

PUB PRICING ANALYSIS



SQL CHALLENGE

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INTRODUCTION

In this Challenge I am working as a Pricing Analyst working for a pub chain called 'Pubs "R" Us'
You 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

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

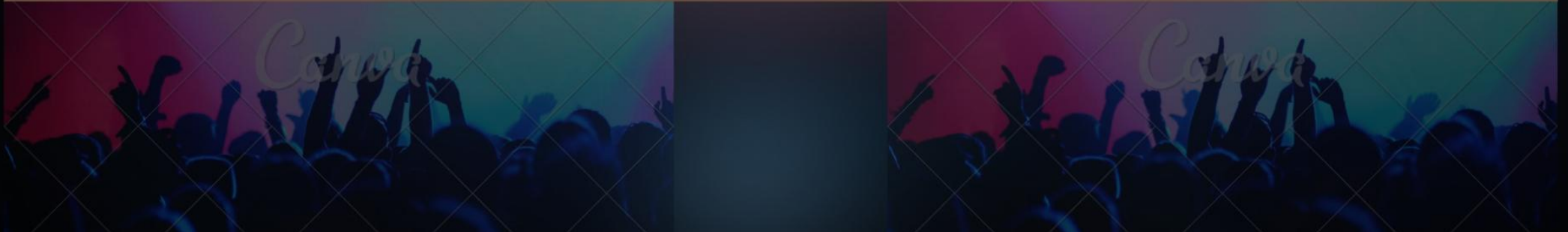
sales

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



QUESTIONS











1. How many pubs are located in each country??
2. What is the total sales amount for each pub, including the beverage price and quantity sold?
3. Which pub has the highest average rating?
4. What are the top 5 beverages by sales quantity across all pubs?
5. How many sales transactions occurred on each date?
6. Find the name of someone that had cocktails and which pub they had it in.
7. What is the average price per unit for each category of beverages, excluding the category 'Spirit'?
8. Which pubs have a rating higher than the average rating of all pubs?
9. What is the running total of sales amount for each pub, ordered by the transaction date?
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?
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?



Q1. HOW MANY PUBS ARE LOCATED IN EACH COUNTRY?

```
SELECT country, COUNT(*) AS num_of_pubs
FROM pubs
GROUP BY country;
```

Output Messages Notifications

							
country	num_of_pubs						
character varying (50) 	bigint 						
Ireland	1						
United States	1						
Spain	1						
United Kingdom	1						

Q2. WHAT IS THE TOTAL SALES AMOUNT FOR EACH PUB, INCLUDING THE BEVERAGE PRICE AND QUANTITY SOLD?

```
WITH abc AS (  
  SELECT pub_name, ROUND(quantity*price_per_unit,2) AS total_sales  
  FROM pubs  
  JOIN sales ON pubs.pub_id=sales.pub_id  
  JOIN beverages ON sales.beverage_id=beverages.beverage_id  
  GROUP BY pub_name, sales.quantity, beverages.price_per_unit  
)  
SELECT pub_name, SUM(total_sales) AS total_sales  
FROM abc  
GROUP BY pub_name  
ORDER BY 1 DESC;
```

Output Messages Notifications



pub_name	total_sales
character varying (50)	numeric
The Red Lion	532.66
The Dubliner	308.62
The Cheers Bar	413.57
La Cerveceria	337.72



Q3. WHICH PUB HAS THE HIGHEST AVERAGE RATING?

```
SELECT pub_name,AVG(rating) AS avg_rating FROM pubs
JOIN ratings ON pubs.pub_id=ratings.pub_id
GROUP BY pubs.pub_name
ORDER BY 2 DESC;
```

Output Messages Notifications











pub_name character varying (50)	avg_rating double precision
The Red Lion	4.666666666666667
La Cerveceria	4.6
The Cheers Bar	4.5
The Dubliner	4.266666666666667

but I want precision upto two digits

SO ALTERNATIVE CODE

```
SELECT pub_name, ROUND(CAST(AVG(rating) AS numeric), 2) AS avg_rating
FROM pubs
JOIN ratings ON pubs.pub_id=ratings.pub_id
GROUP BY pubs.pub_name
ORDER BY 2 DESC
LIMIT 1;
```

Output Messages Notifications

							
pub_name		avg_rating					
character varying (50)		numeric					
The Red Lion		4.67					

Q4. WHAT ARE THE TOP 5 BEVERAGES BY SALES QUANTITY ACROSS ALL PUBS?

```
SELECT beverage_name,category,  
SUM(quantity) AS total_purchased_quantity  
FROM beverages  
JOIN sales ON beverages.beverage_id=sales.beverage_id  
GROUP BY beverages.beverage_name,beverages.category  
ORDER BY 3 DESC  
LIMIT 5;
```

