STEEL DATA

Challenge 3 - Customer Insights

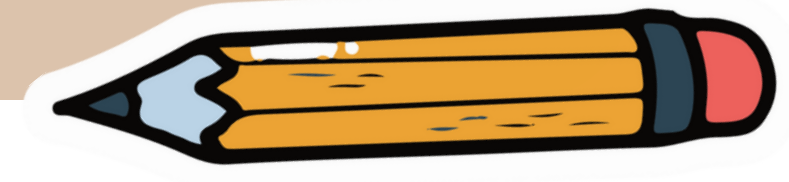# SQL Case Study

Challenge 3 - Customer Insights
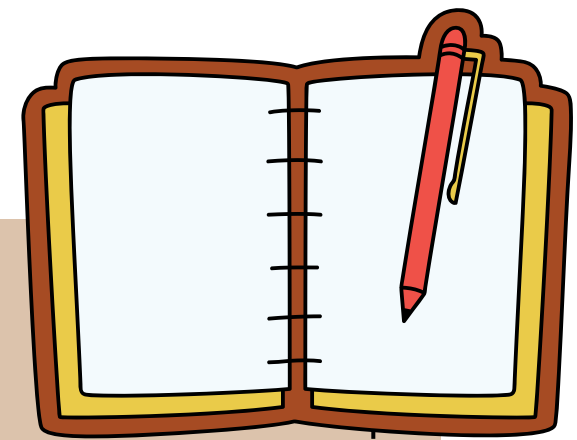
Created By: **SHRADDHA SHUKLA**
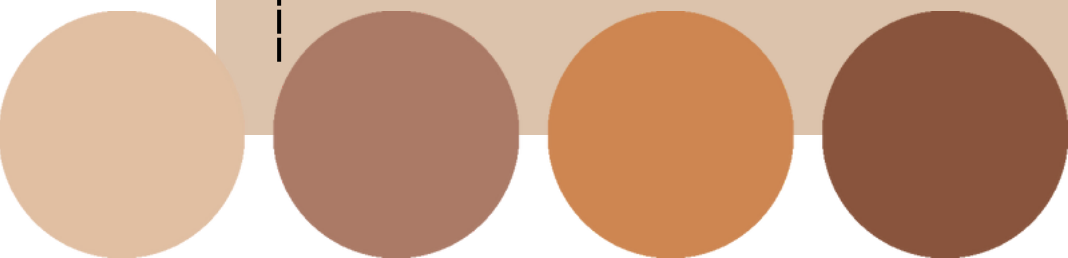
STEEL DATA

Introduction

- You are a Customer Insights Analyst for 'The General Store'
- Can you analyse the following tables to find out crucial information about your customers to provide to your marketing team?

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?

STEEL DATA

Tables

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

Question:1

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

```sql
SELECT
    country_name
FROM country;
```

	country_name
▶	UK
	USA
	China

Question:2

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

Query:

```sql
SELECT
    COUNT(distinct customer_id) AS total_num_of_customers
FROM customers;
```

Output

total_num_of_customers
8

Question:3

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

Query

```sql
SELECT
    ROUND(AVG(age),0) AS average_age
FROM customers
WHERE can_email = "yes";
```

Output

	average_age
▶	37

Question:4

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

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

	total_orders
▶	3

Question:5

What is the total revenue generated by each product category?

Query

```sql
SELECT
  p.product_id,p.category,
  count(b.order_id) AS total_orders,
  COUNT(b.order_id)*p.price AS revenue
FROM products p
JOIN baskets b
ON p.product_id = b.product_id
GROUP  BY p.product_id,p.category;
```

Output

product_id	category	total_orders	revenue
1	food	4	23.96
2	sports	3	37.47
3	vitamins	5	34.95
4	food	2	1.78
5	vitamins	2	31.98

Question:6

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

Query

```sql
SELECT
 p.product_id,
 ROUND(AVG(p.price),2) AS avg_food_price ,p.category
FROM products p
JOIN baskets b
ON p.product_id = b.product_id
WHERE p.category = "food"
GROUP BY p.product_id,p.category;
```

Output

product_id	avg_food_price	category
1	5.99	food
4	0.89	food

Question:7

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

Query

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

Output

sales_channel	total_orders
retail	5
online	3

Question:8

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

```
SELECT
    o.date_shop, c.can_email
FROM orders o JOIN customers c
ON c.customer_id=o.customer_id
WHERE c.can_email = "yes"
ORDER BY o.date_shop DESC
LIMIT 1;
```

Output

date_shop	can_email
2023-02-02	yes

Question:9

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

```sql
SELECT
    c.country_name ,count(o.order_id) AS num_of_orders
FROM country c JOIN orders o
ON c.country_id = o.country_id
GROUP BY c.country_name
ORDER BY  num_of_orders DESC
LIMIT 1;
```

Output

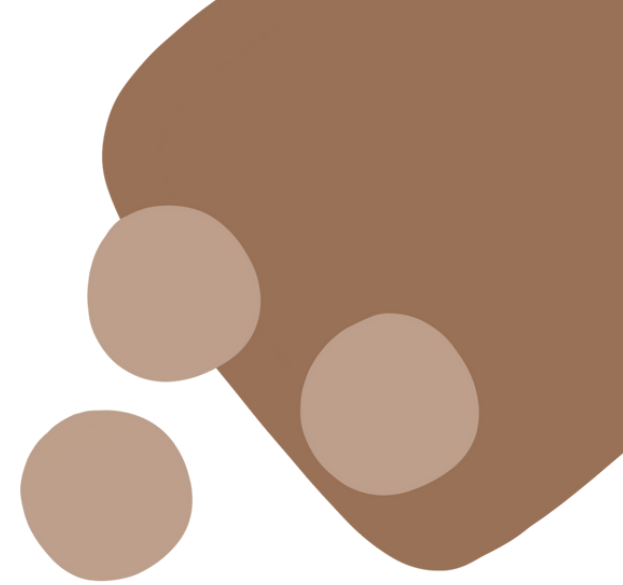| country_name	num_of_orders
UK	5

Question:10

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

Query

```sql
SELECT
    ROUND(AVG(c.age),1) AS avg_age_of_customer
FROM products p
JOIN baskets b
ON p.product_id = b.product_id
JOIN orders o ON b.order_id = o.order_id
JOIN customers c ON o.customer_id = c.customer_id
WHERE p.category = "vitamins";
```

Output

avg_age_of_customer
▶ 29.7