

SQL CASE STUDY

Challenge 3 Customer Insights

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INTRODUCTION:

You are a Customer Insights Analyst for 'The General Store'.

Can you analyze the following tables to find out crucial information about your customers to provide to your marketing team?

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?

```
SELECT country_name  
FROM country;
```

country_name
UK
USA
China

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

```
SELECT  
COUNT(customer_id) AS Total_customers  
FROM customers;
```

Total_customers
8

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

```
SELECT
```

```
ROUND(AVG(age), 2) AS avg_age_of_customers
```

```
FROM customers
```

```
WHERE can_email = 'Yes';
```

avg_age_of_customers
37.00

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

```
SELECT
age,
COUNT(order_id) AS orders_count
FROM customers c
JOIN orders o ON c.customer_id = o.customer_id
WHERE age >= 30
GROUP BY age;
```

age	orders_count
32	2
49	1

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

```
SELECT  
category,  
SUM(price) AS Total_revenue  
FROM products  
GROUP BY category  
ORDER BY total_revenue DESC;
```

category	Total_revenue
vitamins	22.98
sports	12.49
food	6.88

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

```
SELECT  
category,  
AVG(price) AS avg_price  
FROM products  
WHERE category = 'food'  
GROUP BY category;
```

category	avg_price
food	3.440000

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

```
SELECT  
sales_channel,  
COUNT(order_id) AS orders_count  
FROM orders  
GROUP BY sales_channel  
ORDER BY orders_count DESC;
```

sales_channel	orders_count
retail	5
online	3

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

```
SELECT  
MAX(o.date_shop) AS latest_order_date  
FROM orders o  
JOIN customers c ON o.customer_id = c.customer_id  
WHERE can_email = 'Yes';
```

latest_order_date

2023-02-02

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

```
SELECT
country_name, COUNT(order_id) AS orders_count
FROM country co
JOIN orders o ON co.country_id = o.country_id
GROUP BY country_name
ORDER BY orders_count DESC
LIMIT 1;
```

country_name	orders_count
UK	5

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

```
SELECT  
AVG(c.age) AS avg_age  
FROM customers c  
JOIN orders o ON c.customer_id = o.customer_id  
JOIN baskets b ON o.order_id = b.order_id  
JOIN products p ON b.product_id = p.product_id  
WHERE p.category = 'vitamins';
```

avg_age
29.7143

Thankyou