-- 1. Sales Performance Insights
-- a) Top-selling Products and Categories

-- Q1) What is the total revenue generated?

```sql
SELECT SUM(TOTAL_PRICE) AS TOTAL_REVENUE FROM ELECTRONICS_SALES;
```
TOTAL_REVENUE
58521578.109997064

--Q2)What is the monthly breakdown of sales?

```sql
SELECT DATE_TRUNC('MONTH',PURCHASE_DATE) AS MONTH,
SUM(TOTAL_PRICE) AS REVENUE_PER_MONTH FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 1;
```
"month"                    "revenue_per_month"

"2023-09-01 00:00:00+05:30" 481961.79000000056
"2023-10-01 00:00:00+05:30" 2318466.349999999
"2023-11-01 00:00:00+05:30" 2068434.1399999969
"2023-12-01 00:00:00+05:30" 1980700.3299999984
"2024-01-01 00:00:00+05:30" 6001020.489999997
"2024-02-01 00:00:00+05:30" 5372749.099999997
"2024-03-01 00:00:00+05:30" 5639074.8400000045
"2024-04-01 00:00:00+05:30" 5743905.710000012
"2024-05-01 00:00:00+05:30" 6173917.860000006
"2024-06-01 00:00:00+05:30" 6071590.6000000145
"2024-07-01 00:00:00+05:30" 6004135.610000019
"2024-08-01 00:00:00+05:30" 6110175.959999991
"2024-09-01 00:00:00+05:30" 4555445.329999997

--Q3)Which product type generated the highest revenue?

```sql
SELECT PRODUCT_TYPE,SUM(TOTAL_PRICE) AS TOTAL_REVENUE_OF_PRODUCT
FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 2;
```
"product_type" "total_revenue_of_product"

"Headphones" 3967358.339999995
"Tablet" 11410018.970000116
"Laptop" 12057530.690000003
"Smartwatch" 13926912.060000103
"Smartphone" 17159758.049999706

--Q4)What is the average order value (AOV)?

```sql
SELECT AVG(TOTAL_PRICE) AS AVG_ORDERVALUE FROM ELECTRONICS_SALES;
```

"avg_ordervalue"
3020.7803701025687

--Q5)Write top 10 customers who made the most purchases?

```sql
 SELECT customer_id, COUNT(*) AS total_orders
```

```
FROM electronics_sales
GROUP BY customer_id
ORDER BY total_orders DESC
LIMIT 10;
```

"id"  "total_orders"
18304 7
16357 7
4224 6
5948 6
12616 6
2556 6
17946 6
19996 6
2238 6
2447 6

--Q4)Find the avg age of customers?

```
SELECT AVG(AGE) AVG_AGE FROM ELECTRONICS_SALES;
```

"avg_age"
48.9807463996283487

--Q7)Which shipping methods are used the most?

```
SELECT SHIPPING_TYPE,COUNT(*) AS TOP_USED_SHIPPING FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 2 DESC;
```

"shipping_type" "top_used_shipping"
"Standard" 6522
"Express" 3366
"Overnight" 3357
"Expedited" 3072
"Same Day" 3056

--Q8)Which shipping method has the highest cancellation rate?

```
SELECT shipping_type,
     COUNT(*) FILTER (WHERE order_status = 'Cancelled') * 100.0 / COUNT(*) AS cancel_rate
FROM electronics_sales
GROUP BY shipping_type
ORDER BY cancel_rate DESC;
```

"shipping_type" "cancel_rate"
"Express" 33.8383838383838384
"Overnight" 33.0652368185880250
"Same Day" 33.0170157068062827
"Standard" 32.4440355719104569
"Expedited" 32.3567708333333333

