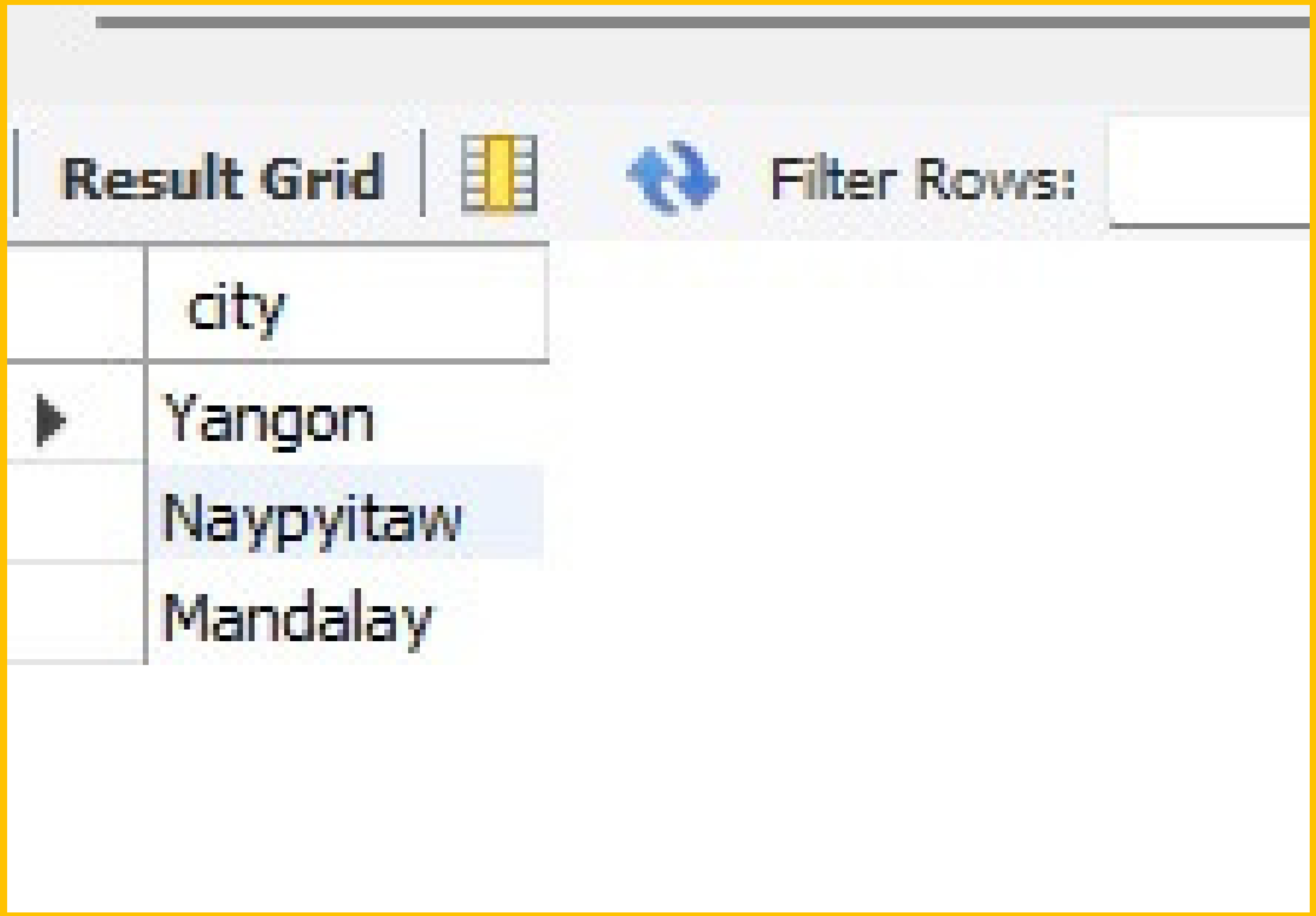
In this project, I analyzed Walmart's sales data using SQL to extract key business insights. I created structured tables from raw CSV data and performed aggregation, grouping, and filtering operations. The analysis focused on total revenue, branch-wise and city-wise performance, customer types, payment method trends, product line popularity, and customer satisfaction ratings. Through SQL queries, I identified top-performing branches, best-selling products peak sales periods, and the relationship between customer type and total spending. This project strengthened my skills in data cleaning, SQL joins, subqueries, time-based analysis, and performance optimization.

how many unique cities does the data have?

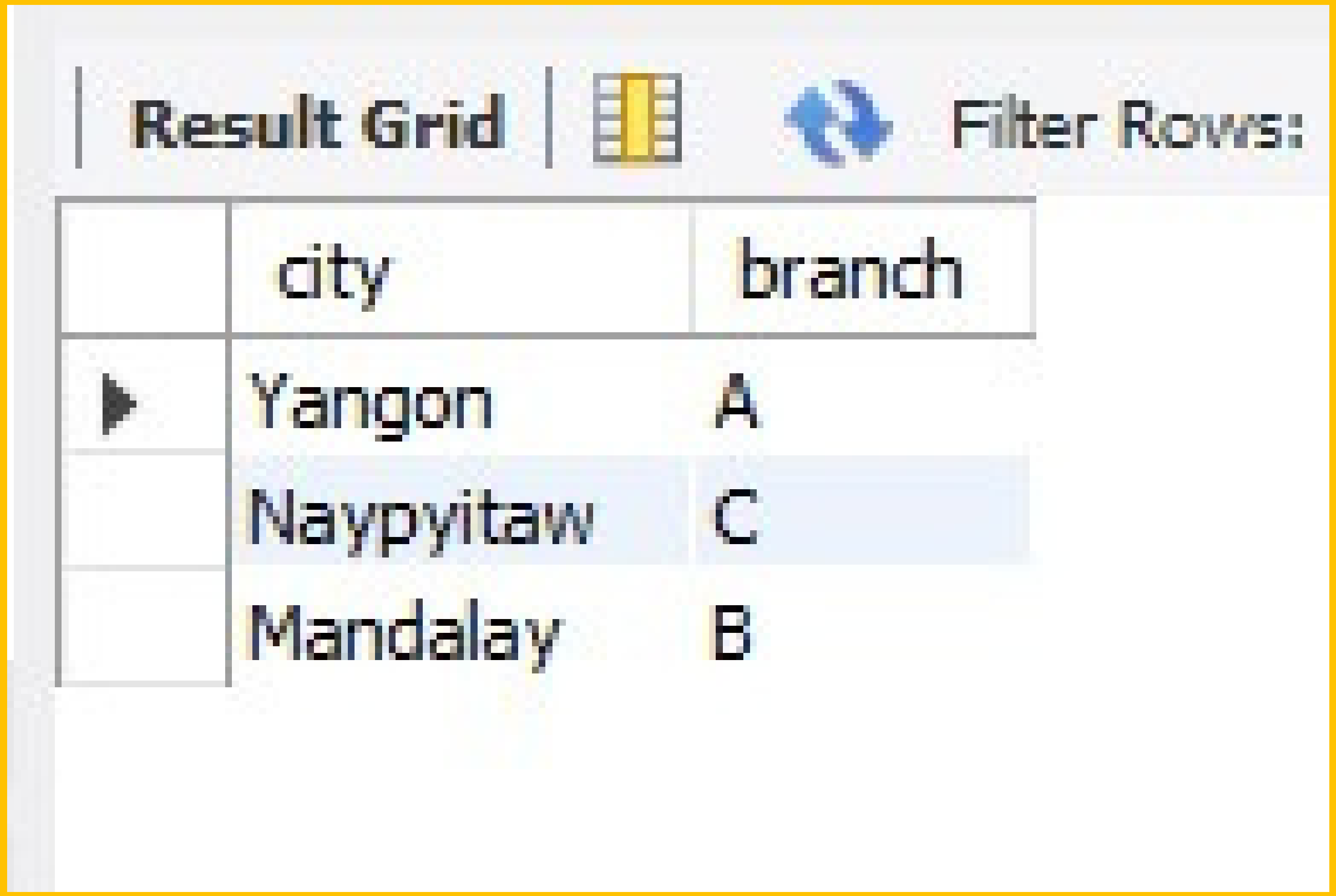
```
SELECT DISTINCT
city
FROM
sales;
```



city
Yangon
Naypyitaw
Mandalay

in which city each branch?

