



 **STEEL DATA**

Challenge 5 – Pub pricing analysis





SQL Case Study

Challenge 5 -

Pub Pricing Analysis



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Tables

Tables

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



STEEL DATA

Introduction

You are 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.

Tools Used





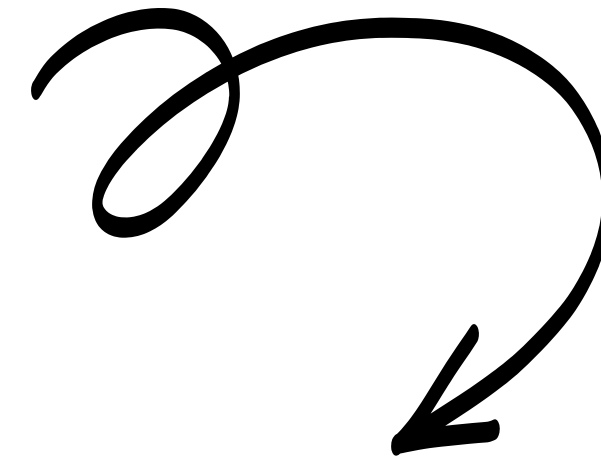
Questions

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?



Question :1-How many pubs are located in each country??

```
2  # 1 How many pubs are located in each country?
3
4  ● SELECT
5      country , COUNT(*) AS num_of_pub_located
6  FROM pubs
7  GROUP BY country;
```



country	num_of_pub_located
United Kingdom	1
Ireland	1
United States	1
Spain	1

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

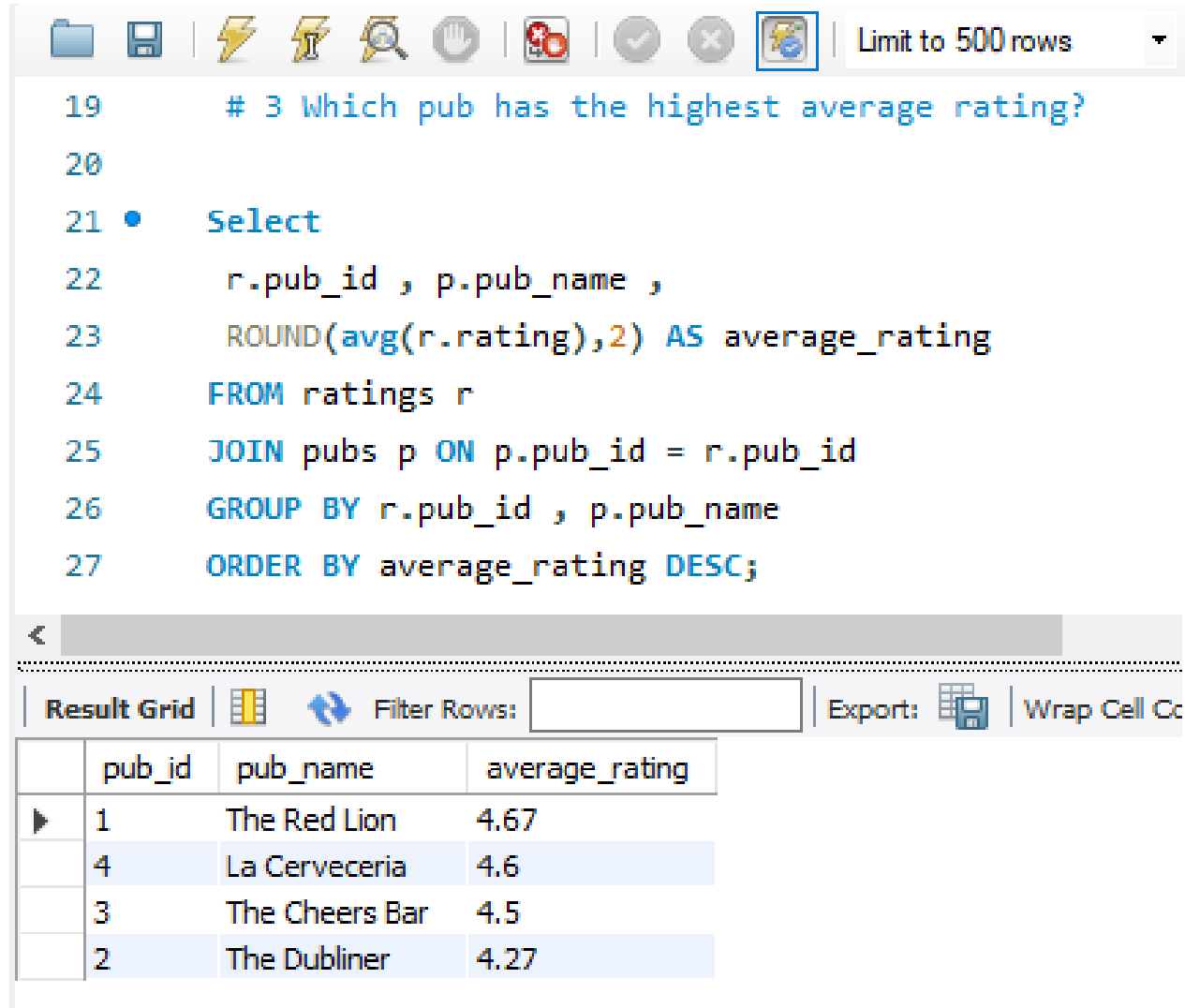
```
8      # 2 What is the total sales amount for each pub, including the beverage price and quantity sold?
9
10 •   SELECT
11       p.pub_name ,
12       SUM(s.Quantity*b.price_per_unit) AS total_sales
13   FROM pubs p
14   JOIN sales s ON p.pub_id = s.pub_id
15   JOIN beverages b ON s.beverage_id = b.beverage_id
16   GROUP BY p.pub_name, p.pub_id;
17
```

