

Customer Purchase Portfolio Analysis Project



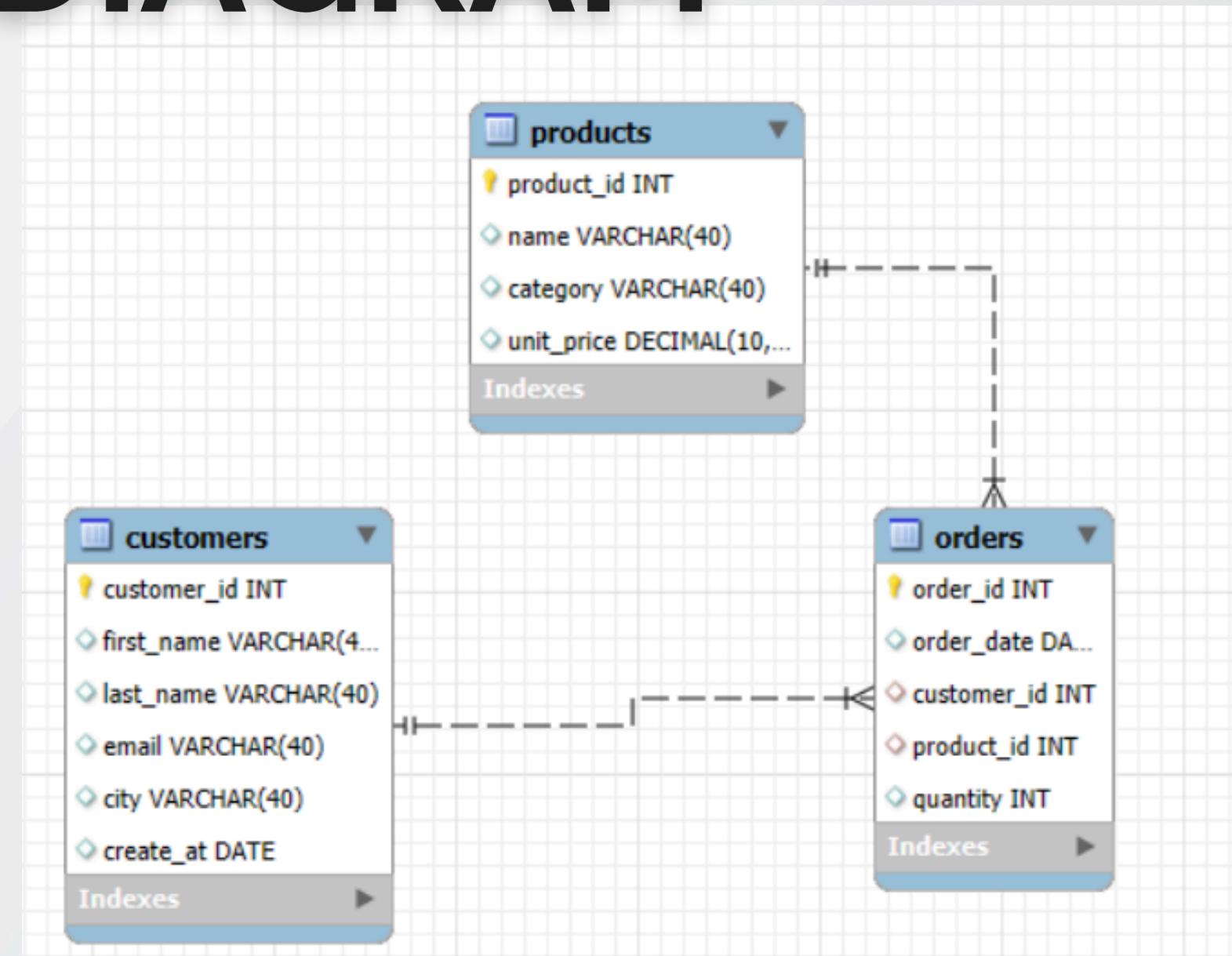
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Introduction

This project leverages SQL to analyze customer purchase portfolios, identifying key buying patterns, segment preferences, and spending trends. By transforming raw transactional data into actionable insights, it empowers businesses to better understand their customers, refine marketing strategies, and optimize sales outcomes.