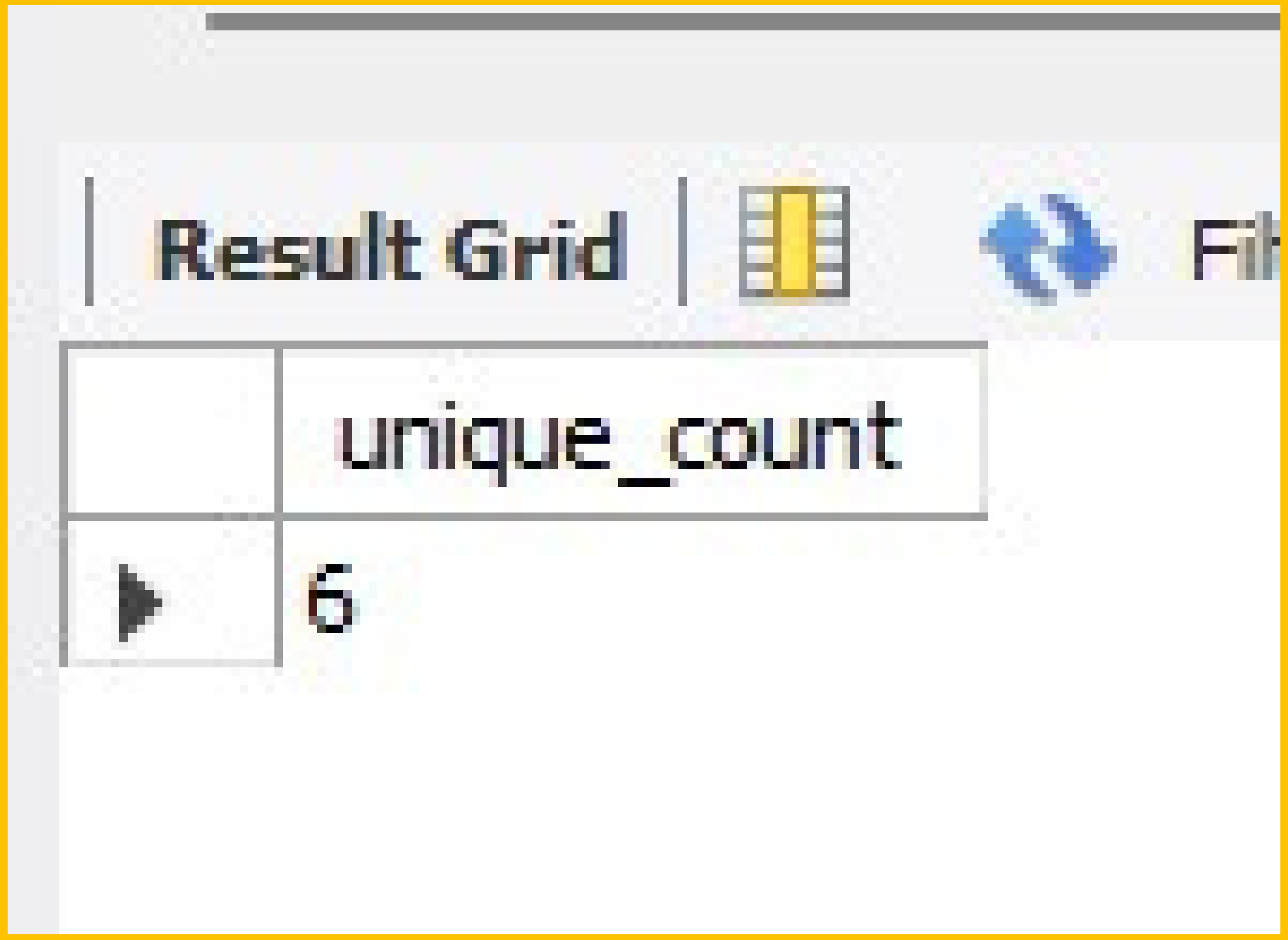
```
SELECT DISTINCT
     city, branch
     FROM
       sales;
```



city	branch
Yangon	A
Naypyitaw	C
Mandalay	B

how many unique product lines does the data have?

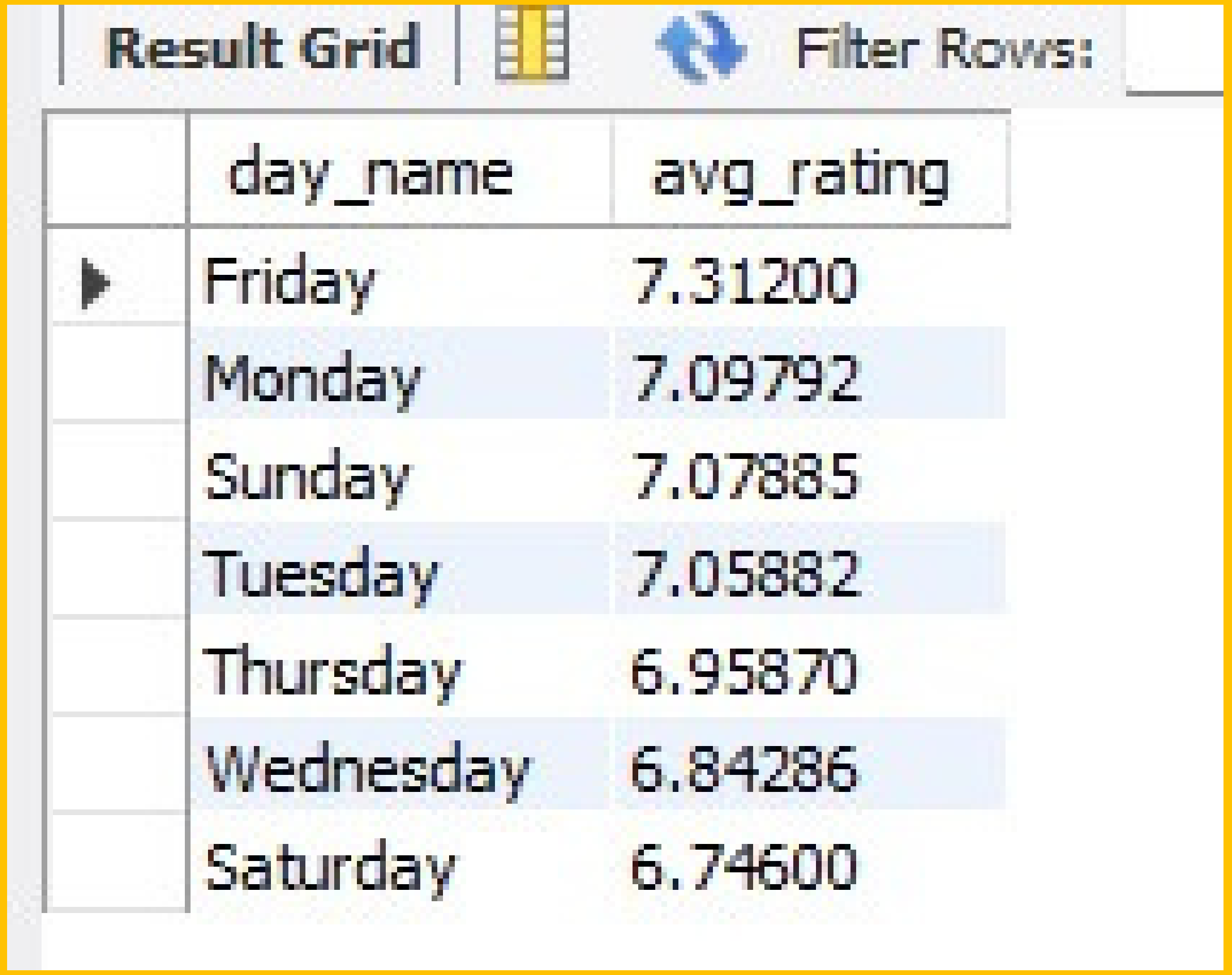
```
SELECT
COUNT(DISTINCT product_line)
AS unique_count
FROM
sales;
```