Result Grid |   Filter Rows: | Export:  | Wrap

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

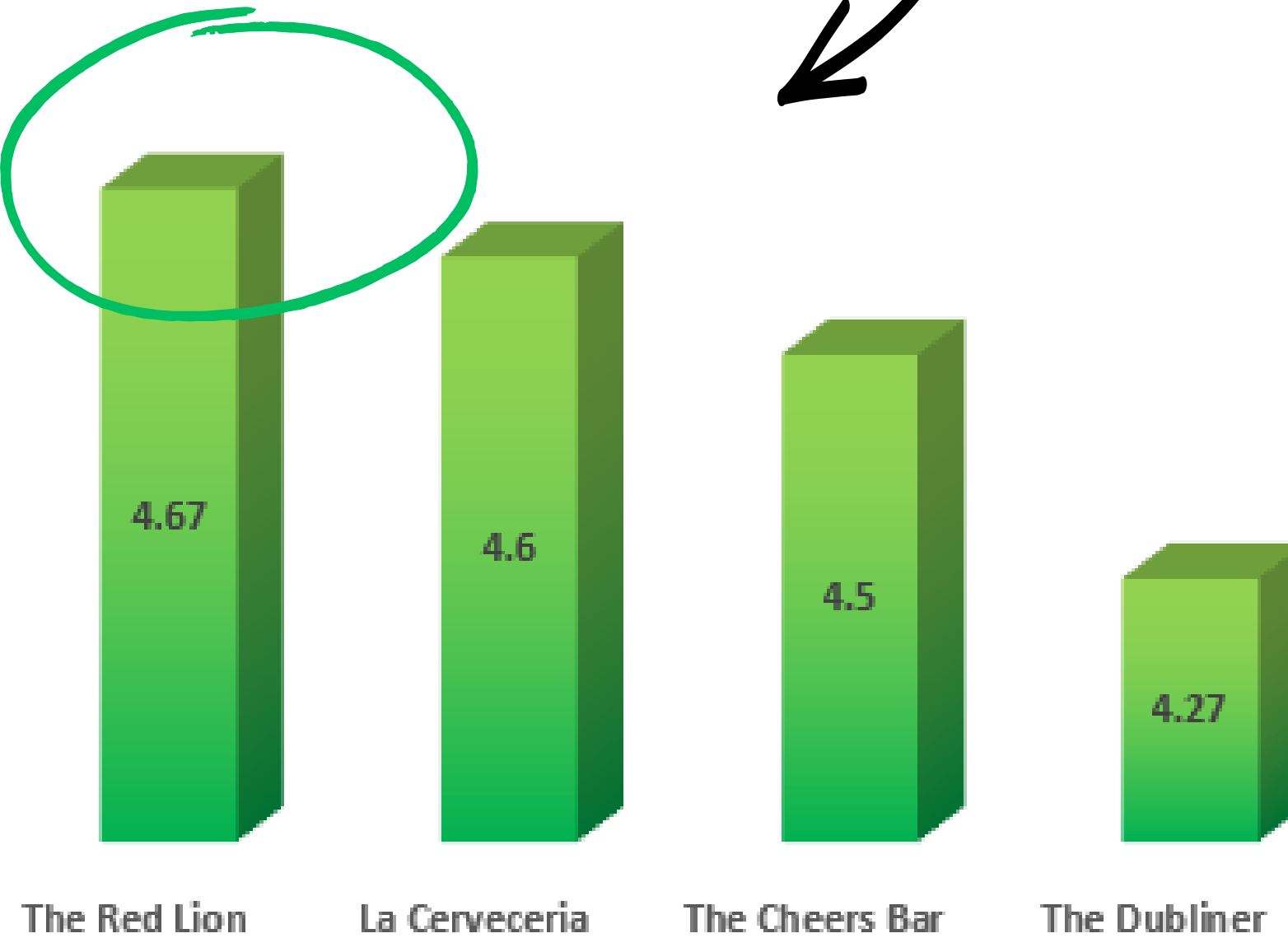


Question :3-Which pub has the highest average rating?



```
19 # 3 Which pub has the highest average rating?
20
21 • Select
22   r.pub_id , p.pub_name ,