ER DIAGRAM



Q1

TOTAL ORDER PLACED PER CUSTOMER

```
/*Q1.TOTAL ORDER PLACED PER CUSTOMER*/
SELECT customer_id,COUNT(*) AS order_count
FROM orders
GROUP BY customer_id;
```

customer_id	order_count
1	5
2	4
3	5
4	3
5	4
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	2
16	1
17	1

Q10 AVERAGE ORDER VALUE

```
/*Q10.AVERAGE ORDER VALUE*/
SELECT (ROUND(SUM(o.quantity*p.unit_price),2))/(COUNT(DISTINCT order_id))AS avg_order_value
FROM orders o
JOIN products p
ON o.product_id=p.product_id;
```

avg_order_value
2547.740000

Q2 TOTAL QUANTITY PURCHASED BY CUSTOMERS

```
/*Q2.TOTAL QUANTITY PURCHASED BY CUSTOMERS*/
SELECT customer_id,SUM(quantity) AS quantity_purchased
FROM orders
GROUP BY customer_id;
```

customer_id	quantity_purchased
1	9
2	5
3	20
4	7
5	10
6	1
7	2
8	5
9	3
10	1
11	1
12	1
13	4
14	1
15	8

Q9 DAILY ORDER AND REVENUE FOR A GIVEN WEEK(2024-06-07)TO(2024-07-13)

```
/*Q9.DAILY ORDER AND REVENUE FOR A GIVEN WEEK(2024-06-07)TO(2024-07-13)*/
SELECT o.order_date,COUNT(*)AS orders,SUM(o.quantity*p.unit_price) AS revenue
FROM orders o
JOIN products p ON o.product_id=p.product_id
WHERE order_date BETWEEN '2024-06-07' AND '2024-06-13'
GROUP BY order_date;
```

order_date	orders	revenue
2024-06-07	1	550.00
2024-06-08	2	3349.00
2024-06-09	1	2900.00
2024-06-10	2	4844.00
2024-06-11	1	1599.00
2024-06-12	2	14350.00
2024-06-13	2	2848.00

Q3

REVENUE PER CUSTOMER

```
/*Q3. REVENUE PER CUSTOMER*/
SELECT c.customer_id, CONCAT(c.first_name, ' ', c.last_name) AS customer_name,
SUM(o.quantity*p.unit_price) AS revenue
FROM orders o
JOIN customers c ON o.customer_id=c.customer_id
JOIN products p ON o.product_id=p.product_id
GROUP BY c.customer_id
ORDER BY revenue DESC;
```

customer_id	customer_name	revenue
3	Chitra Iyer	30920.00
5	Esha Shah	21947.00
1	Asha Rao	9144.00
4	Deepak Singh	8044.00
2	Ben Kapoor	7848.00
11	Karan Mishra	7499.00
27	Amit Tripathi	4299.00
19	Siddharth Bose	3998.00
15	Om Kale	3260.00
14	Nina Roy	3200.00
12	Lata Joshi	2999.00
30	Divya Bhatt	2799.00

Q8 TOTAL REVENUE BY PRODUCT CATEGORY

```
/*Q8.TOTAL REVENUE BY PRODUCT CATEGORY*/
SELECT p.category,ROUND(SUM(o.quantity*p.unit_price),2) AS revenue
FROM orders o
JOIN products p ON o.product_id=p.product_id
GROUP BY category
ORDER BY revenue DESC;
```

category	revenue
Electronics	96780.00
Furniture	14596.00
Accessories	12236.00
Stationery	3775.00