Output Messages Notifications

beverage_name character varying (50)	category character varying (50)	total_purchased_quantity bigint
Guinness	Beer	55
Mojito	Cocktail	30
Chardonnay	Wine	18
Tequila	Spirit	18
IPA	Beer	14

Q5. HOW MANY SALES TRANSACTIONS OCCURRED ON EACH DATE?

```
SELECT DISTINCT(transaction_date),  
COUNT(transaction_date) AS no_of_transactions  
FROM sales  
GROUP BY sales.transaction_date  
ORDER BY 1 ASC;
```

Output Messages Notifications



transaction_date date	no_of_transactions bigint
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

Q6. FIND THE NAME OF SOMEONE THAT HAD COCKTAILS AND WHICH PUB THEY HAD IT IN.

```
SELECT customer_name, pub_name FROM pubs  
JOIN ratings ON pubs.pub_id=ratings.pub_id  
WHERE ratings.review ILIKE '%cocktail%';
```

Output Messages Notifications



customer_name character varying (50)	pub_name character varying (50)
Sophia Davis	The Cheers Bar



Q7. WHAT IS THE AVERAGE PRICE PER UNIT FOR EACH CATEGORY OF BEVERAGES, EXCLUDING THE CATEGORY 'SPIRIT'?

```
SELECT category,  
       ROUND(AVG(price_per_unit), 2) AS avg_price_per_unit  
FROM beverages  
WHERE category <> 'Spirit'  
GROUP BY category;
```

Output Messages Notifications



category	avg_price_per_unit
character varying (50)	numeric
Cocktail	8.99
Beer	5.49
Wine	12.99
Whiskey	29.99



Q8. Which pubs have a rating higher than the average rating of all pubs?

```
WITH abc AS(  
SELECT pubs.pub_id, pub_name, AVG(rating) AS pub_rating  
FROM pubs  
JOIN ratings ON ratings.pub_id=pubs.pub_id  
GROUP BY pubs.pub_id  
)  
SELECT * FROM abc  
WHERE pub_rating > (SELECT AVG(rating) FROM ratings)
```

Output Messages Notifications



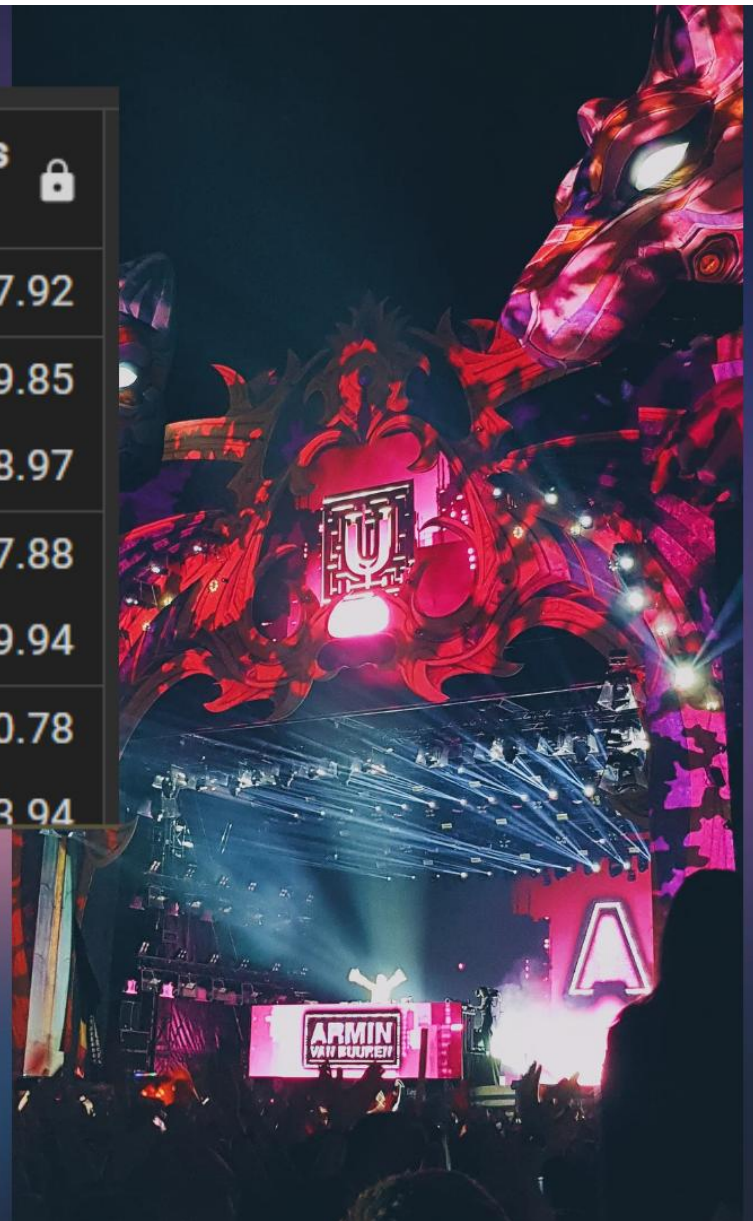
pub_id [PK] integer	pub_name character varying (50)	pub_rating double precision
4	La Cerveceria	4.6
1	The Red Lion	4.666666666666667

