SQL - SALES Script

```sql
select * from sales_sales

---format the date ------
update sales_sales set date=replace(date,'/','-');
create or replace table sales_sales as(
select*, to_date(date,'dd-mm-yyyy')as formatted_date
from sales_sales);

--- run---
select*from sales_sales;

---retrieve min and maxium date
select
min(date)as min_date,
max (date)as max_date
from sales_sales;
---drop date ----
alter table sales_sales drop date;

-------
select*from sales_sales;
--- truncate to 2 decimal points -----


----truncate final
create or replace table sales_sales as (select formatted_date,truncate(sales,2)as
sales,truncate(cost_of_sales,2)as cost_of_sales,quantity_sold,sales/quantity_sold as
price_per_unit
from sales_sales);

----split data into months ---
create or replace table sales_sales as ( select sales,cost_of_sales,quantity_sold,price_per_unit,
to_char(formatted_date,'mon yyyy')as
month_name,formatted_date,to_char(formatted_date,'dy')as day_of_the_week
from sales_sales);

--average daily sales price per unit -----
SELECT
    formatted_date,
    Sales / Quantity_Sold AS Sales_Price_Per_Unit
FROM SALES_SALES;
------
```

```sql
SELECT
    SUM(Sales) / SUM(Quantity_Sold) AS Average_Unit_Sales_Price
FROM SALES_SALES;


--- daily gross profit
SELECT
    formatted_date,
    ((Sales - Cost_of_Sales) / Sales) * 100 AS Gross_Profit_Percentage
FROM SALES_SALES;

--- identifitying promotional periods
SELECT
    formatted_date,
    Sales / Quantity_Sold AS Sales_Price_Per_Unit
FROM SALES_SALES
ORDER BY Sales_Price_Per_Unit ASC
LIMIT 3;


--top 5 sale days
SELECT
    formatted_date,
    Sales
FROM SALES_SALES
ORDER BY Sales DESC
LIMIT 5;

---- PED------- did not work,,,,, tried so maany variations
SELECT
    formatted_date,
    Percentage_Change_Quantity / Percentage_Change_Price AS Price_Elasticity_of_Demand
FROM (
    SELECT
        formatted_date
        ((Quantity_Sold - LAG(Quantity_Sold) OVER (ORDER BY formatted_date)) /
LAG(Quantity_Sold) OVER (ORDER BY formatted_date)) * 100 AS
Percentage_Change_Quantity,
        ((Sales / Quantity_Sold - LAG(Sales / Quantity_Sold) OVER (ORDER BY formatted_date))
/ LAG(Sales / Quantity_Sold) OVER (ORDER BY formatted_date)) * 100 AS
Percentage_Change_Price
    FROM SALES_SALES

-----sales price per unit test -----
```

```sql
SELECT
    formatted_date,
    Sales / Quantity_Sold AS Sales_Price_Per_Unit
FROM SALES_SALES
ORDER BY Sales_Price_Per_Unit ASC
LIMIT 3;

----graph to aggragate yearly profit
SELECT
    YEAR(Formatted_Date) AS Year,
    SUM(Sales - Cost_of_Sales) AS Yearly_Gross_Profit
FROM sales_sales
GROUP BY YEAR(Formatted_Date)
ORDER BY Year;

SELECT
    YEAR(Formatted_Date) AS Year,
    ((SUM(Sales) - SUM(Cost_of_Sales)) / SUM(Sales)) * 100 AS Gross_Profit_Percentage
FROM sales_sales
GROUP BY YEAR(Formatted_Date)
ORDER BY Year;

--------------quarterly gross profit
SELECT
    CONCAT(YEAR(Formatted_Date), '-Q',
        CASE
            WHEN MONTH(Formatted_Date) BETWEEN 1 AND 3 THEN '1'
            WHEN MONTH(Formatted_Date) BETWEEN 4 AND 6 THEN '2'
            WHEN MONTH(Formatted_Date) BETWEEN 7 AND 9 THEN '3'
            WHEN MONTH(Formatted_Date) BETWEEN 10 AND 12 THEN '4'
        END
    ) AS Quarter,
    SUM(Sales - Cost_of_Sales) AS Quarterly_Gross_Profit
FROM sales_sales
WHERE Formatted_Date BETWEEN '2014-01-01' AND '2016-09-30'
GROUP BY Year(Formatted_Date), Quarter
ORDER BY Quarter;

-----


SELECT
    FORMATTED_DATE,
```

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    (PRICE_PER_UNIT - (COST_OF_SALES / QUANTITY_SOLD)) / PRICE_PER_UNIT * 100
AS gross_profit_percentage_per_unit
FROM sales_sales;


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SELECT
    FORMATTED_DATE,
    ((PRICE_PER_UNIT - (COST_OF_SALES / QUANTITY_SOLD)) / PRICE_PER_UNIT) * 100
AS gross_profit_percentage_per_unit
FROM sales_sales;




---

SELECT
    FORMATTED_DATE,
    (`TRUNCATE(SALES,2')' / QUANTITY_SOLD) AS daily_sales_price_per_unit
FROM sales_sales
ORDER BY FORMATTED_DATE;

SELECT
    FORMATTED_DATE,
    ([TRUNCATE(SALES,2)] / QUANTITY_SOLD) AS daily_sales_price_per_unit
FROM sales_sales
ORDER BY FORMATTED_DATE;

SELECT
    FORMATTED_DATE,
    (sales_value / QUANTITY_SOLD) AS daily_sales_price_per_unit
FROM (
    SELECT
        FORMATTED_DATE,
        `TRUNCATE(SALES,2)` AS sales_value,
        QUANTITY_SOLD
    FROM sales_sales
) AS sub
ORDER BY FORMATTED_DATE;
```