



CHALLENGE - 5

SQL CASE STUDY

PUB PRICING ANALYSIS

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CHALLENGE - 5

INTRODUCTION

- As a Pricing Analyst working for a pub chain called 'Pubs "R" Us'
- I have been tasked with analyzing the drinks prices and sales to gain a greater insight into how the pubs in your chain are performing
- The Tables are consisting of Four Tables
 - Pubs
 - Ratings
 - Sales
 - Beverages

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TABLE

pubs

pub_id	pub_name	city	state	country
1	The Red Lion	London	England	United Kingdom
2	The Dubliner	Dublin	Dublin	Ireland
3	The Cheers Bar	Boston	Massachusetts	United States
4	La Cerveceria	Barcelona	Catalonia	Spain

beverages

beverage_id	beverage_name	category	alcohol_content	price_per_unit
1	Guinness	Beer	4.2	5.99
2	Jameson	Whiskey	40	29.99
3	Mojito	Cocktail	12	8.99
4	Chardonnay	Wine	13.5	12.99
5	IPA	Beer	6.8	4.99
6	Tequila	Spirit	38	24.99

ratings

rating_id	pub_id	customer_name	rating	review
1	1	John Smith	4.5	Great pub with a wide selection of beers
2	1	Emma Johnson	4.8	Excellent service and cozy atmosphere
3	2	Michael Brown	4.2	Authentic atmosphere and great beers
4	3	Sophia Davis	4.6	The cocktails were amazing! Will definitely come back.
5	4	Oliver Wilson	4.9	The wine selection here is outstanding
6	4	Isabella Moore	4.3	Had a great time trying different spirits
7	1	Sophia Davis	4.7	Loved the pub food! Great ambience
8	2	Ethan Johnson	4.5	A good place to hang out with friends
9	2	Olivia Taylor	4.1	The whiskey tasting experience was fantastic
10	3	William Miller	4.4	Friendly staff and live music on weekends

sales

sale_id	pub_id	beverage_id	quantity	transaction_date
1	1	1	10	1/5/23
2	1	2	5	1/5/23
3	2	1	8	1/5/23
4	3	3	12	2/5/23
5	4	4	3	2/5/23
6	4	6	6	3/5/23
7	2	3	6	3/5/23
8	3	1	15	3/5/23
9	3	4	7	3/5/23
10	4	1	10	4/5/23
11	1	3	5	6/5/23
12	2	2	3	9/5/23
13	2	5	9	9/5/23
14	3	6	4	9/5/23
15	4	3	7	9/5/23
16	4	4	2	9/5/23
17	1	4	6	11/5/23
18	1	6	8	11/5/23
19	2	1	12	12/5/23
20	3	5	5	13/5/23

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1. How many pubs are located in each country??

```
select country, count(1) as no_of_pub
from pubs
group by country
order by 2 asc;
```

Output:

country	no_of_pub
United Kingdom	1
Ireland	1
United States	1
Spain	1



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2. What is the total sales amount for each pub, including the beverage price and quantity sold?

```
select pub_name, sum(price_per_unit*quantity) as
total_sales
from pubs p
inner join saless s
on p.pub_id = s.pub_id
inner join beverages b
on s.beverage_id = b.beverage_id
group by pub_name
order by 2 desc;
```

Output:

pub_name	total_sales
The Red Lion	532.66
The Cheers Bar	413.57
La Cerveceria	337.72
The Dubliner	308.62



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3. Which pub has the highest average rating?

```
select pub_name, avg(rating) as avg_total
from pubs p
inner join ratings r
on p.pub_id = r.pub_id
group by pub_name
order by 2 desc
limit 1;
```

Output:

pub_name	avg_total
The Red Lion	4.666666667



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4. What are the top 5 beverages by sales quantity across all pubs?

```
select pub_name, avg(rating) as avg_total
from pubs p
inner join ratings r
on p.pub_id = r.pub_id
group by pub_name
order by 2 desc
limit 1;
```

Output:

beverage_name	sale_quantity
Guinness	5
Mojito	4
Chardonnay	4
Tequila	3
Jameson	2



CHALLENGE - 5

5. How many sales transactions occurred on each date?

```
select transaction_date, count(sale_id) as no_of_sales
from saless
group by 1
order by 2 asc;
```

Output:

transaction_date	no_of_sales
04-05-2023	1
06-05-2023	1
12-05-2023	1
13-05-2023	1
02-05-2023	2
11-05-2023	2
01-05-2023	3
03-05-2023	4
09-05-2023	5



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6. Find the name of someone that had cocktails and which pub they had it in.

```
select customer_name, pub_name, category
from pubs p
inner join ratings r
on p.pub_id = r.pub_id
inner join saless s
on r.pub_id = s.pub_id
inner join beverages b
on b.beverage_id = s.beverage_id
where category = 'Cocktail'
```

Output:

customer_name	pub_name	category
Sophia Davis	The Cheers Bar	Cocktail
William Miller	The Cheers Bar	Cocktail
Michael Brown	The Dubliner	Cocktail
Ethan Johnson	The Dubliner	Cocktail
Olivia Taylor	The Dubliner	Cocktail
John Smith	The Red Lion	Cocktail
Emma Johnson	The Red Lion	Cocktail
Sophia Davis	The Red Lion	Cocktail
Oliver Wilson	La Cerveceria	Cocktail
Isabella Moore	La Cerveceria	Cocktail