Q4 MONTHLY REVENUE TREND

```
/*Q4.MONTHLY REVENUE TREND*/  
SELECT SUM(o.quantity*p.unit_price)AS revenue,DATE_FORMAT(order_date,'%y-%m')AS month  
FROM orders o  
JOIN products p ON o.product_id=p.product_id  
GROUP BY month  
ORDER BY month DESC;
```

revenue	month
127387.00	24-06

Q7 AVERAGE BASKET SIZE PER CUSTOMER

```
/*Q7.AVERAGE BASKET SIZE PER CUSTOMER*/  
SELECT customer_id,ROUND(AVG(quantity),2) AS avg_quantity  
FROM orders  
GROUP BY customer_id;
```

customer_id	avg_quantity
1	1.80
2	1.25
3	4.00
4	2.33
5	2.50
6	1.00
7	2.00
8	5.00
9	3.00

Q5

TOP SELLING PRODUCT

```
/*Q5.TOP SELLING PRODUCT*/  
SELECT p.name, SUM(o.quantity) AS unit_sold  
FROM orders o  
JOIN products p ON o.product_id=p.product_id  
GROUP BY p.name  
ORDER BY unit_sold DESC  
LIMIT 5;
```

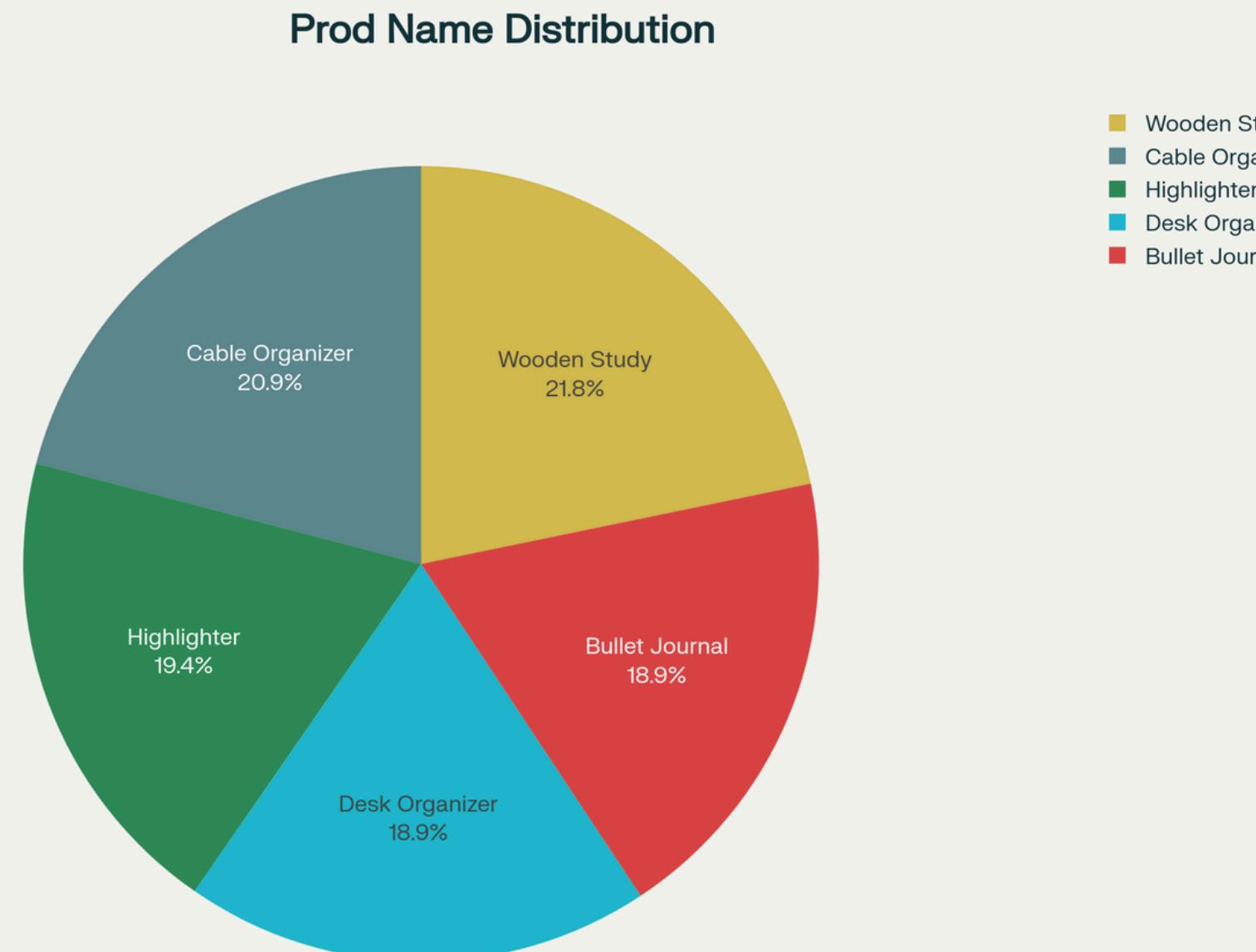
name	unit_sold
Portable Speaker	17
USB-C Charger	10
Paper Clips (Box)	10
Gel Pen (Pack of 10)	9
Wireless Mouse	8