23   ROUND(avg(r.rating),2) AS average_rating
24 FROM ratings r
25 JOIN pubs p ON p.pub_id = r.pub_id
26 GROUP BY r.pub_id , p.pub_name
27 ORDER BY average_rating DESC;
```

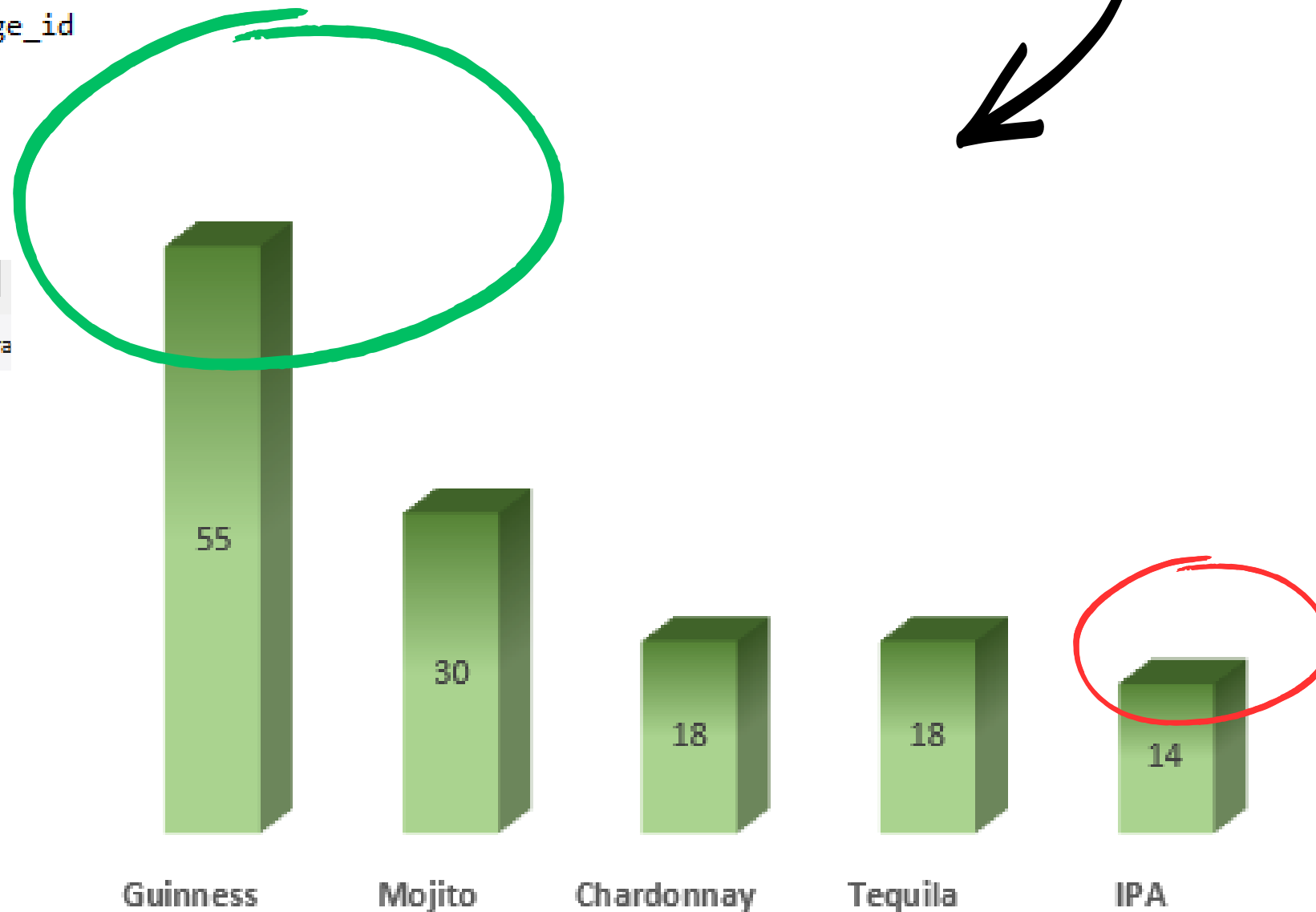
	pub_id	pub_name	average_rating
▶	1	The Red Lion	4.67
	4	La Cerveceria	4.6
	3	The Cheers Bar	4.5
	2	The Dubliner	4.27



