

## Retail Sales & Profitability Analysis(SQL)

-- Q1. What is the total revenue generated?

```
SELECT ROUND(SUM(sales),2) AS total_revenue  
FROM retail;
```

	total_revenue
▶	2297200.86

-- Q2. What is the total profit earned?

```
SELECT ROUND(SUM(profit),2) AS total_profit  
FROM retail;
```

	total_profit
▶	286397.02

-- Q3. What is the total number of orders?

```
SELECT COUNT(DISTINCT order_id) AS total_orders  
FROM retail;
```

	total_orders
▶	5009

-- Q4. What is the overall profit margin?

```
SELECT ROUND(SUM(profit)/SUM(sales),4) AS overall_profit_margin  
FROM retail;
```

	overall_profit_margin
▶	0.1247

-- Q5. What is the total sales by category?

```
SELECT category,  
       ROUND(SUM(sales),2) AS total_sales  
FROM retail
```

```
GROUP BY category
```

```
ORDER BY total_sales DESC;
```

	category	total_sales
▶	Technology	836154.03
	Furniture	741999.8
	Office Supplies	719047.03

-- Q6. What is the total profit by category?

```
SELECT category,
       ROUND(SUM(profit),2) AS total_profit
  FROM retail
 GROUP BY category
 ORDER BY total_profit DESC;
```

	category	total_profit
▶	Technology	145454.95
	Office Supplies	122490.8
	Furniture	18451.27

-- Q7. Which sub-categories are generating losses?

```
SELECT sub_category,
       ROUND(SUM(profit),2) AS total_profit
  FROM retail
 GROUP BY sub_category
 HAVING total_profit < 0
 ORDER BY total_profit;
```

	sub_category	total_profit
▶	Tables	-17725.48
	Bookcases	-3472.56
	Supplies	-1189.1

-- Q8. What is the total sales by region?

```
SELECT region,
       ROUND(SUM(sales),2) AS total_sales
  FROM retail
 GROUP BY region
 ORDER BY total_sales DESC;
```

	region	total_sales
▶	West	725457.82
	East	678781.24
	Central	501239.89
	South	391721.91

-- Q9. What is the total profit by region?

```
SELECT region,
       ROUND(SUM(profit),2) AS total_profit
  FROM retail
 GROUP BY region
 ORDER BY total_profit DESC;
```

	region	total_profit
▶	West	108418.45
	East	91522.78
	South	46749.43
	Central	39706.36

-- Q10. Who are the top 10 customers by sales?

```
SELECT customer_name,
       ROUND(SUM(sales),2) AS total_sales
  FROM retail
 GROUP BY customer_name
 ORDER BY total_sales DESC
 LIMIT 10;
```

	customer_name	total_sales
▶	Sean Miller	25043.05
	Tamara Chand	19052.22
	Raymond Buch	15117.34
	Tom Ashbrook	14595.62
	Adrian Barton	14473.57
	Ken Lonsdale	14175.23
	Sanjit Chand	14142.33
	Hunter Lopez	12873.3
	Sanjit Engle	12209.44
	Christopher Conant	12129.07

-- Q11. What is the yearly sales trend?

```
SELECT year,
       ROUND(SUM(sales),2) AS yearly_sales
  FROM retail
 GROUP BY year
 ORDER BY year;
```

	year	yearly_sales
▶	2014	484247.5
	2015	470532.51
	2016	609205.6
	2017	733215.26

-- Q12. What is the monthly sales trend?

```
SELECT month_name,
       ROUND(SUM(sales),2) AS monthly_sales
  FROM retail
 GROUP BY month_name
 ORDER BY monthly_sales DESC;
```

	month_name	monthly_sales
▶	November	352461.07
	December	325293.5
	September	307649.95
	March	205005.49
	October	200322.98
	August	159044.06
	May	155028.81
	June	152718.68
	July	147238.1
	April	137762.13
	January	94924.84
	February	59751.25

-- Q13. What is the average discount by category?

```
SELECT category,
       ROUND(AVG(discount),2) AS avg_discount
  FROM retail
 GROUP BY category
 ORDER BY avg_discount DESC;
```

	category	avg_discount
▶	Furniture	0.17
	Office Supplies	0.16
	Technoloav	0.13

-- Q14. Which products have high discount and negative profit?

```
SELECT product_name,
```

```
    discount,
```

```
    profit
```

```
FROM retail
```

```
WHERE discount > 0.5
```

```
AND profit < 0
```

```
ORDER BY discount DESC;
```

product_name	discount	profit
Holmes Replacement Filter for HEPA Air Cleaner...	0.8	-123.858
Storex DuraTech Recycled Plastic Frosted Binders	0.8	-3.816
Economy Binders	0.8	-1.9344
Avery Hidden Tab Dividers for Binding Systems	0.8	-3.0396
Kensington 7 Outlet MasterPiece Power Center	0.8	-453.849
Kensington 7 Outlet MasterPiece HOMEOFFICE ...	0.8	-131.12
Acco 7-Outlet Masterpiece Power Center, Wiht...	0.8	-243.16
Eureka Sanitaire Commercial Upright	0.8	-178.9668
Eureka Disposable Bags for Sanitaire Vibra Gro...	0.8	-4.466
Round Ring Binders	0.8	-3.432
Holmes Odor Grabber	0.8	-20.3322
GBC Twin Loop Wire Binding Elements, 9/16" Spi...	0.8	-18.8728
Wilson Jones Century Plastic Molded Ring Binders	0.8	-20.5623
Cardinal Hold-It CD Pocket	0.8	-7.9002
XtraLife ClearVue Slant-D Ring Binders by Cardinal	0.8	-21.168
Premier Elliptical Ring Binder, Black	0.8	-68.1856
Flexible Leather-Look Classic Collection Ring Bin...	0.8	-17.046
Cardinal Slant-D Ring Binder, Heavy Gauge Vinyl	0.8	-14.773
Avery Binding System Hidden Tab Executive Sty...	0.8	-3.462
Avery Durable Plastic 1" Binders	0.8	-4.2222
Hoover Portapower Portable Vacuum	0.8	-7.392
Thick Hi-Tech Manual Binding System	0.8	-320.2295

-- Q15. What is the average shipping time?

```
SELECT ROUND(AVG(shipping_days),2) AS avg_shipping_days
```

```
FROM retail;
```

avg_shipping_days
3.96