unique_count
6

which day of the week has the best avg rting per branch?

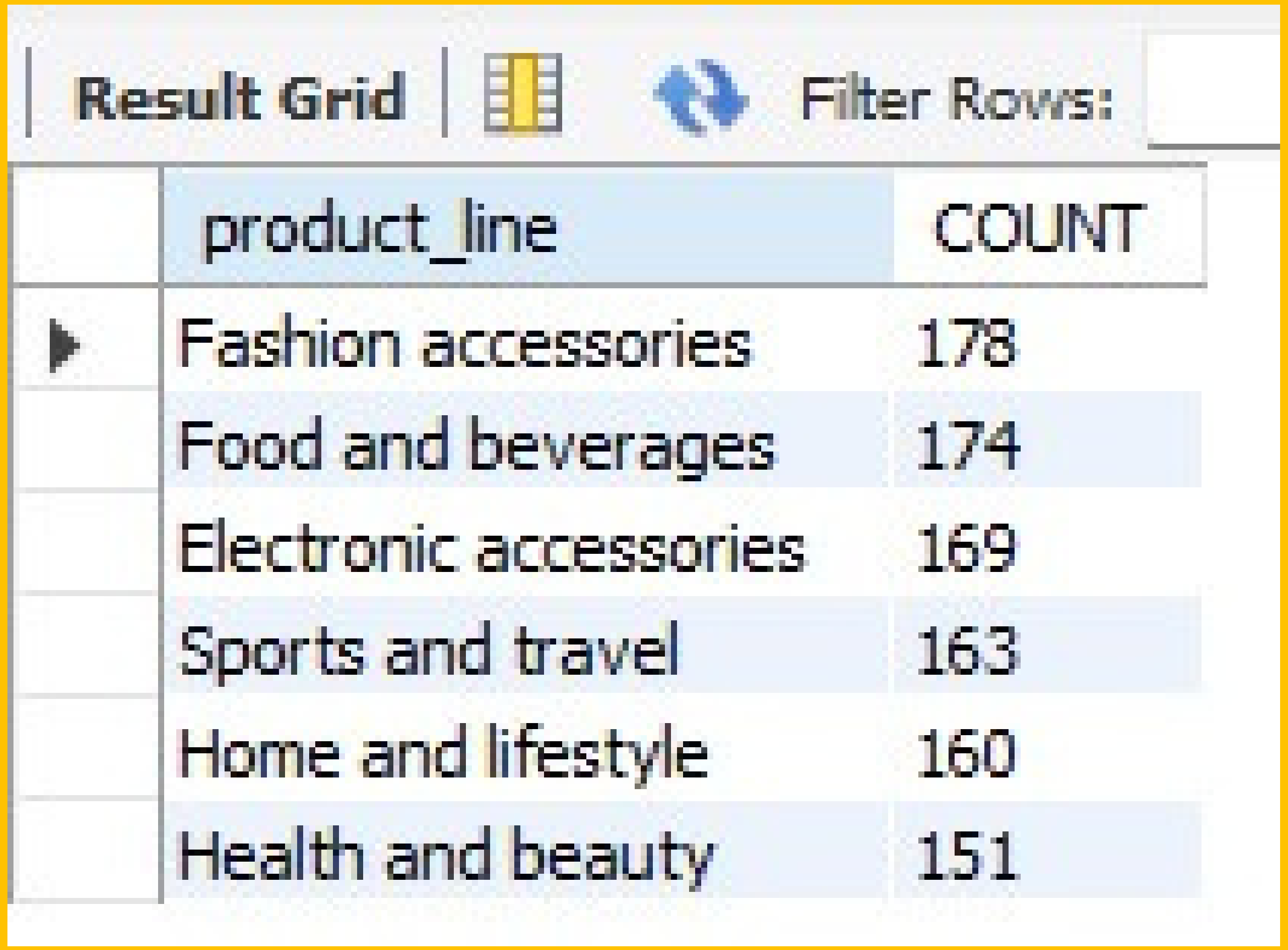
```
SELECT
day_name, AVG(rating) AS
avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY day_name
ORDER BY avg_rating DESC;
```



day_name	avg_rating
Friday	7.31200
Monday	7.09792
Sunday	7.07885
Tuesday	7.05882
Thursday	6.95870
Wednesday	6.84286
Saturday	6.74600

what is the most selling product line?

