

Challenge 5

PUB PRICING ANALYSIS

SQL CASE STUDY



CREATED BY

NITISH_KUMAR

MY ROLE

I AM A PRICING ANALYST WORKING FOR A PUB CHAIN CALLED 'PUBS "R" US.' MY TASK INVOLVES ANALYZING THE DRINKS PRICES AND SALES TO GAIN A GREATER INSIGHT INTO HOW THE PUBS IN OUR CHAIN ARE PERFORMING.

Here are the tables you will be using

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?

```
3 SELECT pub_name, country, COUNT(pub_id) AS TOTAL  
4 FROM pubs  
5 GROUP BY pub_name, country  
6 ORDER BY COUNT(pub_id) DESC;
```

OUTPUT

Query #1 Execution time: 0ms

pub_name	country	TOTAL
The Red Lion	United Kingdom	1
The Dubliner	Ireland	1
The Cheers Bar	United States	1
La Cerveceria	Spain	1

2. WHAT IS THE TOTAL SALES AMOUNT FOR EACH PUB, INCLUDING THE BEVERAGE PRICE AND QUANTITY SOLD?

```
10 SELECT P.pub_name, SUM(B.price_per_unit * S.quantity) AS total_sales_amount
11 FROM beverages AS B
12 JOIN sales AS S USING(beverage_id)
13 JOIN pubs AS P USING(pub_id)
14 GROUP BY P.pub_name
15 ORDER BY SUM(B.price_per_unit * S.quantity) DESC;
```

OUTPUT

Query #2 **Execution time: 1ms**

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

3. WHICH PUB HAS THE HIGHEST AVERAGE RATING?

```
19 SELECT P.pub_name,CEIL(AVG(R.rating))
20 FROM pubs AS P
21 JOIN ratings AS R USING(pub_id)
22 GROUP BY P.pub_name
23 ORDER BY AVG(R.rating) DESC
24 LIMIT 1;
```

OUTPUT

Query #3 Execution time: 1ms

pub_name	CEIL(AVG(R.rating))
The Red Lion	5

NITISH_KUMAR

4. WHAT ARE THE TOP 5 BEVERAGES BY SALES QUANTITY ACROSS ALL PUBS?

```
27  
28 SELECT B.beverage_id,B.beverage_name,SUM(S.quantity) AS TOTAL  
29 FROM beverages AS B  
30 JOIN sales AS S USING(beverage_id)  
31 GROUP BY B.beverage_id,B.beverage_name  
32 ORDER BY SUM(S.quantity) DESC  
33 LIMIT 5;
```

OUTPUT

Query #4 Execution time: 12ms

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

5. HOW MANY SALES TRANSACTIONS OCCURRED ON EACH DATE?

```
--  
38 SELECT COUNT(sale_id) AS TOTAL,transaction_date  
39 FROM sales  
40 GROUP BY transaction_date  
41 ORDER BY COUNT(sale_id) DESC;
```

OUTPUT

Query #5 Execution time: 0ms

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

6. FIND THE NAME OF SOMEONE THAT HAD COCKTAILS AND WHICH PUB THEY HAD IT IN.

```
44  
45 SELECT R.customer_name,P.pub_name,B.category  
46 FROM pubs AS P  
47 JOIN ratings AS R USING(pub_id)  
48 JOIN beverages AS B  
49 WHERE B.category = "cocktail";
```

OUTPUT

Query #6 Execution time: 1ms

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

7. WHAT IS THE AVERAGE PRICE PER UNIT FOR EACH CATEGORY OF BEVERAGES, EXCLUDING THE CATEGORY 'SPIRIT'?

```
53 SELECT category, AVG(price_per_unit) AS AVERAGE  
54 FROM beverages  
55 WHERE category <> "Spirit"  
56 GROUP BY category  
57 ORDER BY AVG(price_per_unit);  
58
```

OUTPUT

Query #7 Execution time: 0ms

category	AVERAGE
Beer	5.490000
Cocktail	8.990000
Wine	12.990000
Whiskey	29.990000

