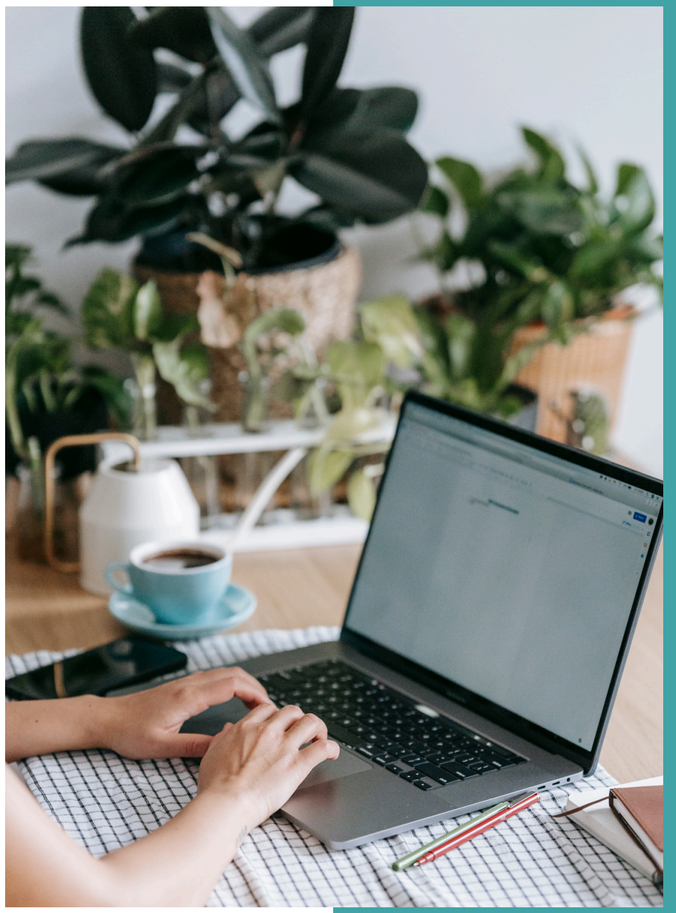
Sale Retails
Analysis

SALES REPORT



Introduction

Retails Sale Analysis

HALLO MY NAME IS ANIKET ARUN GAIKWAD IN THIS PROJECT I HAVE UTILIZED SQL QUERIES TO SOLVED QUESTION SQL RELATED RETAILS SALE ANALYSIS PROJECT.

Project Title: Retail Sales Analysis

Language: SQL

Database: retail_sales_db

QUESTION

01 Wap to retrieve all columns for sales made on '2022-11-05:

02 Wap to retrieve all transactions where the category is 'Clothing' and the quantity sold is more than 4 in the month of Nov-2022:

03 Wap to calculate the total sales (total_sale) for each category.

04 Wap to find the average age of customers who purchased items from the 'Beauty' category.

05 Wap to find five transactions where the total_sale is greater than 1000.

06 Wap to find the total number of transactions (transaction_id) made by each gender in each category.

07 Wap to calculate the average sale for each month. Find out best selling month in each year.

08 Wap to find the top 5 customers based on the highest total sales

09 Wap to find the number of unique customers who purchased items from each category.

10 Wap to create each shift and number of orders (Example Morning <12, Afternoon Between 12 & 17, Evening >17).

QUESTION

01 Wap to retrieve all columns for sales made on '2022-11-05:

```
SELECT *
FROM retail_sales_p1
WHERE sale_date = '2022-11-05';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantity	price_per_unit	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

QUESTION

02 Wap to retrieve all transactions where the category is 'Clothing' and the quantity sold is more than 4 in the month of Nov-2022:

```
SELECT
    *
FROM
    retail_sales_p1
WHERE
    category = 'Clothing'
        AND DATE_FORMAT(sale_date, '%Y-%m') = '2022-11'
        AND quantity >= 4;
```

transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantity	price_per_unit	cogs	total_sale
64	2022-11-15	06:34:00	7	Male	49	Clothing	4	25	8.5	100
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
284	2022-11-12	09:17:00	129	Male	43	Clothing	4	50	20.5	200
547	2022-11-14	07:36:00	3	Male	63	Clothing	4	500	250	2000
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
943	2022-11-05	19:29:00	90	Female	57	Clothing	4	300	318	1200
965	2022-11-27	21:45:00	84	Male	22	Clothing	4	50	13	200
1259	2022-11-03	17:31:00	105	Female	45	Clothing	4	50	21	200
1296	2022-11-26	20:42:00	45	Female	22	Clothing	4	300	342	1200
1476	2022-11-11	22:27:00	130	Female	27	Clothing	4	500	555	2000
1484	2022-11-23	09:29:00	22	Female	19	Clothing	4	300	147	1200
1497	2022-11-19	21:44:00	109	Male	41	Clothing	4	30	32.4	120
1615	2022-11-17	13:43:00	82	Female	61	Clothing	4	25	13.5	100
1696	2022-11-21	17:59:00	24	Female	50	Clothing	4	50	55	200
1885	2022-11-09	07:32:00	148	Female	52	Clothing	4	30	10.8	120
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

QUESTION

03 Wap to calculate the total sales (total_sale) for each category.

```
SELECT
    category,
    SUM(total_sale) as net_sale,
    COUNT(*) as total_orders
FROM retail_sales_p1
GROUP BY 1
```

category	net_sale	total_orders
Beauty	286790	611
Clothing	309995	698
Electronics	311445	678

QUESTION

04 Wap to find the average age of customers who purchased items from the 'Beauty' category.

```
SELECT
category,
    ROUND(AVG(age), 2) as avg_age
FROM retail_sales_p1
WHERE category = 'Beauty' group by category
```

	category	avg_age
▶	Beauty	40.42

QUESTION

05 Wap to find five transactions where the total_sale is greater than 1000.

```
SELECT * FROM retail_sales_p1
WHERE total_sale > 1000 limit 5;
```

transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantity	price_per_unit	cogs	total_sale
13	2023-02-08	17:43:00	106	Male	22	Electronics	3	500	245	1500
15	2022-07-01	11:50:00	75	Female	42	Electronics	4	500	210	2000
16	2022-06-25	10:33:00	82	Male	19	Clothing	3	500	180	1500
31	2023-12-31	17:47:00	3	Male	44	Electronics	4	300	129	1200
46	2022-11-08	17:50:00	54	Female	20	Electronics	4	300	84	1200
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

QUESTION

06 Wap to find the total number of transactions (transaction_id) made by each gender in each category.

```
SELECT
    category,
    gender,
    COUNT(*) as total_trans
FROM retail_sales_p1
GROUP
    BY
    category,
    gender
ORDER BY 1
```

	category	gender	total_trans
▶	Beauty	Female	330
	Beauty	Male	281
	Clothing	Female	347
	Clothing	Male	351
	Electronics	Female	335
	Electronics	Male	343

QUESTION

07 Wap to calculate the average sale for each month. Find out best selling month in each year.

```
SELECT
       year,
       month,
    avg_sale
FROM
(
SELECT
    EXTRACT(YEAR FROM sale_date) as year,
    EXTRACT(MONTH FROM sale_date) as month,
    AVG(total_sale) as avg_sale,
    RANK() OVER(PARTITION BY EXTRACT(YEAR FROM sale_date) ORDER BY AVG(total_sale) DESC) as rn
FROM retail_sales_p1
GROUP BY 1, 2
) as t1
WHERE rn = 1
```

	year	month	avg_sale
▶	2022	7	541.3414634146342
	2023	2	535.531914893617

QUESTION

08 Wap to find the top 5 customers based on the highest total sales

```
SELECT
    customer_id,
    SUM(total_sale) as total_sales
FROM retail_sales_p1
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5
```

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

QUESTION

09 Wap to find the number of unique customers who purchased items from each category.

```
SELECT
    category,
    COUNT(DISTINCT customer_id) as cnt_unique_cs
FROM retail_sales_p1
GROUP BY category
```

category	cnt_unique_cs
Beauty	141
Clothing	149
Electronics	144

QUESTION

10 Wap to create each shift and number of orders (Example Morning <12, Afternoon Between 12 & 17, Evening >17).

```sql
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 retail_sales_p1
)
SELECT
    shift,
    COUNT(*) as total_orders
FROM hourly_sale
GROUP BY shift
```

	shift	total_orders
▶	Evening	1062
	Morning	548
	Afternoon	377

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Thank You