SQL RETAILS SALES ANALYSIS PROJECT

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SQL QUERY QUESTIONS..

Q.1 WRITE A SQL QUERY TO RETRIEVE ALL COLUMNS FOR SALES MADE ON '2022-11-05' ?

Q.2 WRITE A SQL QUERY TO RETRIEVE ALL TRANSACTIONS WHERE THE CATEGORY IS 'CLOTHING' AND THE QUANTITY S OLD IS MORE THAN THE MONTH OF NOV-2022 ?

Q.3 WRITE A SQL QUERY TO CALCULATE THE TOTAL SALES (TOTAL_SALE) FOR EACH CATEGORY. ?

Q.4 WRITE A SQL QUERY TO FIND THE AVERAGE AGE OF CUSTOMERS WHO PURCHASED ITEMS FROM THE 'BEAUTY' CATEGORY.?

Q.5 WRITE A SQL QUERY TO FIND ALL TRANSACTIONS WHERE THE TOTAL_SALE IS GREATER THAN 1000 ?

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SQL QUERY QUESTIONS..

Q.6 WRITE A SQL QUERY TO FIND THE TOTAL NUMBER OF TRANSACTIONS (TRANSACTION_ID) MADE BY EACH GENDER IN EACH CATEGORY ?

Q.7 WRITE A SQL QUERY TO FIND TO CALCULATE THE AVERAGE SALE FOR EACH MONTH. FIND OUT BEST SELLING MONTH IN EACH YEAR

Q.8 WRITE A SQL QUERY TO FIND THE TOP 5 CUSTOMERS BASED ON THE HIGHEST TOTAL SALES

Q.9 WRITE A SQL QUERY TO FIND THE NUMBER OF UNIQUE CUSTOMERS WHO PURCHASED ITEMS FROM EACH CATEGORY.

Q. 10 WRITE A SQL QUERY TO CREATE EACH SHIFT AND NUMBER OF ORDERS (EXAMPLE MORNING <=12, AFTERNOON BETWEEN 12 & 17, EVENING >17 ?

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QUERY- Q1.

```sql
-- Q.1 Write a SQL query to retrieve all columns for sales made on '2022-11-05 ?
Select *
From Retails_sales
Where sale_date = '2022-11-05'
```

100% | 19:92 | 2 errors found

Result Grid | Filter Rows: Search | Edit: | Export/Import:

transactions...	sale_date	sale_time	customer_id	gender	age	category	quantity	price_per_u...	cogs	total_sale
180	2022-11-05	10:47:00	117	Male	41	Clothing	3	300	129	900
214	2022-11-05	16:31:00	53	Male	20	Beauty	2	30	8.1	60
240	2022-11-05	11:49:00	95	Female	23	Beauty	1	300	123	300
856	2022-11-05	17:43:00	102	Male	54	Electronics	4	30	9.3	120
943	2022-11-05	19:29:00	90	Female	57	Clothing	4	300	318	1200
1137	2022-11-05	22:34:00	104	Male	46	Beauty	2	500	145	1000
1256	2022-11-05	09:58:00	29	Male	23	Clothing	2	500	190	1000
1265	2022-11-05	14:35:00	86	Male	55	Clothing	3	300	111	900
1587	2022-11-05	20:06:00	140	Female	40	Beauty	4	300	105	1200
1819	2022-11-05	20:44:00	83	Female	35	Beauty	2	50	13.5	100
1896	2022-11-05	20:19:00	87	Female	30	Electronics	2	25	30.75	50
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Retails_sales 22

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QUERY- Q2.

```sql
-- Q.2 Write a SQL query to retrieve all transactions where the category is 'Clothing' and the quantity sold is more than the month of Nov-2022

SELECT *
FROM retails_sales
WHERE category = 'Clothing'
  AND DATE_FORMAT(sale_date, '%Y-%m') = '2022-11';
```

100% | 144:95 | 3 errors found

Result Grid | Filter Rows: Search | Edit: | Export/Import:

transactions...	sale_date	sale_time	customer_id	gender	age	category	quantity	price_per_u...	cogs	total_sale
59	2022-11-14	18:28:00	61	Male	62	Clothing	1	50	27	50
64	2022-11-15	06:34:00	7	Male	49	Clothing	4	25	8.5	100
95	2022-11-06	19:57:00	103	Female	32	Clothing	2	30	7.5	60
103	2022-11-12	10:05:00	33	Female	59	Clothing	1	25	10.75	25
110	2022-11-18	17:28:00	149	Male	27	Clothing	3	300	99	900
126	2022-11-01	18:16:00	63	Female	28	Clothing	3	30	28.8	90
145	2022-11-06	19:21:00	64	Female	39	Clothing	3	25	27.5	75
146	2022-11-10	22:01:00	74	Male	38	Clothing	4	50	49	200
159	2022-11-10	21:30:00	42	Male	26	Clothing	4	50	23.5	200
180	2022-11-05	10:47:00	117	Male	41	Clothing	3	300	129	900
205	2022-11-22	17:20:00	88	Female	43	Clothing	1	25	25.5	25
224	2022-11-11	21:32:00	99	Female	25	Clothing	1	50	24	50
265	2022-11-24	12:12:00	80	Male	55	Clothing	3	300	132	900
284	2022-11-12	09:17:00	129	Male	43	Clothing	4	50	20.5	200
291	2022-11-22	08:29:00	15	Male	60	Clothing	2	300	126	600
319	2022-11-07	18:50:00	145	Male	31	Clothing	1	500	500	500
389	2022-11-11	19:06:00	109	Male	21	Clothing	2	25	12.25	50
526	2022-11-19	12:47:00	65	Male	33	Clothing	2	50	19.5	100
529	2022-11-29	17:43:00	46	Female	35	Clothing	3	50	20.5	150
547	2022-11-14	07:36:00	3	Male	63	Clothing	4	500	250	2000
566	2022-11-26	19:15:00	106	Female	64	Clothing	1	30	8.4	30
580	2022-11-14	14:44:00	104	Female	31	Clothing	3	500	200	1500
699	2022-11-21	22:21:00	129	Female	37	Clothing	4	30	16.2	120
735	2022-11-26	21:38:00	153	Female	64	Clothing	4	500	515	2000
750	2022-11-13	07:33:00	69	Female	35	Clothing	3	25	8.75	75
761	2022-11-14	22:16:00	64	Female	33	Clothing	1	500	275	500