--Q9)What are the trends in cancelled orders over time?

```
SELECT DATE_TRUNC('month', purchase_date) AS month, COUNT(*) AS cancelled_orders
```

```sql
FROM electronics_sales
WHERE order_status = 'Cancelled'
GROUP BY month
ORDER BY month;
```

| "month" | "cancelled_orders" |
| --- | --- |
| "2023-09-01 00:00:00+05:30" | 66 |
| "2023-10-01 00:00:00+05:30" | 298 |
| "2023-11-01 00:00:00+05:30" | 260 |
| "2023-12-01 00:00:00+05:30" | 275 |
| "2024-01-01 00:00:00+05:30" | 627 |
| "2024-02-01 00:00:00+05:30" | 576 |
| "2024-03-01 00:00:00+05:30" | 613 |
| "2024-04-01 00:00:00+05:30" | 624 |
| "2024-05-01 00:00:00+05:30" | 653 |
| "2024-06-01 00:00:00+05:30" | 629 |
| "2024-07-01 00:00:00+05:30" | 604 |
| "2024-08-01 00:00:00+05:30" | 668 |
| "2024-09-01 00:00:00+05:30" | 475 |

--Q10)How many purchases did loyalty members make compared to non-members?

```sql
SELECT LOYALTY_MEMBER, SUM(TOTAL_PRICE),COUNT(*)
FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 2;
```

| "loyalty_member" | "sum" | "count" |
| --- | --- | --- |
| "Yes" | 12629103.48999997 | 4221 |
| "No" | 45892474.619999304 | 15152 |

--Q13)Which product has the highest average rating?

```sql
SELECT PRODUCT_TYPE ,AVG(rating) as AVG_RATING
FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 2 DESC;
```

| "product_type" | "avg_rating" |
| --- | --- |
| "Smartphone" | 3.3437106352348389 |
| "Tablet" | 3.0195399455849617 |
| "Smartwatch" | 2.9964001028542042 |
| "Headphones" | 2.9853015712113533 |
| "Laptop" | 2.9836358987471235 |

--Q14)What is the average rating given by loyalty members versus non-members?

```sql
SELECT
    loyalty_member,
    AVG(rating) AS avg_rating
FROM electronics_sales
```

```
WHERE rating IS NOT NULL
GROUP BY loyalty_member;
```

```
"loyalty_member" "avg_rating"
"No"         3.0949709609292503
"Yes"        3.1049514333096423
```

--Q15)How does average rating affect sales volume?

```
SELECT
  CASE
     WHEN rating < 3 THEN '1-2 Stars'
     WHEN rating = 3 THEN '3 Stars'
     WHEN rating > 3 THEN '4-5 Stars'
  END AS rating_range,
  COUNT(*) AS sales_volume
FROM electronics_sales
WHERE rating IS NOT NULL
GROUP BY rating_range;
```

```
"rating_range" "sales_volume"
 "4-5 Stars"        5758
 "1-2 Stars"        5780
 "3 Stars"          7835
```

--Q16)What is the average order value (AOV) for highly rated products?

```
SELECT AVG(TOTAL_PRICE) AS AVG_ORDER_VALUE
FROM ELECTRONICS_SALES
WHERE RATING >=4;
```

```
"avg_order_value"
2339.1457103160797
```

--Q17)What is the total revenue generated by each payment method?

```
SELECT PAYMENT_METHOD, SUM(TOTAL_PRICE) AS TOTAL_REVENUE
FROM ELECTRONICS_SALES
GROUP BY 1
ORDER BY 2 DESC;
```

```
"payment_method" "total_revenue"
```

```
"Credit Card" 17221180.93999994
"Bank Transfer" 11037735.999999993
"PayPal" 10772090.720000034
"Debit Card" 6736217.539999951
"Paypal" 6498781.079999958
"Cash"        6255571.829999958
```

--Q18)Which payment methods are associated with the highest cancellation rates?

```
SELECT payment_method,
     COUNT(*) FILTER (WHERE ORDER_status = 'Cancelled') * 100.0 / COUNT(*) AS cancellation_rate
FROM electronics_sales
```

```
GROUP BY payment_method
ORDER BY cancellation_rate DESC;
```

"payment_method"    "cancellation_rate"

"Paypal" 35.2426412092283214
"Credit Card" 33.6278494433645520
"Bank Transfer" 33.0066392665191274
"PayPal" 31.9778789850357840
"Debit Card" 31.8494536624848240
"Cash"          30.6982343499197432

--END--