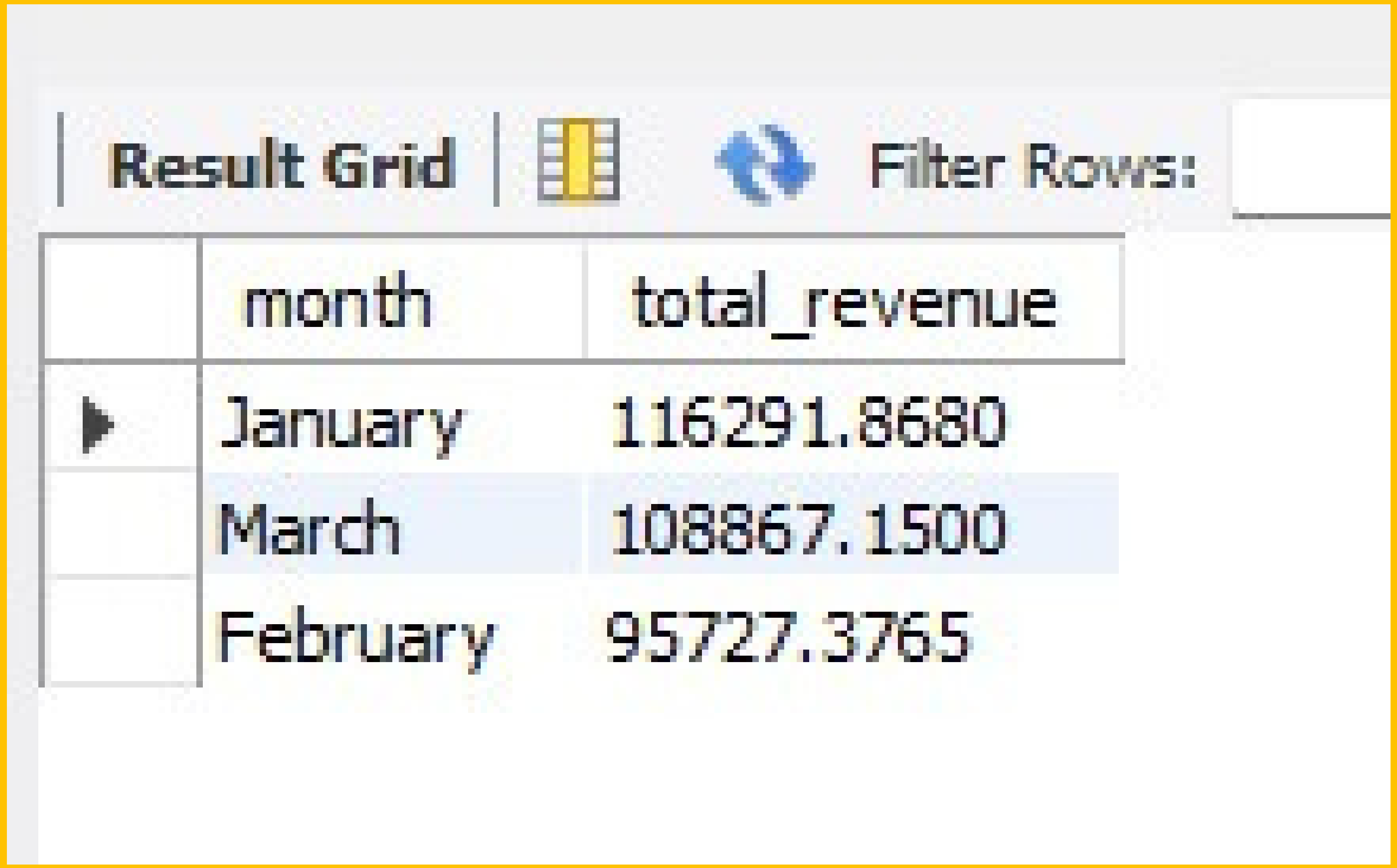
```
SELECT
product_line,
COUNT(product_line) AS COUNT
FROM
sales
GROUP BY product_line
ORDER BY COUNT DESC;
```



product_line	COUNT
Fashion accessories	178
Food and beverages	174
Electronic accessories	169
Sports and travel	163
Home and lifestyle	160
Health and beauty	151

what is the total revenue by month?

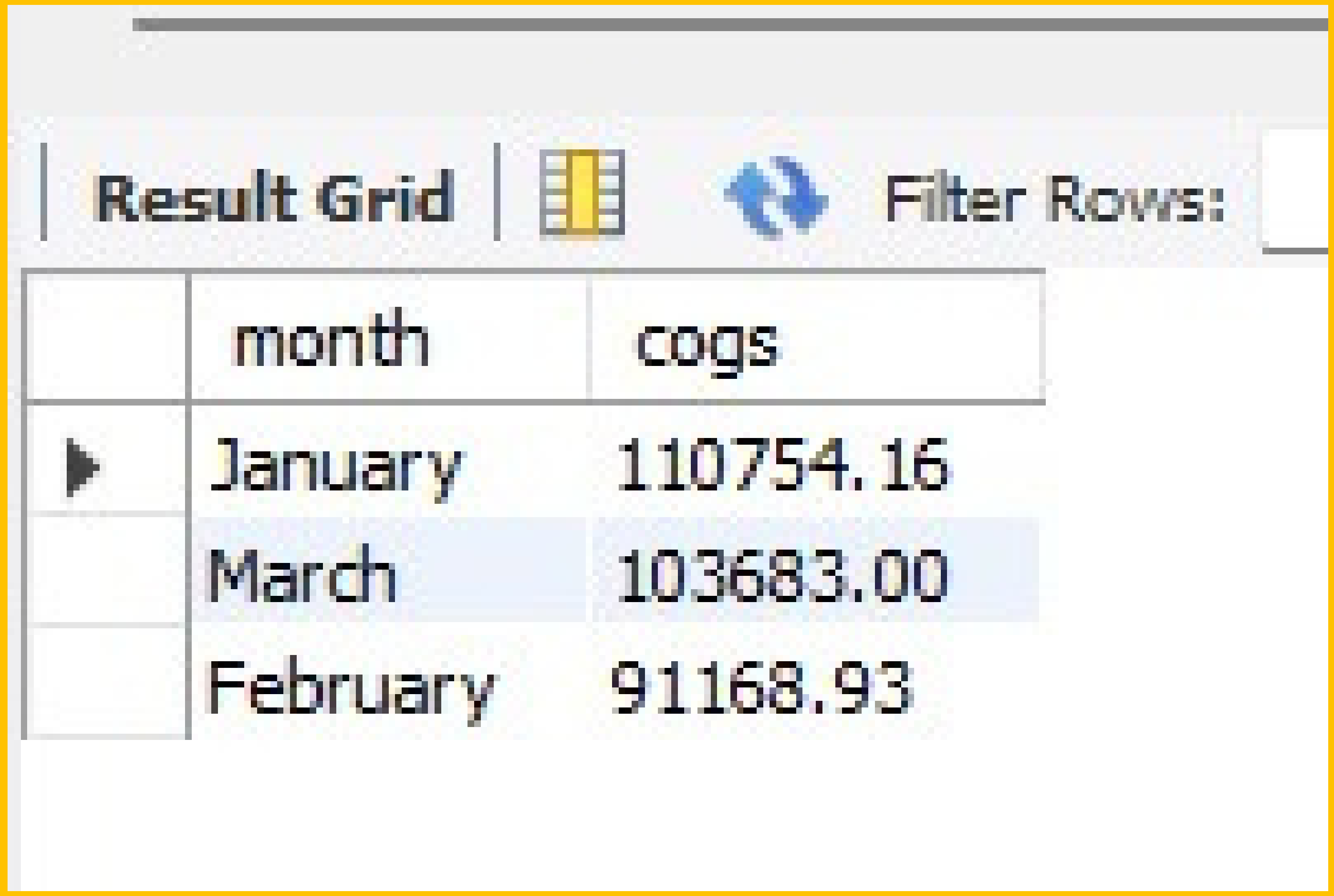
```
SELECT
month_name AS month, SUM(total) AS
total _revenue
FROM
sales
GROUP BY month_name
ORDER BY total_revenue DESC;
```



month	total_revenue
January	116291.8680
March	108867.1500
February	95727.3765

what month had the leargest cogs?