Q6 PRODUCT NEVER ORDERED

```
/*Q6.PRODUCT NEVER ORDERED*/  
SELECT product_id, name  
FROM products  
WHERE product_id NOT IN(SELECT DISTINCT product_id FROM orders);
```

product_id	name
114	Desk Organizer
116	Bullet Journal
117	Highlighter Pens (Set of 6)
127	Cable Organizer Pouch
132	Wooden Study Table
HULL	HULL

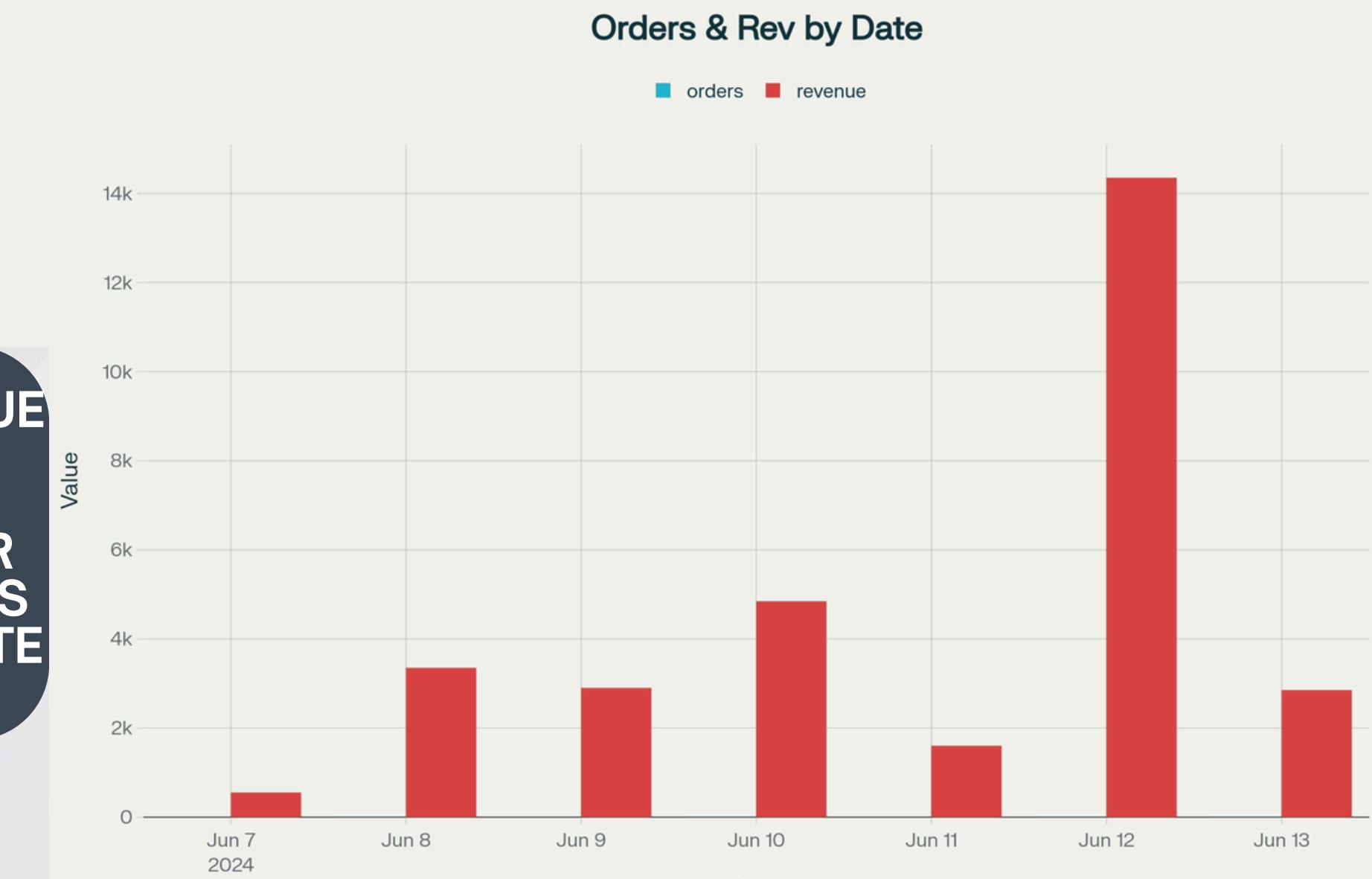