Question :4-What are the top 5 beverages by sales quantity across all pubs?

```
28
29 #4 What are the top 5 beverages by sales quantity across all pubs?
30
31 • SELECT s.beverage_id, b.beverage_name ,
32     SUM(s.Quantity) AS sales_quantity
33 FROM sales s
34 JOIN beverages b ON s.beverage_id = b.beverage_id
35 GROUP BY s.beverage_id, b.beverage_name
36 ORDER BY sales_quantity DESC
37 LIMIT 5;
38
```

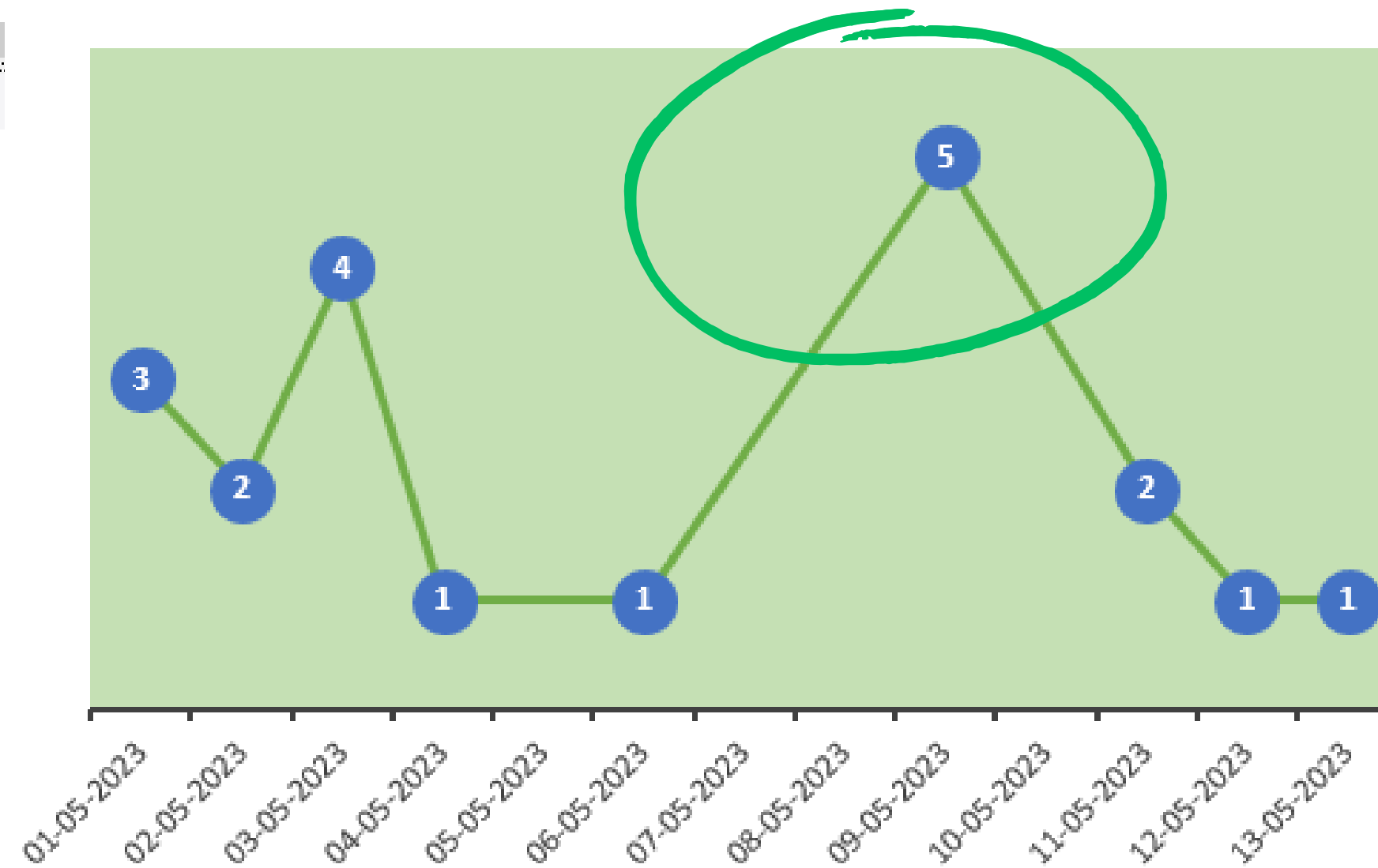
	beverage_id	beverage_name	sales_quantity
▶	1	Guinness	55
	3	Mojito	30
	4	Chardonnay	18
	6	Tequila	18
	5	IPA	14



