

ANALYSISING SALES FOR CONSIDERED DATA SET...BY PRANEETHACSK

- I CREATED A DATA SET WITH FIELDS (ORDERID,ORDER DATE ,AMOUNT)
USE task6;/**DBNAME**/
CREATE TABLE orders (
 order_id INT AUTO_INCREMENT PRIMARY KEY,
 order_date DATE NOT NULL,
 amount DECIMAL(10, 2) NOT NULL,
 product_id INT NOT NULL
);
- ALTERED IT WITH PRODUCT NAME

```
ALTER TABLE orders  
ADD product_name VARCHAR(100) NOT NULL;
```

- AND INSERTED SOME RANDOM VLUES FROM GOOGLE(CAN DO IT WITH DOWNLOADING A DATA SET BUT WANTED TO HAVE COMMAND ON CREATE INSERT, ALTER IN SQL)
- NOW DATA SET IS READY TO USE
- FIRST LETS SEE THE TABLE(it has 100 values):
SELECT * FROM orders;

| | order_id | order_date | amount | product_id | product_name |
|---|----------|------------|--------|------------|----------------|
| ▶ | 1 | 2023-01-15 | 89.99 | 101 | Wireless Mouse |
| | 2 | 2023-02-10 | 125.00 | 102 | Keyboard |
| | 3 | 2023-03-05 | 199.99 | 103 | Monitor |
| | 4 | 2023-04-22 | 49.99 | 104 | USB Cable |
| | 5 | 2023-05-18 | 150.00 | 105 | Laptop Stand |
| | 6 | 2023-06-09 | 78.00 | 106 | Webcam |
| | 7 | 2023-07-12 | 135.00 | 107 | Headphones |
| | 8 | 2023-08-27 | 210.00 | 108 | External HDD |
| | 9 | 2023-09-14 | 65.50 | 109 | Microphone |
| | 10 | 2023-10-30 | 300.00 | 110 | Gaming Mouse |
| | 11 | 2023-11-06 | 89.00 | 101 | Wireless Mouse |
| | 12 | 2023-12-02 | 115.99 | 102 | Keyboard |
| | 13 | 2024-01-08 | 129.00 | 103 | Monitor |
| | 14 | 2024-02-17 | 45.00 | 104 | USB Cable |
| | 15 | 2024-03-25 | 160.75 | 105 | Laptop Stand |
| | 16 | 2024-04-10 | 95.00 | 106 | Webcam |
| | 17 | 2024-05-05 | 145.00 | 107 | Headphones |

- LETS SEE DISTINCT PRODUCT AND PRODUCT IDS:
SELECT DISTINCT product_id, product_name
FROM orders;

| | product_id | product_name |
|---|------------|----------------|
| ▶ | 101 | Wireless Mouse |
| | 102 | Keyboard |
| | 103 | Monitor |
| | 104 | USB Cable |
| | 105 | Laptop Stand |
| | 106 | Webcam |
| | 107 | Headphones |
| | 108 | External HDD |
| | 109 | Microphone |
| | 110 | Gaming Mouse |

- MONTHLY SALES HERE I USED GROUP BY TO GROUP MONTHS AND SUM TO FIND TOTAL SALES A MONTH

```
SELECT
    MONTHNAME(order_date) AS month_name,
    SUM(amount) AS total_sales
FROM orders
GROUP BY MONTH(order_date), MONTHNAME(order_date)
ORDER BY total_sales DESC;
```

| | month_name | total_sales |
|---|------------|-------------|
| ▶ | March | 1277.24 |
| | June | 1167.43 |
| | October | 1150.50 |
| | May | 1124.98 |
| | August | 1090.48 |
| | July | 1067.77 |
| | November | 1066.00 |
| | April | 1025.85 |
| | January | 989.99 |
| | September | 938.50 |
| | February | 932.99 |
| | December | 910.99 |

- YEARLY SALES- FOR THIS I USED SUM FOR TOTAL SALES AND YEAR TO GET YEARS

```
SELECT
    YEAR(order_date) AS sales_year,
    SUM(amount) AS total_sales
FROM orders
GROUP BY YEAR(order_date)
ORDER BY sales_year;
```

| | sales_year | total_sales |
|---|------------|-------------|
| ▶ | 2023 | 4925.41 |
| | 2024 | 4470.45 |
| | 2025 | 3346.86 |

- USING EXTRACT FUNCTION:
 - IN 2023 PRODUCT VS SALES:

```

SELECT
    product_id,
    product_name,
    SUM(amount) AS total_sales
FROM orders
WHERE EXTRACT(YEAR FROM order_date) = 2023
GROUP BY product_id, product_name
ORDER BY total_sales DESC;

```

| | product_id | product_name | total_sales |
|---|------------|----------------|-------------|
| ▶ | 108 | External HDD | 770.00 |
| | 102 | Keyboard | 551.98 |
| | 103 | Monitor | 539.99 |
| | 110 | Gaming Mouse | 529.98 |
| | 101 | Wireless Mouse | 513.98 |
| | 107 | Headphones | 482.00 |
| | 104 | USB Cable | 454.98 |
| | 105 | Laptop Stand | 420.00 |
| | 106 | Webcam | 338.00 |
| | 109 | Microphone | 324.50 |

