CHALLENGE 3

SQL CASE STUDY

CUSTOMER INSIGHTS

INTRODUCTION

- As a Customer Insights Analyst for “The General Store”.
- I have to analyzed the following tables to find out crucial information about our customer to provide insights to the marketing team.
- The case study consist of 5 Tables :
  - Customers
  - Orders
  - Baskets
  - Products
  - Country

TABLE USED

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

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

Q1. What are the names of all the countries in the country table?

```
select country_name from country
```

output :

	country_name character varying (50)
1	UK
2	USA
3	China

Q2. What is the total number of customers in the customers table?

```sql
select count(*) as total_customer
from customers
```

output :

	total_customer bigint
1	8

Q3. 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
from customers
where can_email = 'yes'
```

output :

	avg_age numeric
1	37

Q4. How many orders were made by customers aged 30 or older?

```sql
select c.customer_id,c.age,count(c.*) as total_order
from customers as c
join orders as o on c.customer_id = o.customer_id
where age >= 30
group by c.customer_id
```

output :

	customer_id [PK] integer	age integer	total_order bigint
1	3	32	2
2	5	49	1

Q5. What is the total revenue generated by each product category?

```sql
select p.category,sum(p.price) as revenue from orders as o
join baskets as b on o.order_id = b.order_id
join products as p on b.product_id = p.product_id
group by p.category
order by revenue desc
```

output :

	category character varying (50)	revenue numeric
1	vitamins	66.93
2	sports	37.47
3	food	25.74

Q6. 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 1
```

output :

	category character varying (50)	avg_price numeric
1	food	3.44

Q7. How many orders were made in each sales channel (sales_channel column) in the orders table?

```sql
select sales_channel,count(o.*) as order_count
from orders as o
group by 1
```

output :

	sales_channel character varying (50)	order_count bigint
1	online	3
2	retail	5

Q8.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 from customers as c
join orders as o on c.customer_id = o.customer_id
where c.can_email = 'yes'
```

output :

	latest_order date
1	2023-02-02

Q9. What is the name of the country with the highest number of orders?

```
select c.country_name,count(c.*)as highest_order
from orders as o
join country as c on o.country_id = c.country_id
group by 1
order by 2 desc
limit 1
```

output :

	country_name character varying (50)	highest_order bigint
1	UK	5

Q10. What is the average age of customers who made orders in the 'vitamins' product category?

```sql
select p.category,round(avg(c.age))as avg_age,count(o.*) as order_count
from customers as c
join orders as o on c.customer_id = o.customer_id
join baskets as b on o.order_id = b.order_id
join products as p on b.product_id = p.product_id
where category = 'vitamins'
group by 1
```

output :

	category character varying (50)	avg_age numeric	order_count bigint
1	vitamins	30	7

THANK YOU

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