Question :5-How many sales transactions occurred on each date?

```
41 # 5.How many sales transactions occurred on each date?
42
43 • SELECT transaction_date,
44     COUNT(sale_id) as num_of_transaction
45 FROM sales
46 GROUP BY transaction_date
47 ORDER BY num_of_transaction DESC;
```

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



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

```
49 #6.Find the name of someone that had cocktails and which pub they had it in.
50
51 • SELECT
52     r.customer_name,p.pub_name
53 FROM ratings r JOIN pubs p
54 ON p.pub_id =r.pub_id
55 JOIN sales s ON r.pub_id=s.pub_id
56 JOIN beverages b ON s.beverage_id =b.beverage_id
57 WHERE b.category = "Cocktail";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

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

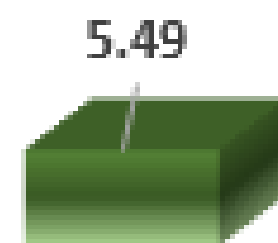


customer_name	pub_name
Sophia Davis	The Cheers Bar
William Miller	The Cheers Bar
Michael Brown	The Dubliner
Ethan Johnson	The Dubliner
Olivia Taylor	The Dubliner
John Smith	The Red Lion
Emma Johnson	The Red Lion
Sophia Davis	The Red Lion
Oliver Wilson	La Cerveceria
Isabella Moore	La Cerveceria

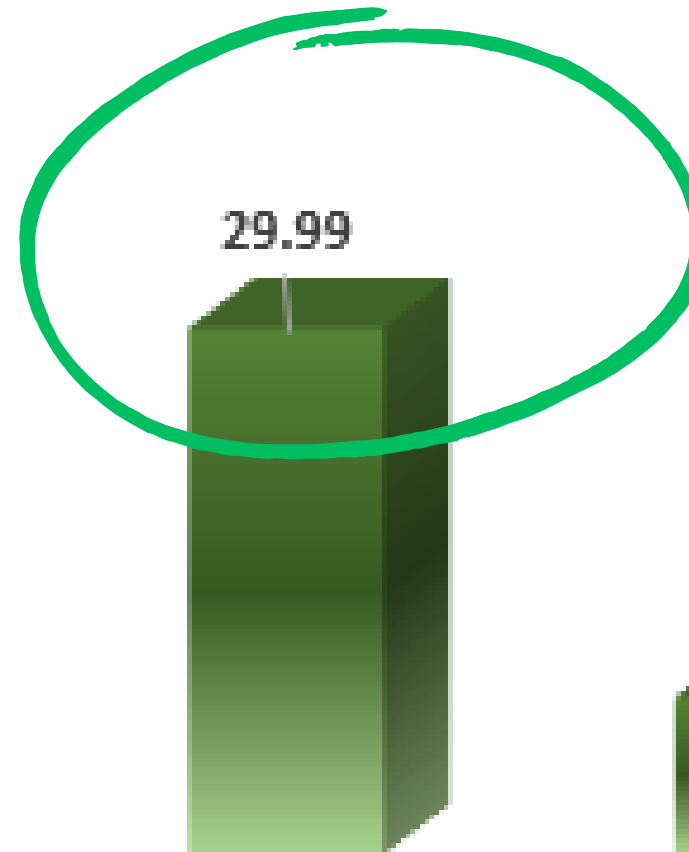
Question :7-What is the average price per unit for each category of beverages, excluding the category 'Spirit'?

