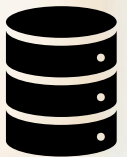# Challenge 3 - Customer Insights

Tools Used:- My SQL, Power point

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☐**Intro:-**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?

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

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

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

```sql
96 • select country_name from country;
97
98
```

Result Grid | Filter Row

country_name
UK
USA
China

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

```sql
select count(customer_id)
as no_of_customers
from customers;
```

Limit to 50000 rows

Result Grid	Filter Rows:
no_of_customers
8

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

```sql
select round(avg(age),2)
as Avg_Age from customers
where can_email="yes";
```

Result Grid		Filter Ro
Avg_Age		
▶ 37.00		

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

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

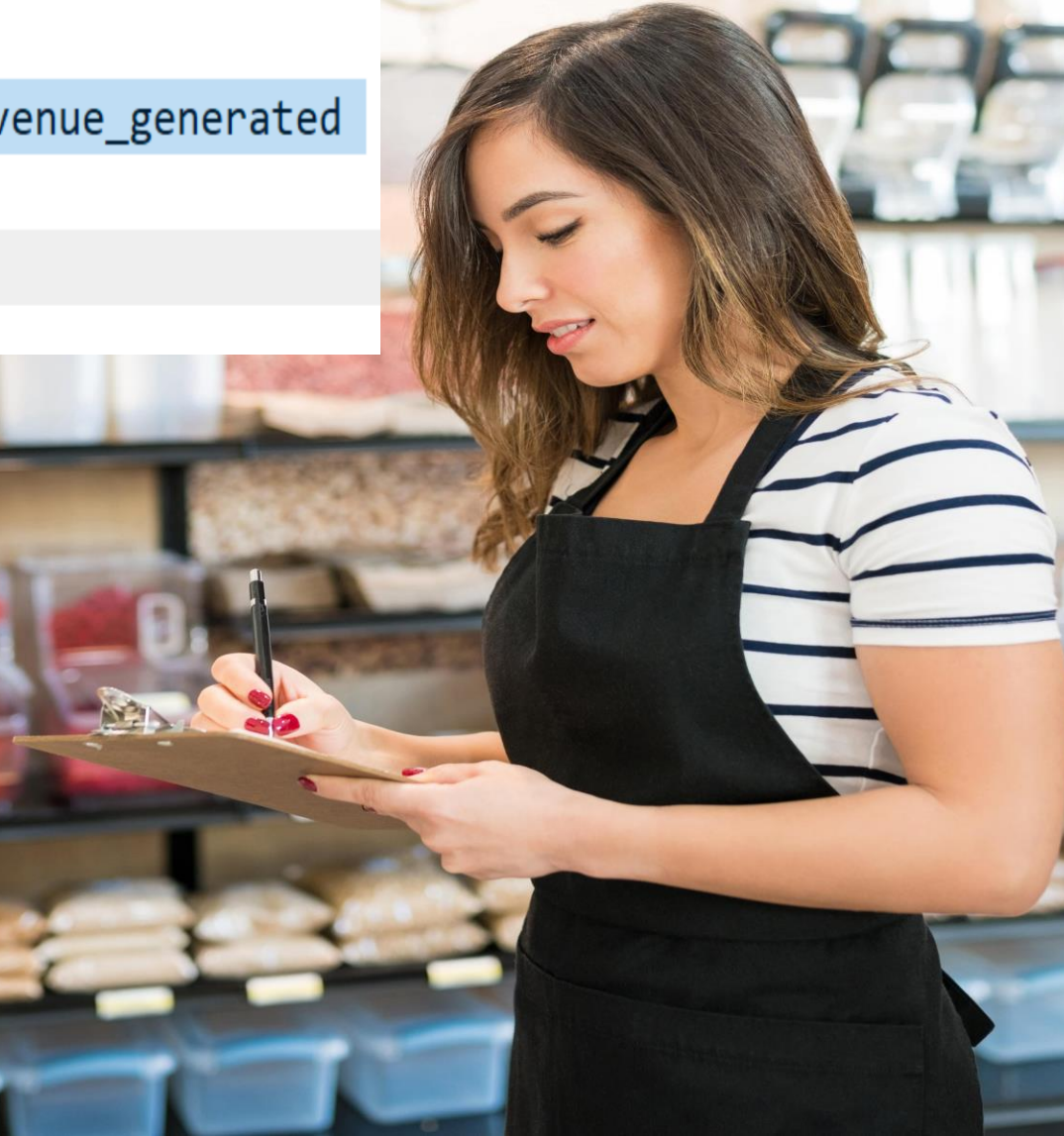| Result Grid		Filter Rows
	age	No_of_orders
▸	32	2
	49	1

What is the total revenue generated by each product category?

Execute the selected portion of the script or everything, if there is no selection

```sql
select category,sum(price) as Revenue_generated
from products
group by category;
```

| Result Grid | | Filter Rows: | Export: | |

category	Revenue_generated
food	6.88
sports	12.49
vitamins	22.98

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

```sql
30•  select round(avg(price),2)
31   as Avg_Price_of_foods from products
32   where category="food";
```

Result Grid	Filter Row
Avg_Price_of_foods
3.44

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

```sql
select sales_channel, count(order_id)
as No_of_orders from orders
group by sales_channel;
```

	sales_channel	No_of_orders
▶	retail	5
	online	3

Result Grid | Filter Rows:

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

```sql
select o.date_shop
as latest_order_date ,c.customer_id
from orders as o
join customers as c
on o.customer_id=c.customer_id
where can_email="yes"
order by date_shop desc
limit 1;
```

Result Grid		Filter Rows:		Export:
latest_order_date	customer_id			
2023-02-02	5			

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

```sql
select c.country_name, count(o.order_id) as No_of_orders
from country as c
join orders as o
on c.country_id=o.country_id
group by c.country_name
order by No_of_orders desc
limit 1;
```

Result Grid		Filter Rows:	Export:	Wrap C
	country_name	No_of_orders		
▶	UK	5		

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

```sql
select p.category, round(avg(c.age),2) as Avg_age
from products as p
 inner join baskets as b
on p.product_id=b.product_id
 inner join orders as o
on b.order_id=o.order_id
inner join customers as c
on o.customer_id=c.customer_id
where category="vitamins";
```

	category	Avg_age
▶	vitamins	29.71

Key Insights

- There are three countries available in the database i.e; USA,UK , INDIA
- Total Number of customers in customer table is 8
- The average age of customers who can receive email is 37.
- Total revenue generated by food, sports and vitamins are $6.88,$2.49,$22.98.
- Average price of category food is 3.44
- There are 2 sales channel retail and online.
- UK has highest number of orders

Learnings

- Order by
- Group by
- Count
- Average
- Inner join
- Full join
- Right join
- Left join
- Limit
- round