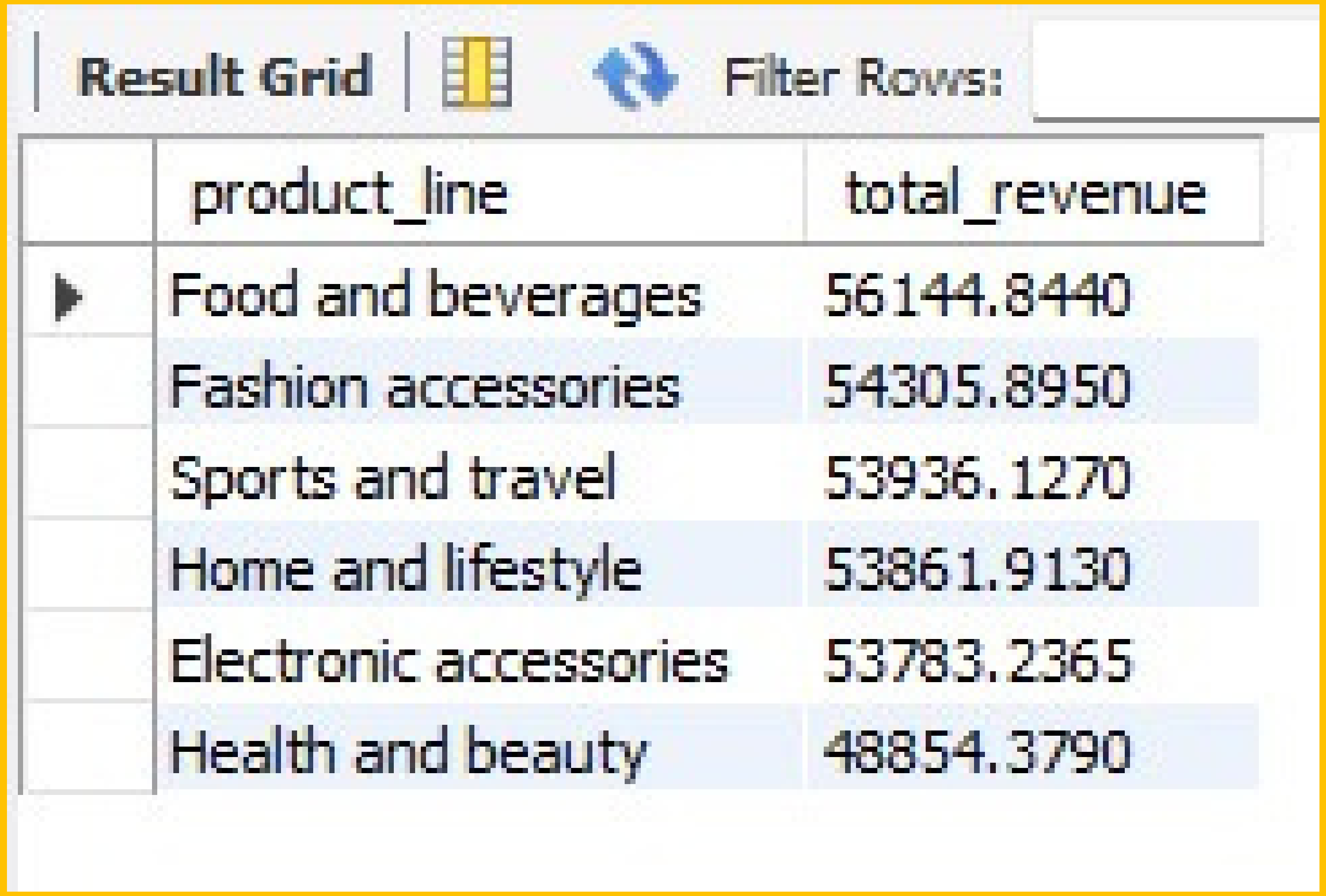
```
SELECT
month_name AS month, SUM(cogs) AS cogs
FROM
sales
GROUP BY month_name
ORDER BY cogs DESC;
```



month	cogs
January	110754.16
March	103683.00
February	91168.93

what product line had largest revenue?

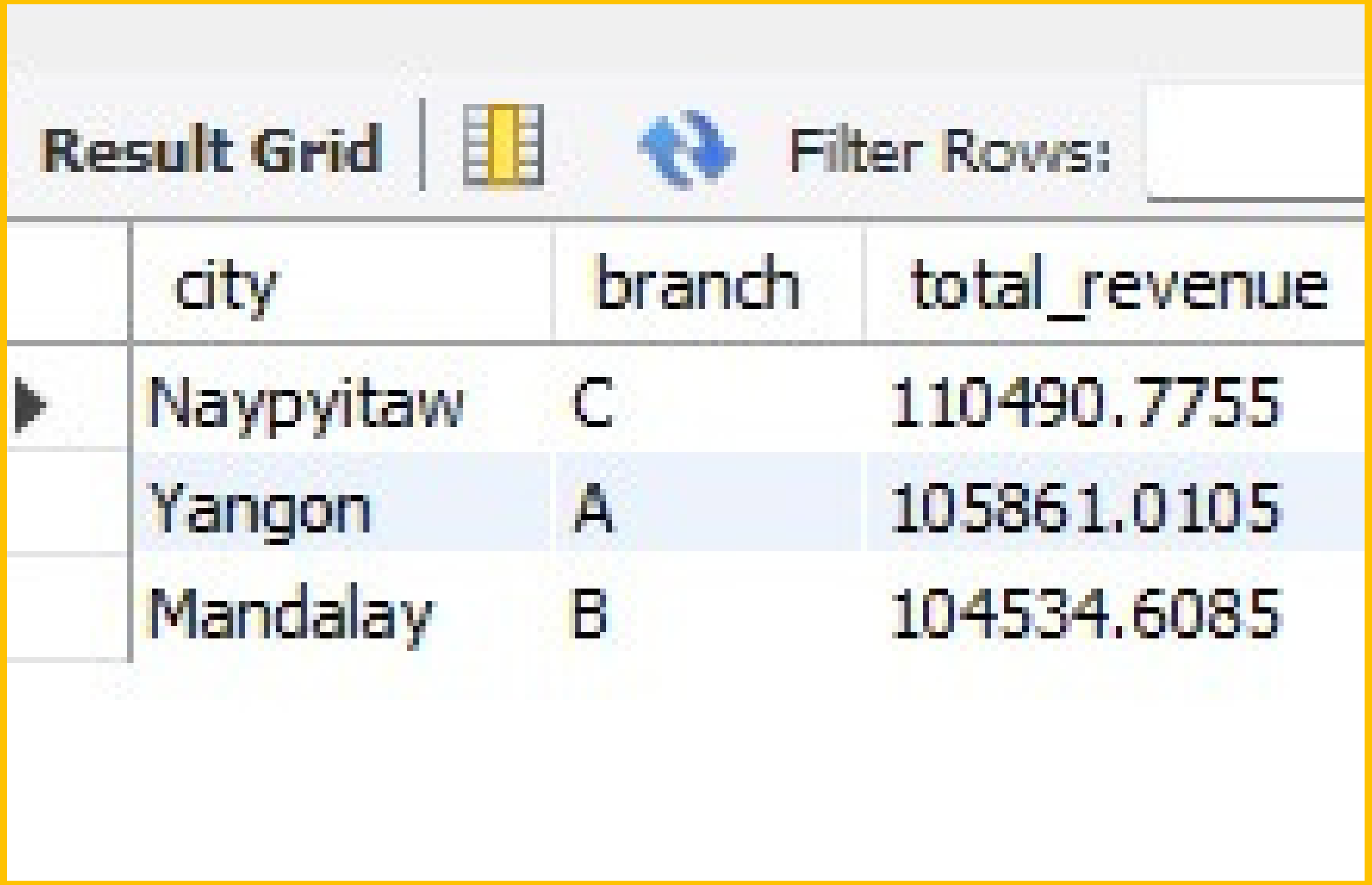
```
SELECT
product_line, SUM(total) AS
total _revenue
FROM
sales
GROUP BY product_line
ORDER BY total_revenue DESC;
```



product_line	total_revenue
Food and beverages	56144.8440
Fashion accessories	54305.8950
Sports and travel	53936.1270
Home and lifestyle	53861.9130
Electronic accessories	53783.2365
Health and beauty	48854.3790

what is the city with largest revenue?