```
60 #7. What is the average price per unit for each category of beverages, excluding the category 'Spirit'?
61
62 • SELECT category ,
63     ROUND(AVG(price_per_unit),2) AS average_price
64 FROM beverages
65 WHERE category NOT IN ("Spirit")
66 GROUP BY category;
67
```

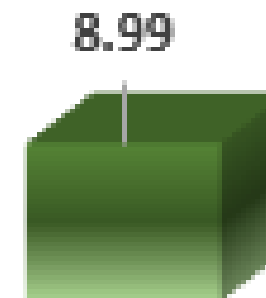
Result Grid		Filter Rows:
category	average_price	
Beer	5.49	
Whiskey	29.99	
Cocktail	8.99	
Wine	12.99	



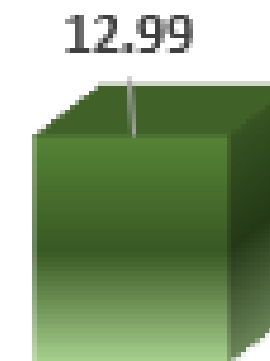
Beer



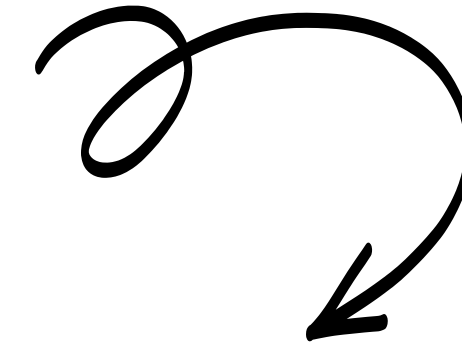
Whiskey



Cocktail



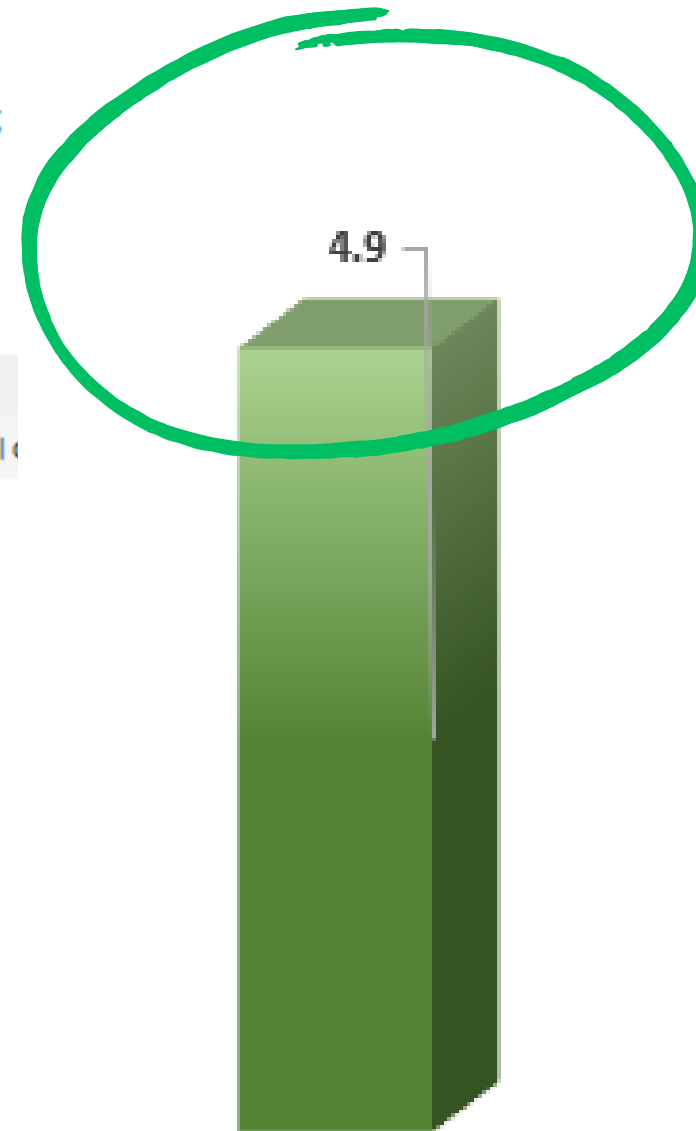
Wine



Question :8-Which pubs have a rating higher than the average rating of all pubs?

