Customer Insights Case Study Analysis Using SQL

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

COUNTRY

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

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

QUESTIONS

1. What are the names of all the countries in the country table?
2. What is the total number of customers in the customers table?
3. What is the average age of customers who can receive marketing emails (can_email is set to 'yes')?
4. How many orders were made by customers aged 30 or older?
5. What is the total revenue generated by each product category?
6. What is the average price of products in the 'food' category?
7. How many orders were made in each sales channel (sales_channel column) in the orders table?
8. What is the date of the latest order made by a customer who can receive marketing emails?
9. What is the name of the country with the highest number of orders?
10. What is the average age of customers who made orders in the 'vitamins' product category?

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?

```sql
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')?

```sql
SELECT ROUND(AVG(age)) AS avg_age_of_customers FROM customers
WHERE can_email='yes';
```

avg_age_of_customers
37

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

```sql
SELECT COUNT(o.order_id) AS total_orders FROM orders o
JOIN customers cu ON o.customer_id=cu.customer_id
WHERE cu.age>=30;
```

total_orders
3

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

```sql
SELECT category,SUM(price) AS total_revenue FROM products P
JOIN baskets b ON P.product_id=b.product_id
GROUP BY category;
```

category	total_revenue
food	25.74
vitamins	66.93
sports	37.47

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

```sql
SELECT category,round(AVG(price),2) AS avg_price FROM products
WHERE category='food'
GROUP BY category;
```

category	avg_price
food	3.44

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

```sql
SELECT sales_channel,COUNT(order_id) AS total_orders FROM orders
GROUP BY sales_channel;
```

sales_channel	total_orders
online	3
retail	5

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

```sql
SELECT cu.customer_id,o.date_shop AS latest_order FROM orders o
JOIN customers cu ON o.customer_id=cu.customer_id
WHERE cu.can_email='yes'
ORDER BY latest_order DESC
LIMIT 1;
```

customer_id	latest_order
5	2023-02-02

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

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

country_name	no_of_orders
UK	5

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

```sql
SELECT ROUND(AVG(cu.age)) AS avg_age_of_customers FROM customers cu
JOIN orders o ON cu.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_of_customers
30