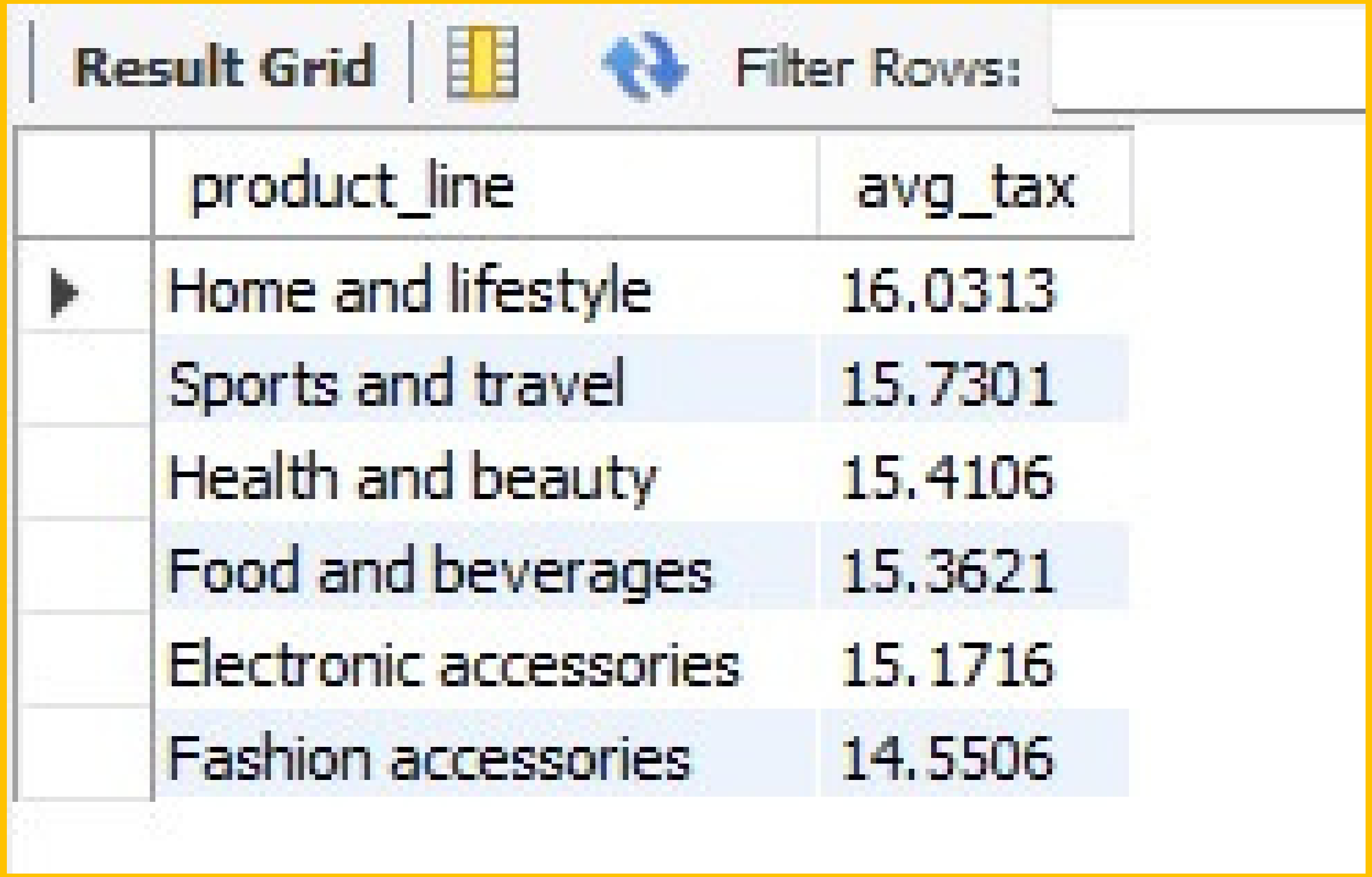
```
SELECT
city, branch, SUM(total) AS total_revenue
FROM
sales
GROUP BY city , branch
ORDER BY total_revenue DESC;
```



city	branch	total_revenue
Naypyitaw	C	110490.7755
Yangon	A	105861.0105
Mandalay	B	104534.6085

what product line had avg vat(value add tax)?

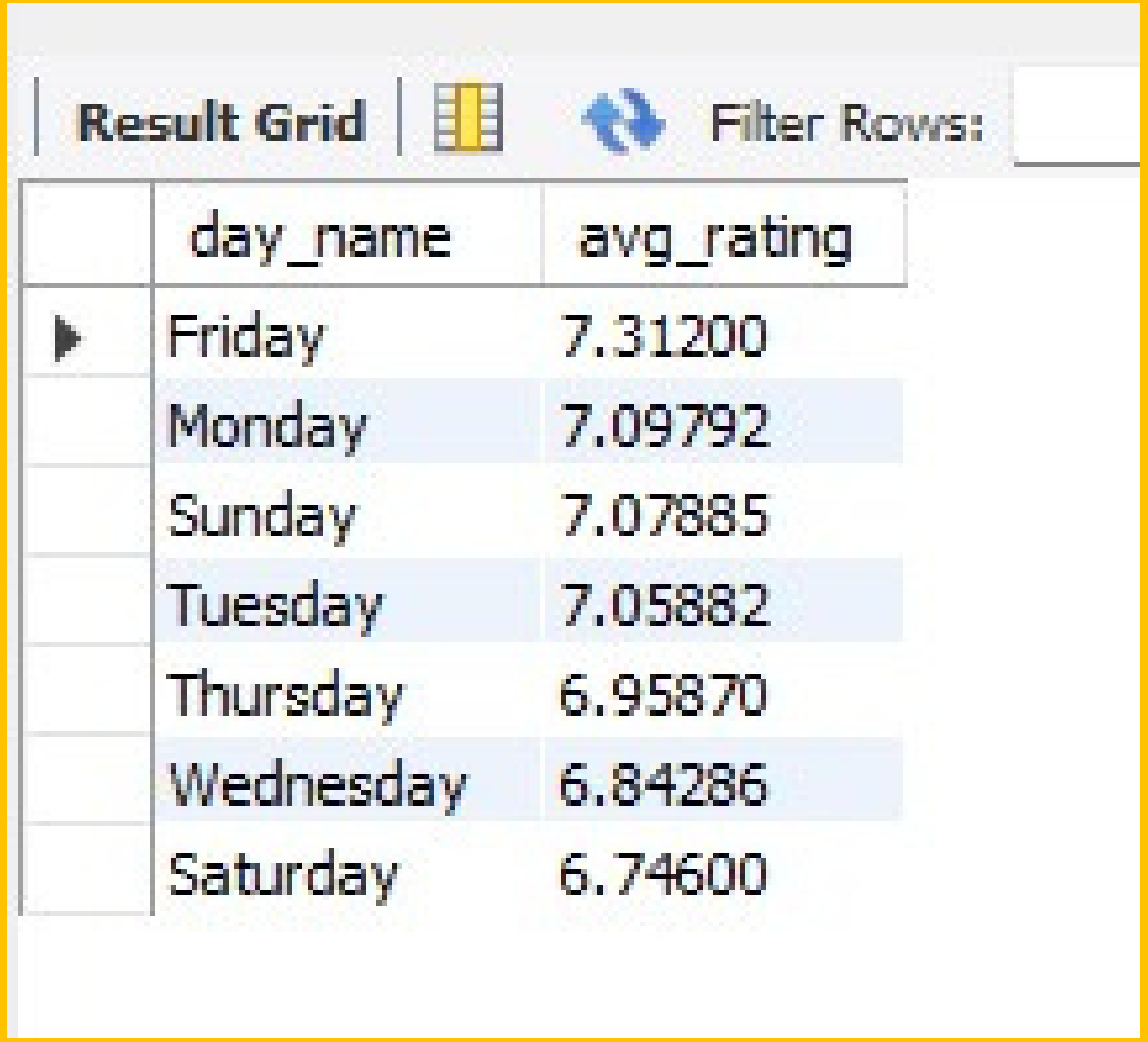
```
SELECT
product_line, AVG(vat) AS avg_tax
FROM
sales
GROUP BY product_line
ORDER BY avg_tax DESC;
```