```
69 # 8. Which pubs have a rating higher than the average rating of all pubs?
70
71 • WITH rating_AS
72 (
73 SELECT p.pub_name, r.rating ,
74 dense_rank() over(partition by p.pub_name order by r.rating desc) as dnrc
75 FROM pubs p JOIN ratings r
76 ON p.pub_id = r.pub_id
77 WHERE
78 (SELECT AVG(rating) FROM ratings) < r.rating
79 ORDER BY rating DESC)
80 SELECT * FROM rating_
81 WHERE dnrc = 1;
```

pub_name	rating	dnrc
La Cerveceria	4.9	1
The Red Lion	4.8	1
The Cheers Bar	4.6	1



Average Rating= 4.5

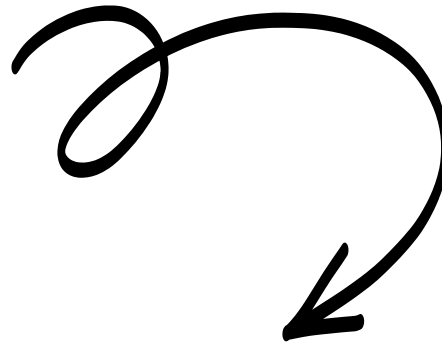
La Cerveceria

The Red Lion

The Cheers Bar

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

```
86 • WITH cte AS
87 (
88     SELECT p.pub_name ,s.transaction_date,
89           SUM((s.Quantity)*(b.price_per_unit)) AS sales_amount
90     FROM pubs p JOIN sales s
91     ON p.pub_id = s.pub_id
92     JOIN beverages b ON s.beverage_id = b.beverage_id
93     GROUP BY p.pub_name,s.transaction_date
94 )
95 SELECT * , SUM(cte.sales_amount)
96     OVER (PARTITION BY cte.pub_name ORDER BY cte.transaction_date)
97     AS running_total_of_sales_amount
98 FROM cte;
```



pub_name ▼	transaction_date ▼	sales_amount ▼	running_total_of_sales_amount ▼
La Cerveceria	02-05-2023	38.97	38.97
La Cerveceria	03-05-2023	149.94	188.91
La Cerveceria	04-05-2023	59.9	248.81
La Cerveceria	09-05-2023	88.91	337.72
The Cheers Bar	02-05-2023	107.88	107.88
The Cheers Bar	03-05-2023	180.78	288.66
The Cheers Bar	09-05-2023	99.96	388.62
The Cheers Bar	13-05-2023	24.95	413.57
The Dubliner	01-05-2023	47.92	47.92
The Dubliner	03-05-2023	53.94	101.86
The Dubliner	09-05-2023	134.88	236.74
The Dubliner	12-05-2023	71.88	308.62
The Red Lion	01-05-2023	209.85	209.85
The Red Lion	06-05-2023	44.95	254.8
The Red Lion	11-05-2023	277.86	532.66

Question: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?

