SQL QUERIES

TRANSFORMATION QUERIES

1. Create a Month Name Column:

```
SELECT
   order_id,
   order_date,
   customer_id,
   customer_name,
   city,
   product_category,
   quantity,
   unit_price,
   profit_percent,
   TO_CHAR(TO_DATE(order_date, 'DD/MM/YYYY'), 'Month') AS month_name
FROM
   sales_data;
```

2. Add State for Corresponding City:

```
SELECT
   s.order_id,
   s.order_date,
   s.customer_id,
   s.customer_name,
   s.city,
   csm.state,
   s.product_category,
   s.quantity,
   s.unit_price,
   s.profit_percent,
   TO_CHAR(TO_DATE(s.order_date, 'DD/MM/YYYY'), 'Month') AS month_name
FROM
   sales_data s
LEFT JOIN
   city_state_mapping csm ON s.city = csm.city;
```

3. Calculate Revenue and Profit Amount:

```
SELECT
   s.order_id,
   s.order_date,
   s.customer_id,
   s.customer_name,
   s.city,
   csm.state,
   s.product_category,
   s.quantity,
   s.unit_price,
   s.quantity * s.unit_price AS revenue,
   (s.quantity * s.unit_price) * (s.profit_percent / 100) AS profit_amount,
   s.profit_percent,
   TO_CHAR(TO_DATE(s.order_date, 'DD/MM/YYYY'), 'Month') AS month_name
FROM
   sales_data s
LEFT JOIN
   city_state_mapping csm ON s.city = csm.city;
```

KPI QUERIES

1. Total Revenue:

```
SELECT
   SUM(quantity * unit_price) AS total_revenue
FROM
   sales_data;
```

2. Total Quantity Sold:

```
SELECT
   SUM(quantity) AS total_quantity_sold
FROM
   Sales_data;
```

3. Average Order Value:

```
SELECT
   AVG(quantity * unit_price) AS avg_order_value
FROM
   Sales_data;
```

4. Profit Margin:

```
SELECT
   (SUM(quantity * unit_price * (profit_percent / 100)) / SUM(quantity * unit_price)) * 100 AS
profit_margin
FROM
   sales_data;
```

ANALYSIS QUERIES:

1. Monthly Revenue vs Profit:

```
SELECT
   TO_CHAR(TO_DATE(order_date, 'DD/MM/YYYY'), 'Month') AS month_name,
   SUM(quantity * unit_price) AS monthly_revenue,
   SUM(quantity * unit_price * (profit_percent / 100)) AS monthly_profit
FROM
   sales_data
GROUP BY
   TO_CHAR(TO_DATE(order_date, 'DD/MM/YYYY'), 'Month')
ORDER BY
   TO_DATE(TO_CHAR(TO_DATE(order_date, 'DD/MM/YYYY'), 'Month'), 'Month');
```

2. Yearly Sales Analysis (Revenue, Profit, Quantity):

```
SELECT
   EXTRACT(YEAR FROM TO_DATE(order_date, 'DD/MM/YYYY')) AS year,
   SUM(quantity * unit_price) AS yearly_revenue,
   SUM(quantity * unit_price * (profit_percent / 100)) AS yearly_profit,
   SUM(quantity) AS yearly_quantity
FROM
   sales_data
GROUP BY
   EXTRACT(YEAR FROM TO_DATE(order_date, 'DD/MM/YYYY'))
ORDER BY
   year;
```

3. Product Categories in Decreasing Order of Quantity:

```
SELECT
   product_category,
   SUM(quantity) AS total_quantity
FROM
   sales_data
```

```
GROUP BY
    product_category
ORDER BY
    total_quantity DESC;
```

4. Cities in Decreasing Order of Revenue:

```
SELECT
    city,
    SUM(quantity * unit_price) AS total_revenue
FROM
    sales_data
GROUP BY
    city
ORDER BY
    total_revenue DESC;
```