product_line	avg_tax
Home and lifestyle	16.0313
Sports and travel	15.7301
Health and beauty	15.4106
Food and beverages	15.3621
Electronic accessories	15.1716
Fashion accessories	14.5506

which day of the week has the best avg rting per branch?

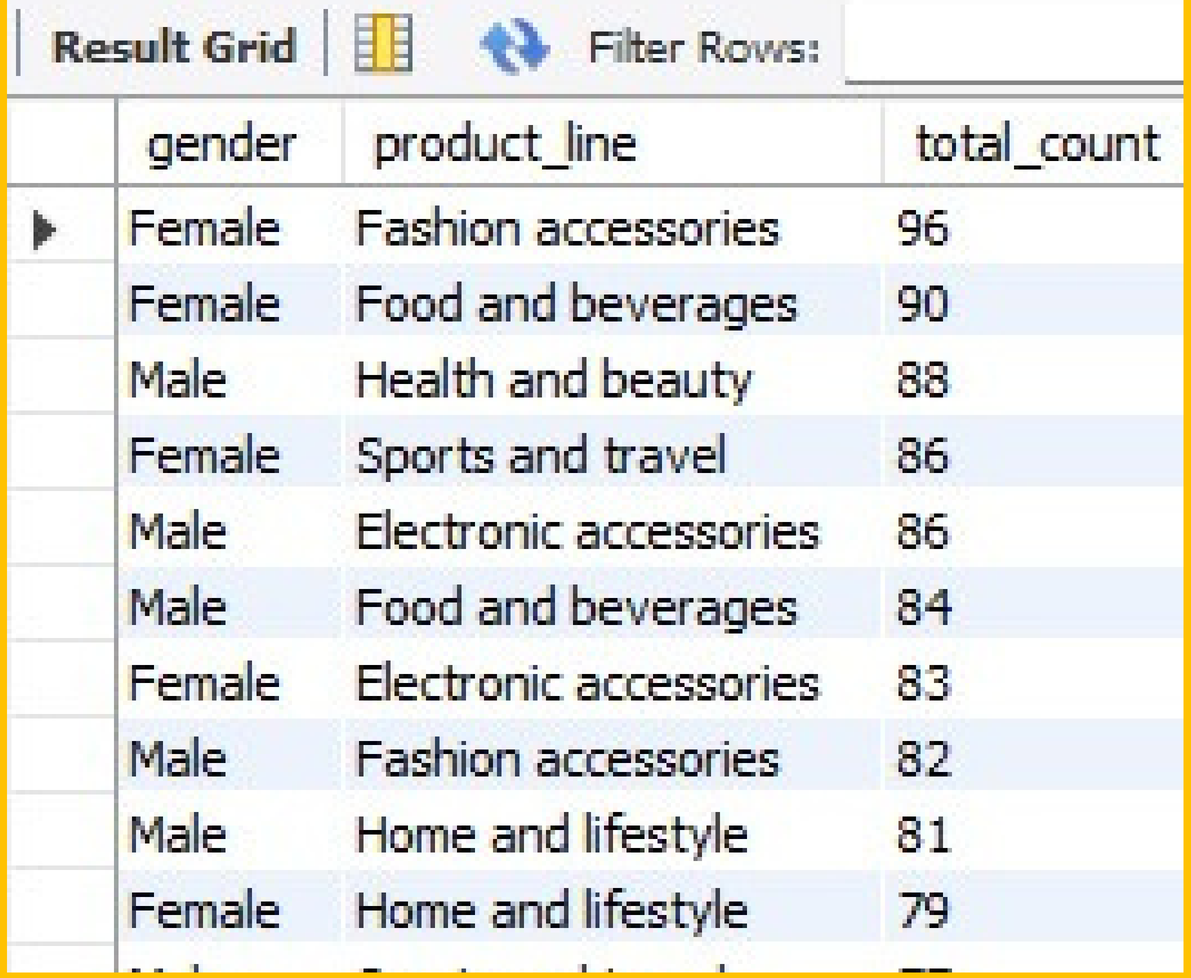
```
SELECT
day_name, AVG(rating) AS avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY day_name
ORDER BY avg_rating DESC;
```



day_name	avg_rating
Friday	7.31200
Monday	7.09792
Sunday	7.07885
Tuesday	7.05882
Thursday	6.95870
Wednesday	6.84286
Saturday	6.74600

what is the most common product line by gender?