PRODUCT NEVER ORDERED



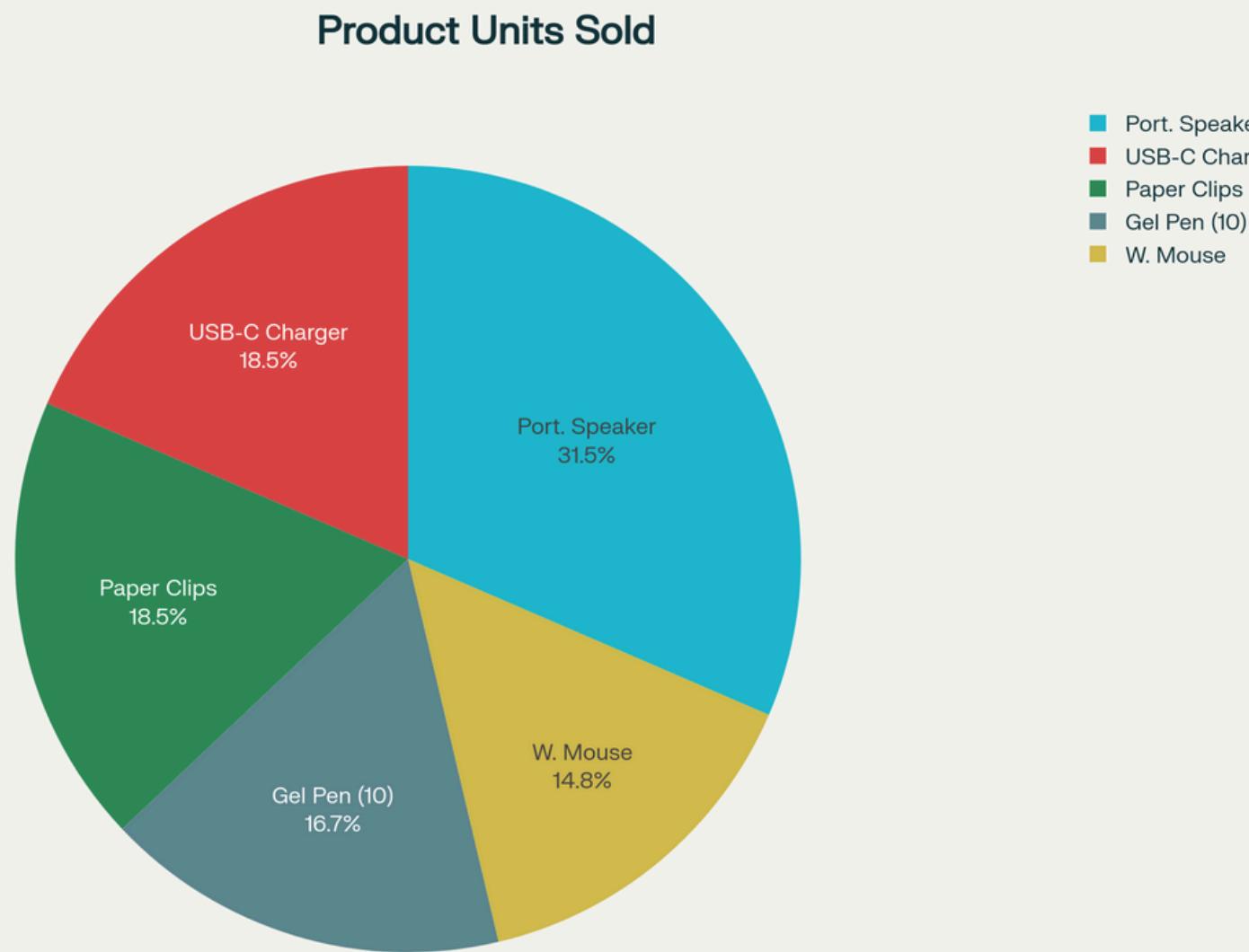
12 JUNE IS THE DAY WITH MOST DAILY ORDER AND REVENUE BY FAR THE DOUBLE IN TERMS OF ORDER AND TRIPLE IN TERMS OF REVENUE THAN REST OF THE DAYS
INVESTIGATE THE REASON BEHIND THAT SPIKE WHETHER THERE WAS A FESTIVAL OR SOME LIMITED PERIOD OFFERS BEEN PROVIDED ON THAT DAY AND THEN TRY TO REPLICATE THAT SUCCESSFUL DAY

