



Pub Pricing Analysis (Challenge-5)

# SQL CASE STUDY

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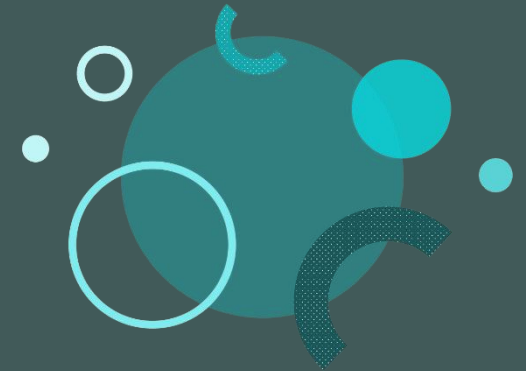
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# CONTENT

**01** Overview

**02** Tables

**03** Questions and  
Answer



# Overview

- I am a Pricing Analyst working for a pub chain called 'Pubs "R" Us'
- I have been tasked with analysing the drinks prices and sales to gain a greater insight into how the pubs in your chain are performing.



# Tables

- Mainly 4 tables are involved in this case:

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

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

## 1 SQL Queries

```
SELECT A.country,  
  
COUNT(A.pub_id) as NumberofPubs  
  
FROM datacoach.pubs A  
  
GROUP BY A.COUNTRY;
```

## 2 Output

	country	NumberofPubs
▶	United Kingdom	1
	Ireland	1
	United States	1
	Spain	1

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

### 1 SQL Queries

```
SELECT P.pub_name,  
sum(B.price_per_unit*S.quantity) AS  
SalesAmount,  
  
SUM(s.quantity) as Quanytity  
  
FROM datacoach.sales S  
  
join datacoach.pubs P on S.pub_id=P.pub_id  
  
JOIN datacoach.beverages B ON  
S.beverage_id= B.beverage_id  
  
group by P.pub_name;
```

### 2 Output

	pub_name	SalesAmount	Quanytity
▶	The Red Lion	532.66	34
	The Dubliner	308.62	38
	The Cheers Bar	413.57	43
	La Cerveceria	337.72	28

### 3. Which pub has the highest average rating?

#### 1 SQL Queries

```
SELECT P.pub_id,P.pub_name,  
ROUND((AVG(R.rating)),1) AS AverageRating  
FROM datacoach.pubs P  
  
JOIN datacoach.ratings R ON  
P.pub_id=R.pub_id  
  
GROUP BY P.pub_id,P.pub_name  
  
order by AverageRating DESC  
  
LIMIT 1;
```

#### 2 Output

	pub_id	pub_name	AverageRating
▶	1	The Red Lion	4.7

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

### 1 SQL Queries

```
SELECT B.beverage_id,B.beverage_name,  
  
SUM(S.quantity) AS Quantity  
  
FROM datacoach.sales S  
  
JOIN datacoach.beverages B ON  
S.beverage_id=B.beverage_id  
  
group by B.beverage_id,B.beverage_name  
  
ORDER BY quantity DESC  
  
Limit 5;
```

### 2 Output

	beverage_id	beverage_name	Quantity
▶	1	Guinness	55
	3	Mojito	30
	4	Chardonnay	18
	6	Tequila	18
	5	IPA	14



## 5. How many sales transactions occurred on each date?

### 1 SQL Queries

```
SELECT S.transaction_date, COUNT(S.sale_id)
AS Tranaction

FROM datacoach.sales S

GROUP BY S.transaction_date;
```

### 2 Output

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

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

### 1 SQL Queries

```
SELECT
P.pub_id,P.pub_name,R.customer_name,B.category

FROM datacoach.ratings R

JOIN datacoach.pubs P ON R.pub_id=P.pub_id

JOIN datacoach.sales S ON P.pub_id=S.pub_id

JOIN datacoach.beverages B ON
S.beverage_id=B.beverage_id

WHERE B.category='Cocktail'

ORDER BY P.pub_id;
```

### 2 Output

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

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

### 1 SQL Queries

```
SELECT B.category,  
ROUND((AVG(B.price_per_unit)),1) AS  
AveragePrice_PerUnit  
  
FROM datacoach.beverages B  
  
WHERE B.category <>'Spirit'  
  
GROUP BY B.category  
  
ORDER BY B.category;
```

### 2 Output

	category	AveragePrice_PerUnit
▶	Beer	5.5
	Cocktail	9.0
	Whiskey	30.0
	Wine	13.0

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

### 1 SQL Queries

```
SELECT P.pub_id,P.pub_name,  
ROUND(AVG(R.RATING)) AS AvgRating  
  
FROM datacoach.pubs P  
  
JOIN datacoach.ratings R ON  
P.pub_id=R.pub_id  
  
GROUP BY P.pub_id,P.pub_name  
  
HAVING AvgRating> (SELECT AVG(rating)  
  
FROM datacoach.ratings);
```

### 2 Output

	pub_id	pub_name	AvgRating
▶	1	The Red Lion	5
	4	La Cerveceria	5

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

### 1 SQL Queries

```
SELECT P.pub_id, P.pub_name, S.transaction_date,  
  
SUM(B.price_per_unit * S.quantity) AS SalsesAmount,  
  
SUM(SUM(B.price_per_unit * S.quantity)) Over(Partition By pub_name  
ORDER BY transaction_date) AS RunningTotal  
  
FROM datacoach.sales S  
  
JOIN datacoach.pubs P ON S.pub_id=P.pub_id  
  
JOIN datacoach.beverages B ON S.beverage_id=B.beverage_id  
  
GROUP BY P.pub_id, P.pub_name, S.transaction_date  
  
ORDER BY P.pub_id;
```

