Retail Sales Analytics

Using SQL

```sql
-- Q.1 Write a SQL query to retrieve all columns for sales made on '2022-11-05

select *
from retail
where sale_date = '2022-11-05';
```

ï»¿transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantiy	price_per_unit	cogs	total_sale
180	2022-11-05	10:47:00	117	Male	41	Clothing	3	300	129	900
240	2022-11-05	11:49:00	95	Female	23	Beauty	1	300	123	300
1256	2022-11-05	09:58:00	29	Male	23	Clothing	2	500	190	1000
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	14	100
943	2022-11-05	19:29:00	90	Female	57	Clothing	4	300	318	1200
1896	2022-11-05	20:19:00	87	Female	30	Electronics	2	25	31	50
1137	2022-11-05	22:34:00	104	Male	46	Beauty	2	500	145	1000
856	2022-11-05	17:43:00	102	Male	54	Electronics	4	30	9	120
214	2022-11-05	16:31:00	53	Male	20	Beauty	2	30	8	60
1265	2022-11-05	14:35:00	86	Male	55	Clothing	3	300	111	900

```sql
-- Q.2 Write a SQL query to retrieve all transactions where the category is 'Clothing' and the quantity sold is more than 4 in the month of Nov-2022 & 2023

select *
from retail
where category = 'Clothing'
     and quantiy  >= 4
     and sale_date between '2022-11-01' and '2023-11-01';
```

ï»¿transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantiy	price_per_unit	cogs	total_sale
559	2022-12-12	10:48:00	5	Female	40	Clothing	4	300	84	1200
1484	2022-11-23	09:29:00	22	Female	19	Clothing	4	300	147	1200
64	2022-11-15	06:34:00	7	Male	49	Clothing	4	25	9	100
736	2022-12-18	08:30:00	97	Male	29	Clothing	4	25	10	100
1107	2022-12-31	11:14:00	62	Female	21	Clothing	4	300	102	1200
284	2022-11-12	09:17:00	129	Male	43	Clothing	4	50	21	200
1284	2022-12-16	11:43:00	145	Male	43	Clothing	4	50	18	200
1885	2022-11-09	07:32:00	148	Female	52	Clothing	4	30	11	120
547	2022-11-14	07:36:00	3	Male	63	Clothing	4	500	250	2000
1278	2023-07-19	06:19:00	28	Female	37	Clothing	4	25	7	100
442	2023-06-30	11:07:00	24	Female	60	Clothing	4	25	13	100
1442	2023-02-16	11:02:00	96	Female	60	Clothing	4	25	11	100

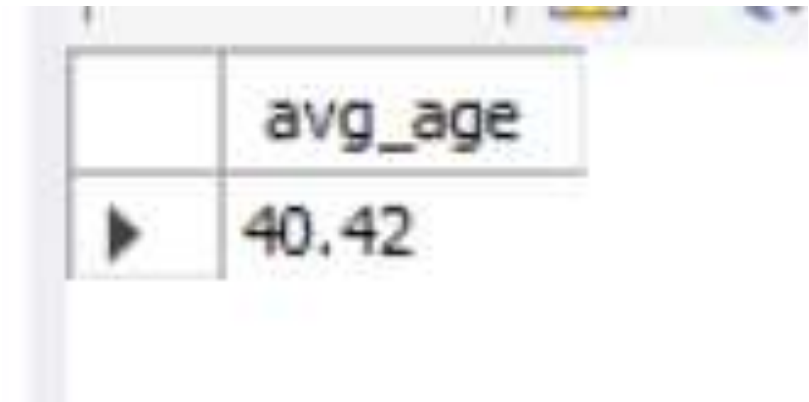
```sql
-- Q.3 Write a SQL query to calculate the total sales (total_sale) for each category.

select category ,
            sum(total_sale) as net_sale,
            count(quantiy) as total_quantity
from retail
group by 1;
```

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

```sql
-- Q.4 Write a SQL query to find the average age of customers who purchased items from the 'Beauty' category.

SELECT
    ROUND(AVG(age), 2) as avg_age
FROM retail
WHERE category = 'Beauty';
```



	avg_age
▶	40.42

```sql
-- Q.5 Write a SQL query to find all transactions where the total_sale is greater than 1000

select *
from retail
where total_sale > 1000;
```

ï»¿transactions_id	sale_date	sale_time	customer_id	gender	age	category	quantiy	price_per_unit	cogs	total_sale
522	2022-07-09	11:00:00	52	Male	46	Beauty	3	500	145	1500
559	2022-12-12	10:48:00	5	Female	40	Clothing	4	300	84	1200
1522	2022-11-14	08:35:00	48	Male	46	Beauty	3	500	235	1500
1559	2022-08-20	07:40:00	49	Female	40	Clothing	4	300	144	1200
421	2022-04-08	08:43:00	66	Female	37	Clothing	3	500	235	1500
1421	2022-01-17	07:07:00	59	Female	37	Clothing	3	500	185	1500
484	2022-03-13	07:52:00	135	Female	19	Clothing	4	300	75	1200
1484	2022-11-23	09:29:00	22	Female	19	Clothing	4	300	147	1200
15	2022-07-01	11:50:00	75	Female	42	Electronics	4	500	210	2000
743	2022-08-07	07:54:00	55	Female	34	Beauty	4	500	260	2000
1015	2022-03-09	11:53:00	94	Female	42	Electronics	4	500	200	2000
1743	2022-10-26	09:37:00	47	Female	34	Beauty	4	500	250	2000

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

select gender, category,
       count(*) as total_transaction
from retail
group by 1,2
order by 1;
```

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

```sql
-- Q.7 Write a SQL query to find the top 5 customers based on the highest total sales

select  customer_id,
        sum(total_sale) as highest_sale
 from retail
 group by 1
 order by highest_sale desc
 limit 5;
```

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

```sql
-- Q.8 Write a SQL query to find the number of unique customers who purchased items from each category.

select  category,
       count(distinct customer_id) as unique_customers
from retail
group by 1;
```

	category	unique_customers
▶	Beauty	141
	Clothing	149
	Electronics	144