```sql
--Bike Store Analysis
--1. Sales and Orders Analysis
--Total Revenue and Quantity Sold:

SELECT Round(Sum(list_price * ( 1 - discount ) * quantity), 2) AS
Total_revenue,
       Sum(quantity)AS Quantity_sold
FROM    [sales].[order_items]
```

	Total_revenue	Quantity_sold
1	7689116.5600	7078

```sql
--.Total Revenue and Quantity Sold Per Year:

SELECT Datename(year, order_date) AS Year,
    Round(Sum(list_price * ( 1 - discount ) * quantity), 2) AS Total_revenue,
       Sum(quantity) AS Quantity
FROM  [sales].[order_items] oi
       JOIN [sales].[orders] o
         ON oi.order_id = o.order_id
GROUP  BY Datename(year, order_date)
ORDER  BY Datename(year, order_date) ASC
```

	Year	Total_revenue	Quantity
1	2016	2427378.5300	2663
2	2017	3447208.2400	3099
3	2018	1814529.7900	1316

```sql
--.Total Monthly Revenue Aggregated Over a Three-Year Period:

SELECT datename(month,o.order_date) AS Month,
       Round(Sum(list_price * ( 1 - discount ) * quantity), 2) AS Total_revenue
FROM    [sales].[order_items] ot
       JOIN [sales].[orders] o
         ON ot.order_id = o.order_id
GROUP  BY datename(month,o.order_date)
order by Total_revenue desc
```

	Month	Total_revenue
1	April	1212356.8200
2	January	882193.0100
3	March	853503.2200
4	February	669694.1300
5	June	589616.7700
6	September	575460.8300
7	October	526187.5200
8	August	524588.6500
9	November	475269.3200
10	May	473503.2500
11	December	465852.9300
12	July	440890.1100

```sql
--2. Customer Analysis
-- Top 10 Customers by Total Order Value:

SELECT TOP 10 c.customer_id,
       CONCAT(c.first_name, ' ', c.last_name) AS customer_name,
    c.state AS State,
    SUM(Quantity) as Order_count,
       SUM(oi.list_price * oi.quantity * (1 - oi.discount)) AS
total_order_value
FROM [sales].[customers] c
JOIN [sales].[orders] o ON c.customer_id = o.customer_id
JOIN [sales].[order_items] oi ON o.order_id = oi.order_id
GROUP BY c.customer_id, CONCAT(c.first_name, ' ', c.last_name), State
ORDER BY total_order_value DESC
```

	customer_id	customer_name	State	Order_count	total_order_value
1	94	Sharyn Hopkins	NY	15	34807.9392
2	10	Pamelia Newman	NY	18	33634.2604
3	75	Abby Gamble	NY	11	32803.0062
4	6	Lyndsey Bean	NY	16	32675.0725
5	16	Emmitt Sanchez	NY	19	31925.8857
6	73	Melanie Hayes	NY	12	31913.6902
7	1	Debra Burks	NY	17	27888.1834
8	61	Elinore Aguilar	TX	17	25636.4531
9	93	Corrina Sawyer	NY	12	25612.7021
10	122	Shena Carter	NY	5	24890.6244

```sql
-- Customer Distribution and Total Sales by State:

SELECT COUNT(distinct c.customer_id) AS Customer_count,
    s.state,
       ROUND(SUM(oi.list_price * oi.quantity * (1 - oi.discount)),2) AS
total_sales
FROM [sales].[orders] o
JOIN  [sales].[customers]c ON o.customer_id = c.customer_id
JOIN [sales].[order_items] oi ON o.order_id = oi.order_id
JOIN [sales].[stores] s ON o.store_id = s.store_id
GROUP BY s.state
ORDER BY total_sales DESC
```