DESK ORGANIZER , BULLET JOURNAL,HIGHLIGHTER, CABLE ORGANIZER POUCH ,WOODEN STUDY TABLE ARE THE TOP 5 NEVER ORDERED PRODUCTS- TRY TO GIVE IT IN DISCOUNTED PRICE OR FOR FREE IN ORDER TO BUILT A CUSTOMER BASE AND CLEAR THE STOCK FOR MORE PROFITABLE ITEMS IN THE NEAR FUTURE

DAILY ORDER AND REVENUE FOR A GIVEN WEEK(2024-06-07)TO(2024-07-13)



TOP SELLING PRODUCT



FOCUS ON THE CUSTOMERS WHO HAS MORE THAN 5,000 REVENUE AND GIVE SPECIAL PERKS TO THOSE WHO ARE PREMIUM CATEGORY CUSTOMER CONTRIBUTING ABOUT 15,000 AS REVENUE. GIVE THEM MORE VOUCHERS AND GIFTS FOR THEIR LOYALTY

PORTABLE SPEAKER(17), USB-C CHARGER(10), PAPER CLIPS(10), GEL PEN(9), WIRELESS MOUSE(8) ARE THE TOP 5 MOST SELLING PRODUCT IN THE STORE-MAKE SURE THEY DON'T GO OUT OF STOCK ANYTIME AND FOCUS YOUR ADVERTISING CAMPEIGN MORE ON THEM AS THESE PRODUCT CATCHES THE CUSTOMER'S ATTENTION A LOT.

REVENUE PER CUSTOMERS



CONCLUSION

The Customer Purchase Portfolio Analysis project harnessed the power of SQL to transform raw transactional data into meaningful business insights. By systematically analyzing customer purchase histories, the project identified critical buying patterns, segmented customers based on preferences, and revealed trends in product popularity and revenue generation.

The use of advanced SQL queries enabled efficient data extraction, aggregation, and visualization, empowering the organization to make data-driven decisions. The findings not only highlighted top-performing products and high-value customers but also exposed opportunities for targeted marketing, personalized offers, and improved inventory management.

Ultimately, this analysis demonstrated the significant value of leveraging SQL for portfolio analysis. The project's outcomes provide a strong foundation for enhancing customer satisfaction, optimizing sales strategies, and driving sustainable business growth.

Thank You



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