<CHALLENGE - 5

7. What is the average price per unit for each category of beverages, excluding the category 'Spirit'?

```
select category, avg(price_per_unit) as avg_price
from beverages
where category <> 'Spirit'
group by category ;
```

Output:

category	avg_price
Beer	5.49
Whiskey	29.99
Cocktail	8.99
Wine	12.99



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8. Which pubs have a rating higher than the average rating of all pubs?

```
select pub_name
from pubs p
inner join ratings r
on p.pub_id = r.pub_id
where rating > (select avg(rating) from ratings);
```

Output:

pub_name
The Red Lion
The Cheers Bar
La Cerveceria
The Red Lion



CHALLENGE - 5

9. What is the running total of sales amount for each pub, ordered by the transaction date?

```
select pub_name, transaction_date,  
sum(price_per_unit*quantity) over(partition by pub_name  
order by transaction_date asc) as running_total  
from pubs p  
inner join sales s  
on p.pub_id = s.pub_id  
inner join beverages b  
on s.beverage_id = b.beverage_id;
```



CHALLENGE - 5

Output:

pub_name	transaction_date	running_total
La Cerveceria	02-05-2023	38.97
La Cerveceria	03-05-2023	188.91
La Cerveceria	04-05-2023	248.81
La Cerveceria	09-05-2023	337.72
La Cerveceria	09-05-2023	337.72
The Cheers Bar	02-05-2023	107.88
The Cheers Bar	03-05-2023	288.66
The Cheers Bar	03-05-2023	288.66
The Cheers Bar	09-05-2023	388.62
The Cheers Bar	13-05-2023	413.57
The Dubliner	01-05-2023	47.92
The Dubliner	03-05-2023	101.86
The Dubliner	09-05-2023	236.74
The Dubliner	09-05-2023	236.74
The Dubliner	12-05-2023	308.62
The Red Lion	01-05-2023	209.85
The Red Lion	01-05-2023	209.85
The Red Lion	06-05-2023	254.8
The Red Lion	11-05-2023	532.66
The Red Lion	11-05-2023	532.66



<CHALLENGE - 5

10. For each country, what is the average price per unit of beverages in each category, and what is the overall average price per unit of beverages across all categories?

```
with cte as (  
  select country, category, round(avg(price_per_unit),2) as  
    avg_amount  
  from pubs p  
  inner join saless s  
    on p.pub_id = s.pub_id  
  inner join beverages b  
    on s.beverage_id = b.beverage_id  
  group by 1,2  
,  
  overall_avg_price as (  
    select category, round(avg(price_per_unit), 2) as avg_price  
    from beverages group by 1  
  )  
  select country, ct.category, ct.avg_amount, ovp.avg_price  
  from cte ct  
  inner join overall_avg_price ovp  
    on ct.category = ovp.category  
  order by 2 asc;
```



CHALLENGE - 5

Output:

country	category	avg_amount	avg_price
United Kingdom	Beer	5.99	5.49
Ireland	Beer	5.66	5.49
United States	Beer	5.49	5.49
Spain	Beer	5.99	5.49
United Kingdom	Cocktail	8.99	8.99
Ireland	Cocktail	8.99	8.99
United States	Cocktail	8.99	8.99
Spain	Cocktail	8.99	8.99
United Kingdom	Spirit	24.99	24.99
United States	Spirit	24.99	24.99
Spain	Spirit	24.99	24.99
United Kingdom	Whiskey	29.99	29.99
Ireland	Whiskey	29.99	29.99
United Kingdom	Wine	12.99	12.99
United States	Wine	12.99	12.99
Spain	Wine	12.99	12.99



<CHALLENGE - 5

11. For each pub, what is the percentage contribution of each category of beverages to the total sales amount, and what is the pub's overall sales amount

```
with cte as (  
  select p.pub_name, b.category, sum(price_per_unit*quantity) as  
    sales_category  
  from pubs p inner join saless s on p.pub_id = s.pub_id  
  inner join beverages b  
  on b.beverage_id = s.beverage_id  
  group by 1,2  
)  
sales_amount as (  
  select pub_name, sum(price_per_unit*quantity) as total_sale  
  from pubs p  
  inner join saless s  
  on p.pub_id = s.pub_id  
  inner join beverages b  
  on s.beverage_id = b.beverage_id  
  group by 1  
)  
select ct.pub_name, (ct.sales_category/sa.total_sale)*100 as  
  percentage_contribution, sa.total_sale  
from cte as ct inner join sales_amount as sa  
on ct.pub_name = sa.pub_name  
order by 1 asc;
```



<CHALLENGE - 5

Output:

pub_name	percentage_contribution	total_sale
La Cerveceria	19.231908	337.72
La Cerveceria	44.397726	337.72
La Cerveceria	17.736587	337.72
La Cerveceria	18.633779	337.72
The Cheers Bar	26.085064	413.57
The Cheers Bar	27.7583	413.57
The Cheers Bar	21.986604	413.57
The Cheers Bar	24.170032	413.57
The Dubliner	53.36984	308.62
The Dubliner	17.477804	308.62
The Dubliner	29.152356	308.62
The Red Lion	11.245447	532.66
The Red Lion	28.151166	532.66
The Red Lion	8.438779	532.66
The Red Lion	14.632223	532.66
The Red Lion	37.532385	532.66



THANK YOU