

Challenge 3 - Customer Insights



TABLES:

customers

customer_id	first_shop	age	rewards	can_email
1	2022-03-20	23	yes	no
2	2022-03-25	26	no	no
3	2022-04-06	32	no	no
4	2022-04-13	25	yes	yes
5	2022-04-22	49	yes	yes
6	2022-06-18	28	yes	no
7	2022-06-30	36	no	no
8	2022-07-04	37	yes	yes

orders

order_id	customer_id	date_shop	sales_channel	country_id
1	1	2023-01-16	retail	1
2	4	2023-01-20	retail	1
3	2	2023-01-25	retail	2
4	3	2023-01-25	online	1
5	1	2023-01-28	retail	3
6	5	2023-02-02	online	1
7	6	2023-02-05	retail	1
8	3	2023-02-11	online	3

baskets

order_id	product_id
1	1
1	2
1	5
2	4
3	3
4	2
4	1
5	3
5	5
6	4
6	3
6	1
7	2
7	1
8	3
8	3

products

product_id	category	price
1	food	5.99
2	sports	12.49
3	vitamins	6.99
4	food	0.89
5	vitamins	15.99

country

country_id	country_name	head_office
1	UK	London
2	USA	New York
3	China	Beijing

1. What are the names of all the countries in the country table?

```
1  -- 1. What are the names of all the countries in the country table?
2
3 • select country_name from country;
4
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

country_name
UK
USA
China

2. What is the total number of customers in the customers table?

```
1  -- 2. What is the total number of customers in the customers table?
2
3 • select count(customer_id) as total_NumberOfCustomers
4  from customers;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

total_NumberOfCustomers
8

3. What is the average age of customers who can receive marketing emails (can_email is set to 'yes')?

```
1  -- 3. What is the average age of customers who can receive marketing emails (can_email is set to 'yes')?
2
3
4 • select avg(age) as Average_age from customers where can_email='yes';
5
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Average_age				
37.0000				

4. How many orders were made by customers aged 30 or older?

```
1  -- How many orders were made by customers aged 30 or older?
2 • with cte as (
3      select c.age, count(o.order_id) as Tt_order from customers c
4      join orders o on c.customer_id = o.customer_id
5      group by c.customer_id
6  )
7  select sum(Tt_order) as Total_orders from cte where age >= 30;
8
9
10
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Total_orders				
3				

5. What is the total revenue generated by each product category?

```
1  -- 5. What is the total revenue generated by each product category?
2
3 • select p.category ,sum(price) from products p
4   where category='food'
5   group by p.category;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
category	sum(price)		
▶ food	6.88		

6. What is the average price of products in the 'food' category?

```
1  -- 6. What is the average price of products in the 'food' category?
2
3 • select avg(price) as avgProductPrice from products where category='food';
4
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
avgProductPrice			
▶ 3.440000			

7.How many orders were made in each sales channel (sales_channel column) in the orders table ?

```
1  -- 7. How many orders were made in each sales channel (sales_channel)
2
3 • select sales_channel, count(order_id) as NoOfOrders from orders
4 group by sales_channel;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
sales_channel	NoOfOrders			
retail	5			
online	3			

8.What is the date of the latest order made by a customer who can receive marketing emails ?

```
1  -- 8.What is the date of the latest order made by a customer who
2
3 • select max(o.date_shop) from orders o
4 join customers c
5 on c.customer_id=o.customer_id
6 where c.can_email='yes'
7
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
max(o.date_shop)				
2023-02-02				

9. What is the name of the country with the highest number of orders?

```
1  -- 9. What is the name of the country with the highest number of orders?
2
3 • with cte as
4 (
5   select c.country_name ,count(o.order_id)as orders1 from orders o
6   join country c
7   on c.country_id = o.country_id
8   group by country_name
9 )
10 select * from cte where orders1 =(select max(orders1) from cte)
11
12
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

country_name	orders1
UK	5

10. What is the average age of customers who made orders in the 'vitamins' product category?

```
1  -- 10. What is the average age of customers who made orders in the 'vitamins' product category?
2
3 • select avg(c.age) as avg_age from customers c
4 join (
5   select distinct o.customer_id from orders o
6   where o.order_id IN (select distinct order_id from baskets
7   where product_id IN (select product_id from products where category ='vitamins'))
8 ) r
9 on c.customer_id=r.customer_id
10
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

avg_age
32.5000