12,899,633
7	Cevahir AVM	12,643,775
8	Viaport Outlet	12,519,960
9	Emaar Squar...	12,404,776
10	Forum Istanbul	12,302,551

5. Quantity sold by shopping mall

```
SELECT [shopping_mall] , FORMAT(SUM ([quantity]), 'N0') AS 'total quantity sold'  
FROM [dbo].[customer_shopping_data]  
GROUP BY [shopping_mall]  
ORDER BY 'total quantity sold' DESC
```

	shopping_mall	total quantity sold
1	Mall of Istanbul	60,114
2	Kanyon	59,457
3	Metrocity	44,894
4	Metropol AVM	30,530
5	Istinye Park	29,465
6	Zorlu Center	15,234
7	Cevahir AVM	14,949
8	Forum Istanbul	14,852
9	Viaport Outlet	14,716
10	Emaar Squar...	14,501

6. Total quantity sold by day_of_week

```
SELECT [day_of_week], FORMAT(SUM ([quantity]),'N0') AS 'total quantity sold'
FROM [dbo].[customer_shopping_data]
GROUP BY [day_of_week]
ORDER BY 'total quantity sold' DESC
```

day_of_week	total quantity sold
Monday	43,568
Friday	43,075
Tuesday	42,822
Thursday	42,469
Wednesday	42,443
Sunday	42,179
Saturday	42,156

7. Most common payment method

```
SELECT [payment_method], COUNT([payment_method]) AS 'no of times used'
FROM [dbo].[customer_shopping_data]
GROUP BY [payment_method]
ORDER BY 'no of times used' DESC
```

payment_method	no of times used
Cash	44447
Credit Card	34931
Debit Card	20079

8. Busiest shopping days

```
SELECT [day_of_week], COUNT(*) AS total_transactions
FROM [dbo].[customer_shopping_data]
GROUP BY [day_of_week]
ORDER BY [day_of_week] DESC
```

Results			Messages
	day_of_week	total_transactions	
1	Wednesday	14120	
2	Tuesday	14217	
3	Thursday	14129	
4	Sunday	14140	
5	Saturday	14121	
6	Monday	14383	
7	Friday	14347	

9. Average price per product category

```
SELECT category, ROUND (AVG(price), 2) AS avg_price
FROM [dbo].[customer_shopping_data]
GROUP BY category
ORDER BY avg_price DESC;
```

	category	avg_price
1	Technology	3156.94
2	Shoes	1807.39
3	Clothing	901.08
4	Cosmetics	122.45
5	Toys	107.73
6	Books	45.57
7	Souvenir	34.89
8	Food & Beverage	15.67

10. Revenue by product category

```
SELECT [category], SUM([revenue]) AS 'total revenue'
FROM [dbo].[customer_shopping_data]
GROUP BY [category]
ORDER BY 'total revenue' DESC
```

	category	total quantity sold
1	Clothing	103558
2	Cosmetics	45465
3	Food & Beverage	44277
4	Toys	30321
5	Shoes	30217
6	Technology	15021
7	Books	14982
8	Souvenir	14871

11. Total quantity sold by product category

```
SELECT [category], SUM([quantity]) AS 'total quantity sold'
FROM [dbo].[customer_shopping_data]
GROUP BY [category]
ORDER BY 'total quantity sold' DESC
```

category	total quantity sold
Clothing	103558
Cosmetics	45465
Food & Beverage	44277
Toys	30321
Shoes	30217
Technology	15021
Books	14982
Souvenir	14871

12. Average order quantity by product category

```
SELECT [category], AVG([quantity]) AS 'avg order quant'
FROM [dbo].[customer_shopping_data]
GROUP BY [category]
```

	category	avg order quant
1	Clothing	3
2	Toys	3
3	Shoes	3
4	Souvenir	2
5	Food & Beverage	2
6	Books	3
7	Cosmetics	3
8	Technology	3

13. Gender distribution

```
SELECT [gender], COUNT([gender]) AS 'population'
FROM [dbo].[customer_shopping_data]
GROUP BY [gender]
ORDER BY 'population' DESC
```

	gender	population
1	Female	59482
2	Male	39975

14. Average purchase amount by gender

```
SELECT gender, AVG(quantity * price) AS avg_purchase_amount
FROM [dbo].[customer_shopping_data]
GROUP BY gender
ORDER BY avg_purchase_amount
```

	gender	avg_purchase_amount
1	Female	2525.25361317475
2	Male	2534.05022786764

15. Most common product category by gender

```
SELECT gender, category, COUNT(*) AS total_transactions
FROM [dbo].[customer_shopping_data]
GROUP BY gender, category
ORDER BY gender, total_transactions DESC;
```

	gender	category	total_transactions
1	Female	Clothing	20652
2	Female	Cosmetics	9070
3	Female	Food & Beverage	8804
4	Female	Toys	6085
5	Female	Shoes	5967
6	Female	Souvenir	3017
7	Female	Technology	2981
8	Female	Books	2906
9	Male	Clothing	13835
10	Male	Cosmetics	6027
11	Male	Food & Beverage	5972
12	Male	Shoes	4067
13	Male	Toys	4002
14	Male	Books	2075
15	Male	Technology	2015
16	Male	Souvenir	1982

16. Age group distribution

```
SELECT [age_group], COUNT([age_group]) AS 'population'  
FROM [dbo].[customer_shopping_data]  
GROUP BY [age_group]  
ORDER BY 'population' DESC
```

Results			Messages		
	age_group	population			
1	55-69	28430			
2	35-44	19401			
3	25-34	19081			
4	45-54	19049			
5	18-24	13496			