- IN 2024 PRODUCT VS SALES:

```

SELECT
    product_id,
    product_name,
    SUM(amount) AS total_sales
FROM orders
WHERE EXTRACT(YEAR FROM order_date) = 2024
GROUP BY product_id, product_name
ORDER BY total_sales DESC;

```

| | product_id | product_name | total_sales |
|---|------------|----------------|-------------|
| ▶ | 105 | Laptop Stand | 673.75 |
| | 110 | Gaming Mouse | 604.99 |
| | 102 | Keyboard | 553.00 |
| | 103 | Monitor | 539.00 |
| | 108 | External HDD | 525.00 |
| | 109 | Microphone | 425.77 |
| | 107 | Headphones | 344.00 |
| | 106 | Webcam | 282.00 |
| | 104 | USB Cable | 274.44 |
| | 101 | Wireless Mouse | 248.50 |

- IN 2025 PRODUCT VS SALES:

```

SELECT
    product_id,
    product_name,
    SUM(amount) AS total_sales
FROM orders
WHERE EXTRACT(YEAR FROM order_date) = 2024
GROUP BY product_id, product_name
ORDER BY total_sales DESC;

```

| | product_id | product_name | total_sales |
|---|------------|----------------|-------------|
| ▶ | 107 | Headphones | 500.00 |
| | 109 | Microphone | 418.99 |
| | 110 | Gaming Mouse | 375.49 |
| | 105 | Laptop Stand | 367.00 |
| | 106 | Webcam | 359.00 |
| | 103 | Monitor | 345.00 |
| | 101 | Wireless Mouse | 322.00 |
| | 108 | External HDD | 288.88 |
| | 102 | Keyboard | 237.50 |
| | 104 | USB Cable | 133.00 |

- BY GIVING SPECIFIC DATE RANGE
SELECT
product_id,
product_name,
SUM(amount) AS total_sales
FROM orders
WHERE order_date BETWEEN '2023-01-01' AND '2023-03-31'
GROUP BY product_id, product_name
ORDER BY total_sales DESC;

| | product_id | product_name | total_sales |
|---|------------|----------------|-------------|
| ▶ | 103 | Monitor | 359.99 |
| | 108 | External HDD | 250.00 |
| | 105 | Laptop Stand | 180.00 |
| | 102 | Keyboard | 125.00 |
| | 104 | USB Cable | 99.99 |
| | 101 | Wireless Mouse | 89.99 |
| | 109 | Microphone | 70.00 |
| | 107 | Headphones | 60.00 |

- COUNTING DISTINCT PRODUCTS IN 2023,2024,2025
SELECT COUNT(DISTINCT product_id) AS unique_products_2023
FROM orders
WHERE EXTRACT(YEAR FROM order_date) = 2023;

| | unique_products_2023 |
|---|----------------------|
| ▶ | 10 |

- MOST total sales product:
SELECT
product_name,
SUM(amount) AS total_sales
FROM orders
GROUP BY product_name

ORDER BY total_sales DESC;

| | product_name | total_sales |
|---|----------------|-------------|
| ▶ | External HDD | 1583.88 |
| | Gaming Mouse | 1510.46 |
| | Laptop Stand | 1460.75 |
| | Monitor | 1423.99 |
| | Keyboard | 1342.48 |
| | Headphones | 1326.00 |
| | Microphone | 1169.26 |
| | Wireless Mouse | 1084.48 |
| | Webcam | 979.00 |
| | USB Cable | 862.42 |

SUMMARY:

1. WE HAVE A TABLE WITH 100 ROWS AND 5 COLUMNS
2. TOTAL 10 ITEMS ARE BEING SOLD TO 100 PEOPLE
3. MARCH MONTH HAS HIGHEST SALES-1277
4. OCT HAS LOWEST 910
5. 2023 HAS HIGHEST SALES OF 4925 AND 2025 HAS LOWEST SALES OF 3346
6. IN 2023 EXTERNAL HDD IS SOLD HIGHEST AND MICROPHONE IS LOWEST
7. IN 2024, LAPTOP STAND- HIGHEST, WIRELESS MOUSE LOWEST
8. IN 2025, HEAD PHONES – HIGHEST, USB CABLE LOWEST
9. 10 DISTINCT PRODUCTS ARE SOLD EVERY YEAR
10. ANALYSIS:
 - NOMATTER WHAT EXTERNAL HDD IS SOLD HIGHEST COMPARED TO ALL SO WE CAN INCREASE THE stack OF IT
 - SALES ARE DECREASING WHEN COMPARED TO LAST TWO YRS
 - PRODUCT COUNT MUST BE INCREASED TO MORE THAN 10
 - CUSTOMERS ARE NOT RE BUYING SO WE NEED TO FIND REASON FOR THAT
 - External hdd is sold high even after being costly