	Customer_count	state	total_sales
1	1019	NY	5215751.2800
2	284	CA	1605823.0400
3	142	TX	867542.2400

```sql
--3. Product Analysis
--  Top 10 Products by Total Sales:

SELECT TOP 10
    p.product_id,
    p.product_name,
    SUM(oi.quantity) AS total_quantity_sold,
    SUM(oi.list_price * oi.quantity * (1 - oi.discount)) AS total_sales
FROM
   [sales].[order_items]  oi
JOIN
   [production].[products]  p ON oi.product_id = p.product_id
GROUP BY
    p.product_id, p.product_name
ORDER BY
    total_sales DESC;
```

	product_id	product_name	total_quantity_sold	total_sales
1	7	Trek Slash 8 27.5 - 2016	154	555558.6111
2	9	Trek Conduit+ - 2016	145	389248.7025
3	4	Trek Fuel EX 8 29 - 2016	143	368472.7294
4	11	Surly Straggler 650b - 2016	151	226765.5510
5	56	Trek Domane SLR 6 Disc - 2017	43	211584.6153
6	10	Surly Straggler - 2016	147	203507.6200
7	8	Trek Remedy 29 Carbon Frameset - 2016	125	203380.8701
8	61	Trek Powerfly 8 FS Plus - 2017	41	188249.6235
9	58	Trek Madone 9.2 - 2017	39	175899.6482
10	51	Trek Silque SLR 8 Women's - 2017	29	174524.7315

```sql
-- Least Profitable Products:

SELECT TOP 10
    p.product_id,
    p.product_name,
    SUM(oi.quantity) AS total_quantity_sold,
    SUM(oi.list_price * oi.quantity * (1 - oi.discount)) AS total_sales
FROM
   [sales].[order_items]  oi
JOIN
   [production].[products]  p ON oi.product_id = p.product_id
GROUP BY
    p.product_id, p.product_name
ORDER BY
    total_sales ASC;
```

	product_id	product_name	total_quantity_sold	total_sales
1	270	Trek Precaliber 16 Boy's - 2018	1	199.4905
2	285	Electra Soft Serve 1 (16-inch) - Girl's - 2018	1	223.9920
3	262	Trek MT 201 - 2018	1	224.9910
4	222	Electra Cruiser 1 Tall - 2016/2018	1	242.9910
5	279	Trek Precaliber 24 7-speed Girl's - 2018	1	255.9920
6	287	Electra Straight 8 1 (16-inch) - Boy's - 2018	1	265.9905
7	273	Trek Precaliber 20 6-speed Girl's - 2018	1	269.6907
8	296	Electra Treasure 3i 20" - 2018	1	295.9920
9	218	Electra Cruiser 7D - 2016/2017/2018	1	303.9905
10	294	Electra Tiger Shark 3i (20-inch) - Boys' - 2018	1	332.9910

```sql
--4. Brands
--Total Sales and Average Sales Price by Brand:

SELECT
    b.brand_name,
    ROUND(SUM(oi.list_price * oi.quantity * (1 - oi.discount)), 2) AS
total_sales,
 ROUND(AVG(oi.list_price * (1 - oi.discount)), 2) AS avg_sales_price
FROM
   [production].[brands]  b
JOIN
  [production].[products]  p ON b.brand_id = p.brand_id
JOIN
  [sales].[order_items]  oi ON p.product_id = oi.product_id
GROUP BY
    b.brand_name
```

```
ORDER BY
    total_sales DESC
```

	brand_name	total_sales	avg_sales_price
1	Trek	4602754.3500	2479.320000
2	Electra	1205320.8200	465.860000
3	Surly	949507.0600	1041.010000
4	Sun Bicycles	341994.9300	473.570000
5	Haro	185384.5500	563.590000
6	Heller	171459.0800	1241.570000
7	Pure Cycles	149476.3400	397.250000
8	Ritchey	78898.9500	669.150000
9	Strider	4320.4800	173.410000

```
--5. Categories
--Total Sales and Average Sales Price by Product Category:

SELECT
    c.category_name,
   Round(SUM(oi.list_price * oi.quantity * (1 - oi.discount)),2) AS
total_sales,
   ROUND(AVG(oi.list_price * (1 - oi.discount)),2) AS avg_sales_price
FROM
   [production].[categories]  c
JOIN
  [production].[products]  p ON c.category_id = p.category_id
JOIN
   [sales].[order_items]  oi ON p.product_id = oi.product_id
GROUP BY
    c.category_name
ORDER BY
    total_sales DESC
```