8. WHICH PUBS HAVE A RATING HIGHER THAN THE AVERAGE RATING OF ALL PUBS?

```
61 SELECT P.pub_name,ROUND(AVG(R.rating),1) AS rating
62 FROM ratings AS R
63 JOIN pubs AS P USING(pub_id)
64 WHERE R.rating >(SELECT ROUND(AVG(R.rating),1) AS AVG_RATING FROM ratings)
65 GROUP BY P.pub_name
66 ORDER BY rating DESC;
```

OUTPUT

Query #8 Execution time: 1ms

pub_name	rating
The Red Lion	4.8
La Cerveceria	4.6
The Cheers Bar	4.4

9. WHAT IS THE RUNNING TOTAL OF SALES AMOUNT FOR EACH PUB, ORDERED BY THE TRANSACTION DATE?

```
69  
70 WITH Total AS  
71 (  
72   SELECT S.pub_id,S.transaction_date,S.quantity,B.price_per_unit,(S.quantity*B.price_per_unit) AS sale  
73   FROM sales AS S  
74   JOIN beverages AS B USING(beverage_id)  
75   ORDER BY S.pub_id ASC  
76 )  
77 SELECT DISTINCT pub_id,transaction_date,SUM(sale) OVER(PARTITION BY pub_id ORDER BY transaction_date ASC) AS Total_sales  
78 FROM Total;  
79
```

OUTPUT

Query #9 Execution time: 1ms

pub_id	transaction_date	Total_sales
1	2023-05-01	209.85
1	2023-05-06	254.80
1	2023-05-11	532.66
2	2023-05-01	47.92
2	2023-05-03	101.86
2	2023-05-09	236.74
2	2023-05-12	308.62
3	2023-05-02	107.88
3	2023-05-03	288.66
3	2023-05-09	388.62
3	2023-05-13	413.57

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?

```
82  
83 WITH average AS  
84 (  
85   SELECT P.country,B.category,ROUND(AVG(price_per_unit),2) AS Average_price_per_unit  
86   FROM sales  
87   JOIN pubs AS P USING(pub_id)  
88   JOIN beverages AS B USING(beverage_id)  
89   GROUP BY 1,2  
90 )  
91   SELECT *,ROUND(AVG(Average_price_per_unit)) OVER (PARTITION BY country),2) AS overall_average_price  
92 FROM average  
93 ORDER BY 1;  
94
```

OUTPUT

Query #10 Execution time: 0ms

country	category	Average_price_per_unit	overall_average_price
Ireland	Beer	5.66	14.88
Ireland	Cocktail	8.99	14.88
Ireland	Whiskey	29.99	14.88
Spain	Wine	12.99	13.24
Spain	Spirit	24.99	13.24
Spain	Beer	5.99	13.24
Spain	Cocktail	8.99	13.24
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

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?

```
96 WITH CTE2 AS(
97 WITH CTE1 AS
98 (
99   SELECT P.pub_name,B.category,SUM(B.price_per_unit * S.quantity) AS Total_sales
100  FROM sales AS S
101  JOIN pubs AS P USING(pub_id)
102  JOIN beverages AS B USING( beverage_id)
103 GROUP BY 1,2
104 )
105 SELECT *,SUM(Total_sales) OVER(PARTITION BY pub_name) AS Overall_Total_Sales
106 FROM CTE1)
107
108 SELECT pub_name,
109 category,
110 CONCAT(ROUND((Total_sales*100/Overall_Total_Sales),2)," %") AS Percentage,Overall_Total_Sales
111 FROM CTE2 ;
```

OUTPUT

Query #11 Execution time: 3ms

pub_name	category	Overall_Total_Sales	Percentage
La Cerveceria	Wine	337.72	19.23 %
La Cerveceria	Spirit	337.72	44.40 %
La Cerveceria	Beer	337.72	17.74 %
La Cerveceria	Cocktail	337.72	18.63 %
The Cheers Bar	Cocktail	413.57	26.09 %
The Cheers Bar	Beer	413.57	27.76 %
The Cheers Bar	Wine	413.57	21.99 %
The Cheers Bar	Spirit	413.57	24.17 %
The Dubliner	Beer	308.62	53.37 %
The Dubliner	Cocktail	308.62	17.48 %
The Dubliner	Whiskey	308.62	29.15 %



CREATED BY

NITISH_KUMAR