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QUERY- Q3.

```sql
101
102     -- Q.3 Write a SQL query to calculate the total sales (total_sale) for each category.
103
104     SELECT
105         Category, SUM(Total_Sale) AS net_scale
106     FROM
107         Retails_sales
108     GROUP BY Category
```

100% 18:108 3 errors found

Result Grid Filter Rows: Search Export:

Category	net_scale
Beauty	286790
Clothing	309995
Electronics	311445

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QUERY- Q4.

```
110     -- Q.4 Write a SQL query to find the average age of customers who purchased items from the 'Beauty' category.
111
112     Select Avg(Age)
113     From Retails_sales
114     Where category = 'Beauty'
115
116
```

100% | 26:114 | 4 errors found

Result Grid Filter Rows: Search Export:

Avg(Age)
40.4157

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QUERY- Q5.

```sql
116    -- Q.5 Write a SQL query to find all transactions where the total_sale is greater than 1000 ?
117
118    Select Count(*) as Total_sale
119    From Retails_sales
120    Where Total_sale > 1000;
121
122
```

100% | 25:120 | 4 errors found

Result Grid Filter Rows: Search Export:

Total_sale
306

QUERY- Q6.

```sql
-- Q.6 Write a SQL query to find the total number of transactions (transaction_id) made by each gender in each category ?

SELECT
    Category, Gender, COUNT(*) AS Total_trans
FROM
    retails_sales
GROUP BY Category , Gender
Order by Category

```

100% | 122:122 | 4 errors found

Result Grid | Filter Rows: Search | Export:

Category	Gender	Total_trans
Beauty	Female	330
Beauty	Male	281
Clothing	Female	347
Clothing	Male	351
Electronics	Female	335
Electronics	Male	343

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QUERY- Q7.

```sql
-- Q.7 Write a SQL query to find  to calculate the average sale for each month. Find out best selling month in each year ?

Select * From
(Select
Year(Sale_date),
Month(Sale_date),
Round(AVG(Total_sale),2) as Avg_sale,
Rank() Over(Partition by Year(Sale_date) order by AVG(Total_sale) Desc) as Ranks
From Retails_sales
Group by 1,2) as t1
Where Ranks = 1;
```

100% | 123:131 | 5 errors found

Result Grid Filter Rows: Search Export:

Year(Sale_date)	Month(Sale_dat...	Avg_sale	Ranks
2022	7	541.34	1
2023	2	535.53	1

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QUERY- Q8.

```sql
-- Q.8 write a SQL query to find the top 5 customers based on the highest total sales ?

Select customer_id,
Sum(Total_sale) as Total_sales
From Retails_sales
Group by customer_id
order by 2 desc
limit 5
```

88:144 | 5 errors found

sult Grid | Filter Rows: Search | Export:

customer_id	Total_sales
3	38440
1	30750
5	30405
2	25295
4	23580

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QUERY- Q9.

```
152
153     -- Q.9 Write a SQL query to find the number of unique customers who purchased items from each category.
154
155     Select Category,
156       count(distinct customer_id)
157     From retails_sales
158     Group by Category
159
```

100% | 104:153 | 6 errors found

Result Grid | Filter Rows: Search | Export:

Category	count(distinct customer...
Beauty	141
Clothing	149
Electronics	144

QUERY- Q10.

```sql
-- Q. 10 Write a SQL query to create each shift and number of orders (Example Morning <=12, Afternoon Between 12 & 17, Evening > 17 ?


With hourly_sale
as (
SELECT
    *,
    CASE
        WHEN EXTRACT(HOUR FROM Sale_time) < 12 THEN 'Morning'
        WHEN EXTRACT(HOUR FROM Sale_time) BETWEEN 12 AND 17 THEN 'Afternoon'
        ELSE 'Evening'
    END AS Shift
FROM
    Retails_sales)

select shift,
Count(*) as total_orders
 From hourly_sale
Group by Shift
```

134:162 | 6 errors found

esult Grid | Filter Rows: Search | Export:

Shift	total_orders
Evening	1062
Morning	548
Afternoon	377

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THANK YOU