	category_name	total_sales	avg_sales_price
1	Mountain Bikes	2715079.5300	1545.670000
2	Road Bikes	1665098.4900	2962.110000
3	Cruisers Bicycles	995032.6200	484.420000
4	Electric Bikes	916684.7800	2869.210000
5	Cyclocross Bicycles	711011.8400	1801.610000
6	Comfort Bicycles	394020.1000	484.080000
7	Children Bicycles	292189.2000	249.120000

```
--6. Store Analysis
--Total Sales by Store:

SELECT S.store_id,
       S.store_name,
       s.city,
       s.state,
       Round(Sum(oi.list_price * oi.quantity * ( 1 - oi.discount )), 2) AS
       total_sales
FROM  [sales].[order_items]  oi
       JOIN [sales].[orders] o
         ON oi.order_id = o.order_id
       JOIN[sales].[stores]  s
         ON o.store_id = s.store_id
GROUP  BY S.store_id,
          S.store_name,
          s.city,
          s.state
ORDER  BY total_sales DESC
```

	store_id	store_name	city	state	total_sales
1	2	Baldwin Bikes	Baldwin	NY	5215751.2800
2	1	Santa Cruz Bikes	Santa Cruz	CA	1605823.0400
3	3	Rowlett Bikes	Rowlett	TX	867542.2400

```sql
--Most Selling Product For Each Store:

WITH RankedProducts AS (
    SELECT
        s.store_id,
        s.store_name,
        p.product_name,
        SUM(oi.quantity) AS units_sold,
        RANK() OVER (PARTITION BY s.store_id ORDER BY SUM(oi.quantity) DESC) AS
rank
    FROM
      [sales].[orders]  o
    JOIN
       [sales].[order_items]  oi ON o.order_id = oi.order_id
    JOIN
        [sales].[stores] s ON o.store_id = s.store_id
    JOIN
       [production].[products]  p ON oi.product_id = p.product_id
    GROUP BY
        s.store_id,
        s.store_name,
        p.product_name
)
SELECT
    store_id,
    store_name,
    product_name,
    units_sold
FROM
    RankedProducts
WHERE
    rank = 1;
```

	store_id	store_name	product_name	units_sold
1	1	Santa Cruz Bikes	Electra Girl's Hawaii 1 (16-inch) - 2015/2016	59
2	2	Baldwin Bikes	Electra Cruiser 1 (24-Inch) - 2016	211
3	3	Rowlett Bikes	Electra Cruiser 1 (24-Inch) - 2016	41

```sql
--7. Staffs
--Total Number of Staff per Store:

SELECT
    s.store_id,
    s.store_name,
    COUNT(*) AS staff_count
FROM
   [sales].[staffs]  st
JOIN
   [sales].[stores] s ON st.store_id = s.store_id
GROUP BY
    s.store_id, s.store_name;
```

	store_id	store_name	staff_count
1	1	Santa Cruz Bikes	4
2	2	Baldwin Bikes	3
3	3	Rowlett Bikes	3

```sql
--Top Performing Staff Members by Total Sales and Units Sold:

 SELECT TOP 10
    CONCAT(first_name, ' ', last_name) AS staff_name,
    ROUND(SUM(oi.list_price * oi.quantity * (1 - oi.discount)),2) AS
total_sales,
    SUM(quantity) AS units_sold
FROM
   [sales].[staffs]  s
JOIN
   [sales].[orders]  o ON s.staff_id = o.staff_id
JOIN
    [sales].[order_items] oi ON o.order_id = oi.order_id
GROUP BY
    s.staff_id, s.first_name, s.last_name
ORDER BY
total_sales DESC
```

	staff_name	total_sales	units_sold
1	Marcelene Boyer	2624120.6500	2419
2	Venita Daniel	2591630.6200	2360
3	Genna Serrano	853287.3600	831
4	Mireya Copeland	752535.6800	685
5	Kali Vargas	463918.3000	412
6	Layla Terrell	403623.9400	371