```
103 • WITH avg_price AS
104 (
105     SELECT p.country,b.category,
106         ROUND(AVG(b.price_per_unit),1) AS average_price_category
107     FROM pubs p JOIN sales s ON s.pub_id = p.pub_id
108     JOIN beverages b on b.beverage_id=s.beverage_id
109     GROUP BY p.country,b.category
110 ),
111 total_avg_price AS
112 (
113     SELECT p.country, ROUND(AVG(b.price_per_unit),1) AS total_average_price
114     FROM pubs p JOIN sales s ON s.pub_id = p.pub_id
115     JOIN beverages b on b.beverage_id=s.beverage_id
116     GROUP BY p.country
117 )
118 SELECT ap.country, ap.category, ap.average_price_category,
119     tap.total_average_price FROM avg_price ap
120 JOIN total_avg_price tap
121 ON ap.country = tap.country;
```

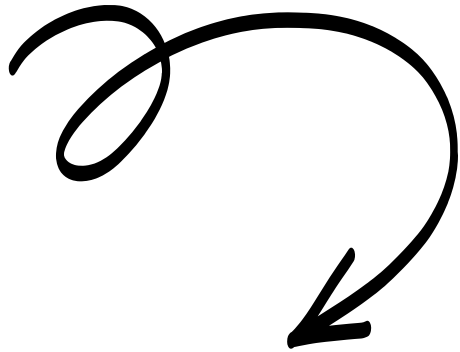


country	category	average_price_category	total_average_price
United Kingdom	Beer	6	16.6
United Kingdom	Whiskey	30	16.6
United Kingdom	Cocktail	9	16.6
United Kingdom	Wine	13	16.6
United Kingdom	Spirit	25	16.6
Ireland	Beer	5.7	11.2
Ireland	Cocktail	9	11.2
Ireland	Whiskey	30	11.2
United States	Cocktail	9	11.6
United States	Beer	5.5	11.6
United States	Wine	13	11.6
United States	Spirit	25	11.6
Spain	Wine	13	13.2
Spain	Spirit	25	13.2
Spain	Beer	6	13.2
Spain	Cocktail	9	13.2

Question: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?



```
128 • WITH category_sales_amt AS
129 (
130 SELECT p.pub_name , b.category , sum(s.Quantity*b.price_per_unit) AS catgy_sales_amount
131 FROM pubs p JOIN sales s ON p.pub_id = s.pub_id
132 JOIN beverages b ON s.beverage_id = b.beverage_id
133 GROUP BY p.pub_name,b.category
134 ),
135 overall_sale_amt AS
136 (
137 SELECT p.pub_name, sum(s.Quantity*b.price_per_unit) as total_sales_amount
138 FROM pubs p JOIN sales s ON p.pub_id = s.pub_id
139 JOIN beverages b ON s.beverage_id = b.beverage_id
140 GROUP BY p.pub_name
141 )
142 SELECT a.pub_name, a.category , a.catgy_sales_amount, z.total_sales_amount,
143 round(sum(a.catgy_sales_amount/ z.total_sales_amount *100),2) AS percentage_contribution_category
144 FROM category_sales_amt a JOIN overall_sale_amt z
145 ON a.pub_name = z.pub_name
146 GROUP BY a.pub_name ,a.category;
147
```



pub_name	category	catgy_sales_amount	total_sales_amount	percentage_contribution_category
The Red Lion	Beer	59.9	532.66	11.25
The Red Lion	Whiskey	149.95	532.66	28.15
The Red Lion	Cocktail	44.95	532.66	8.44
The Red Lion	Wine	77.94	532.66	14.63
The Red Lion	Spirit	199.92	532.66	37.53
The Dubliner	Beer	164.71	308.62	53.37
The Dubliner	Cocktail	53.94	308.62	17.48
The Dubliner	Whiskey	89.97	308.62	29.15
The Cheers Bar	Cocktail	107.88	413.57	26.09
The Cheers Bar	Beer	114.8	413.57	27.76
The Cheers Bar	Wine	90.93	413.57	21.99
The Cheers Bar	Spirit	99.96	413.57	24.17
La Cerveceria	Wine	64.95	337.72	19.23
La Cerveceria	Spirit	149.94	337.72	44.4
La Cerveceria	Beer	59.9	337.72	17.74
La Cerveceria	Cocktail	62.93	337.72	18.63



THANK YOU!