### 2 Output

	pub_id	pub_name	transaction_date	SalsesAmount	RunningTotal
▶	1	The Red Lion	2023-05-01	209.85	209.85
	1	The Red Lion	2023-05-06	44.95	254.80
	1	The Red Lion	2023-05-11	277.86	532.66
	2	The Dubliner	2023-05-01	47.92	47.92
	2	The Dubliner	2023-05-03	53.94	101.86
	2	The Dubliner	2023-05-09	134.88	236.74
	2	The Dubliner	2023-05-12	71.88	308.62
	3	The Cheers Bar	2023-05-02	107.88	107.88
	3	The Cheers Bar	2023-05-03	180.78	288.66
	3	The Cheers Bar	2023-05-09	99.96	388.62
	3	The Cheers Bar	2023-05-13	24.95	413.57
	4	La Cerveceria	2023-05-02	38.97	38.97
	4	La Cerveceria	2023-05-03	149.94	188.91
	4	La Cerveceria	2023-05-04	59.90	248.81
	4	La Cerveceria	2023-05-09	88.91	337.72

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?

## 1 SQL Queries

```
With cte1 as(SELECT P.country, B.category, ROUND((avg(B.price_per_unit)),2) AS AvgPriceEachCatagory
FROM datacoach.beverages B
JOIN datacoach.sales S USING(BEVERAGE_ID)
JOIN datacoach.pubs P USING(PUB_ID)
GROUP BY P.country, B.category),
cte2 as (SELECT P.country, ROUND((avg(B.price_per_unit)),2) AS AvgPriceAllCatagory
FROM datacoach.beverages B
JOIN datacoach.sales S USING(BEVERAGE_ID)
JOIN datacoach.pubs P USING(PUB_ID)
GROUP BY P.country)
SELECT CTE1.COUNTRY,CTE1.CATEGORY, CTE1.AvgPriceEachCatagory,CTE2.AvgPriceAllCatagory
FROM CTE1
JOIN CTE2 ON CTE1.COUNTRY= CTE2.COUNTRY;
```

## 2 Output

COUNTRY	CATEGORY	AvgPriceEachCatagory	AvgPriceAllCatagory
United Kingdom	Beer	5.99	16.59
United Kingdom	Whiskey	29.99	16.59
United Kingdom	Cocktail	8.99	16.59
United Kingdom	Wine	12.99	16.59
United Kingdom	Spirit	24.99	16.59
Ireland	Beer	5.66	11.19
Ireland	Cocktail	8.99	11.19
Ireland	Whiskey	29.99	11.19
United States	Cocktail	8.99	11.59
United States	Beer	5.49	11.59
United States	Wine	12.99	11.59
United States	Spirit	24.99	11.59
Spain	Wine	12.99	13.19
Spain	Spirit	24.99	13.19
Spain	Beer	5.99	13.19
Spain	Cocktail	8.99	13.19



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?

## 1 SQL Queries

```
With cte1 as(SELECT P.pub_name, B.category, sum(b.price_per_unit*s.quantity) AS Category_Sales_Amount
FROM datacoach.beverages B
JOIN datacoach.sales S USING(BEVERAGE_ID)
JOIN datacoach.pubs P USING(PUB_ID)
GROUP BY P.pub_name, B.category),
cte2 as (SELECT P.pub_name, sum(b.price_per_unit*s.quantity) AS Total_Sales_Amount
FROM datacoach.beverages B
JOIN datacoach.sales S USING(BEVERAGE_ID)
JOIN datacoach.pubs P USING(PUB_ID)
GROUP BY P.pub_name)
SELECT CTE1.pub_name,CTE2.Total_Sales_Amount, CTE1.CATEGORY, CTE1.Category_Sales_Amount,
Round((((CTE1.Category_Sales_Amount/CTE2.Total_Sales_Amount)*100),2) AS Contribution
FROM CTE1
JOIN CTE2 ON CTE1.pub_name= CTE2.pub_name;
```

## 2 Output

pub_name	Total_Sales_Amount	CATEGORY	Category_Sales_Amount	Contribution
The Red Lion	532.66	Beer	59.90	11.25
The Red Lion	532.66	Whiskey	149.95	28.15
The Red Lion	532.66	Cocktail	44.95	8.44
The Red Lion	532.66	Wine	77.94	14.63
The Red Lion	532.66	Spirit	199.92	37.53
The Dubliner	308.62	Beer	164.71	53.37
The Dubliner	308.62	Cocktail	53.94	17.48
The Dubliner	308.62	Whiskey	89.97	29.15
The Cheers Bar	413.57	Cocktail	107.88	26.09
The Cheers Bar	413.57	Beer	114.80	27.76
The Cheers Bar	413.57	Wine	90.93	21.99
The Cheers Bar	413.57	Spirit	99.96	24.17
La Cerveceria	337.72	Wine	64.95	19.23
La Cerveceria	337.72	Spirit	149.94	44.40
La Cerveceria	337.72	Beer	59.90	17.74
La Cerveceria	337.72	Cocktail	62.93	18.63



# THANKS

Organized by DataCoach

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