Q9. WHAT IS THE RUNNING TOTAL OF SALES AMOUNT FOR EACH PUB, ORDERED BY THE TRANSACTION DATE?

```
WITH abcd AS(  
  SELECT pub_name,transaction_date,  
    ROUND(price_per_unit*quantity,2) AS total_sales  
  FROM pubs  
  JOIN sales ON pubs.pub_id=sales.pub_id  
  JOIN beverages ON sales.beverage_id=beverages.beverage_id  
  GROUP BY pub_name,transaction_date,price_per_unit,quantity  
  ORDER BY transaction_date  
)  
SELECT pub_name,transaction_date,SUM(total_sales) AS total_sales  
FROM abcd  
GROUP BY abcd.pub_name,abcd.transaction_date  
ORDER BY 2
```



pub_name character varying (50) 🔒	transaction_date date 🔒	total_sales numeric 🔒
The Dubliner	2023-05-01	47.92
The Red Lion	2023-05-01	209.85
La Cerveceria	2023-05-02	38.97
The Cheers Bar	2023-05-02	107.88
La Cerveceria	2023-05-03	149.94
The Cheers Bar	2023-05-03	180.78
The Dubliner	2023-05-03	53.94



Q10. 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 abcde AS (  
  SELECT country,category,ROUND(AVG(price_per_unit),2) AS avg_price  
  FROM beverages  
  JOIN sales ON sales.beverage_id=beverages.beverage_id  
  JOIN pubs ON pubs.pub_id=sales.pub_id  
  GROUP BY pubs.country,category  
  ORDER BY 1 DESC  
)  
SELECT country,ROUND(SUM(avg_price)/COUNT(category),2) AS avg_price_category  
FROM abcde  
GROUP BY abcde.country  
ORDER BY 2 DESC;
```


country character varying (50) 🔒	avg_price_category numeric 🔒
United Kingdom	16.59
Ireland	14.88
Spain	13.24
United States	13.12




```
SELECT country,category,ROUND(AVG(price_per_unit),2) AS avg_price
FROM beverages
JOIN sales ON sales.beverage_id=beverages.beverage_id
JOIN pubs ON pubs.pub_id=sales.pub_id
GROUP BY pubs.country,category
ORDER BY 1 DESC;
```

Output Messages Notifications



country character varying (50) 🔒	category character varying (50) 🔒	avg_price numeric 🔒
United States	Beer	5.49
United States	Cocktail	8.99
United States	Spirit	24.99
United States	Wine	12.99
United Kingdom	Beer	5.99
United Kingdom	Cocktail	8.99
United Kingdom	Spirit	24.99


Q11. 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 abc AS(  
  SELECT pub_name,category,SUM(ROUND(quantity*price_per_unit,2))  
    AS category_wise_total_sales  
  FROM pubs  
  JOIN sales ON pubs.pub_id=sales.pub_id  
  JOIN beverages ON sales.beverage_id=beverages.beverage_id  
  
  GROUP BY pub_name,category  
  ORDER BY pub_name  
)  
SELECT *,ROUND((category_wise_total_sales*100)/  
  (SELECT SUM(category_wise_total_sales)  
    FROM abc AS sub_total  
   WHERE sub_total.pub_name = abc.pub_name)  
,2) AS percentage_contribution  
FROM abc  
GROUP BY abc.pub_name,abc.category,  
category_wise_total_sales  
ORDER BY 1
```

pub_name character varying (50) 🔒	category character varying (50) 🔒	category_wise_total_sales numeric 🔒	percentage_contribution numeric 🔒
La Cerveceria	Beer	59.90	17.74
La Cerveceria	Spirit	149.94	44.40
La Cerveceria	Cocktail	62.93	18.63
La Cerveceria	Wine	64.95	19.23
The Cheers Bar	Wine	90.93	21.99
The Cheers Bar	Spirit	99.96	24.17
The Cheers Bar	Beer	114.80	27.76



THANK YOU

For further get such project challenges
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