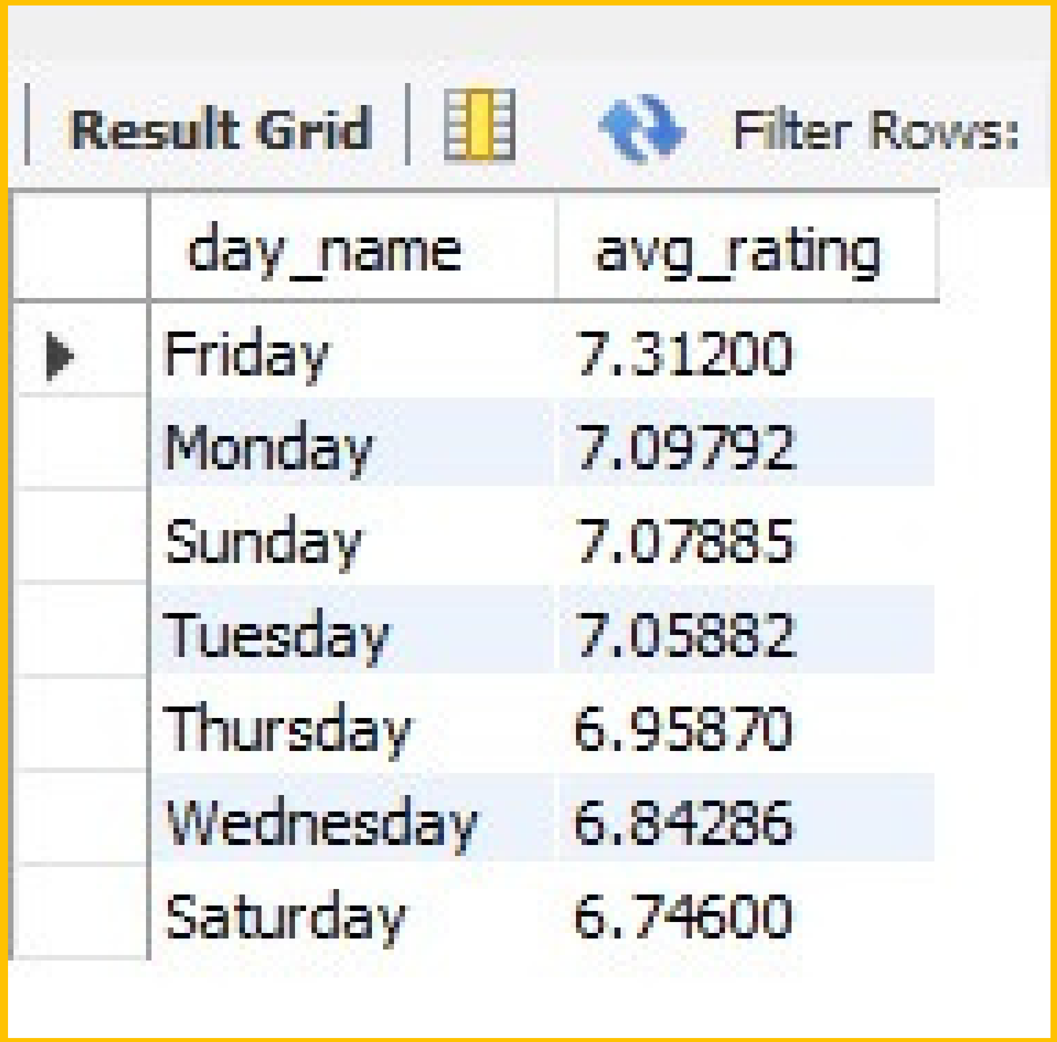
```
SELECT
gender, product_line,
COUNT(gender) AS total_count
FROM
sales
GROUP BY gender , product_line
ORDER BY total_count DESC;
```



gender	product_line	total_count
Female	Fashion accessories	96
Female	Food and beverages	90
Male	Health and beauty	88
Female	Sports and travel	86
Male	Electronic accessories	86
Male	Food and beverages	84
Female	Electronic accessories	83
Male	Fashion accessories	82
Male	Home and lifestyle	81
Female	Home and lifestyle	79

which day of the week has the best avg rting per branch?

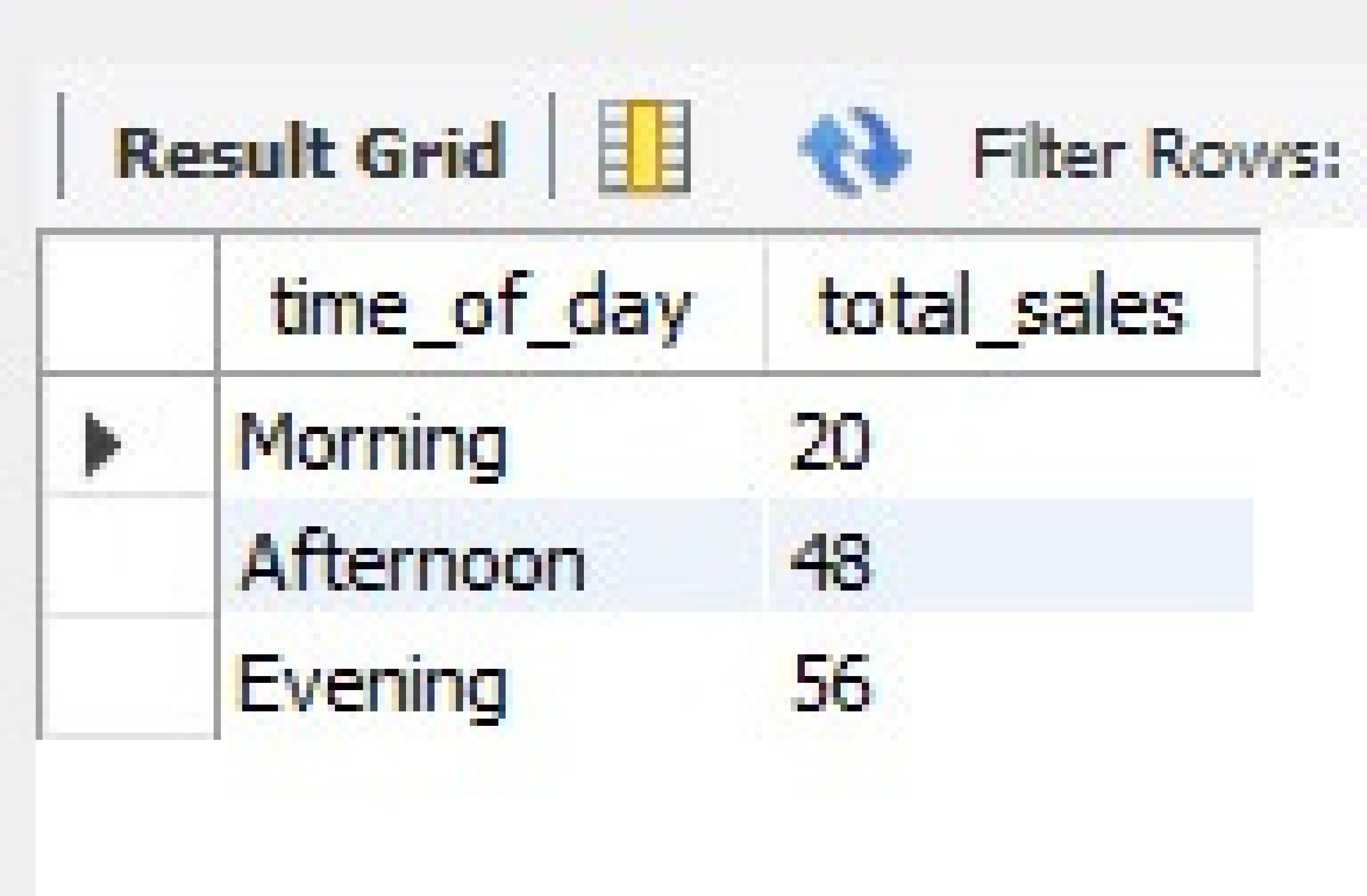
```
SELECT
day_name, AVG(rating) AS avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY day_name
ORDER BY avg_rating DESC;
```



day_name	avg_rating
Friday	7.31200
Monday	7.09792
Sunday	7.07885
Tuesday	7.05882
Thursday	6.95870
Wednesday	6.84286
Saturday	6.74600

number of sales made in each time of day per week?

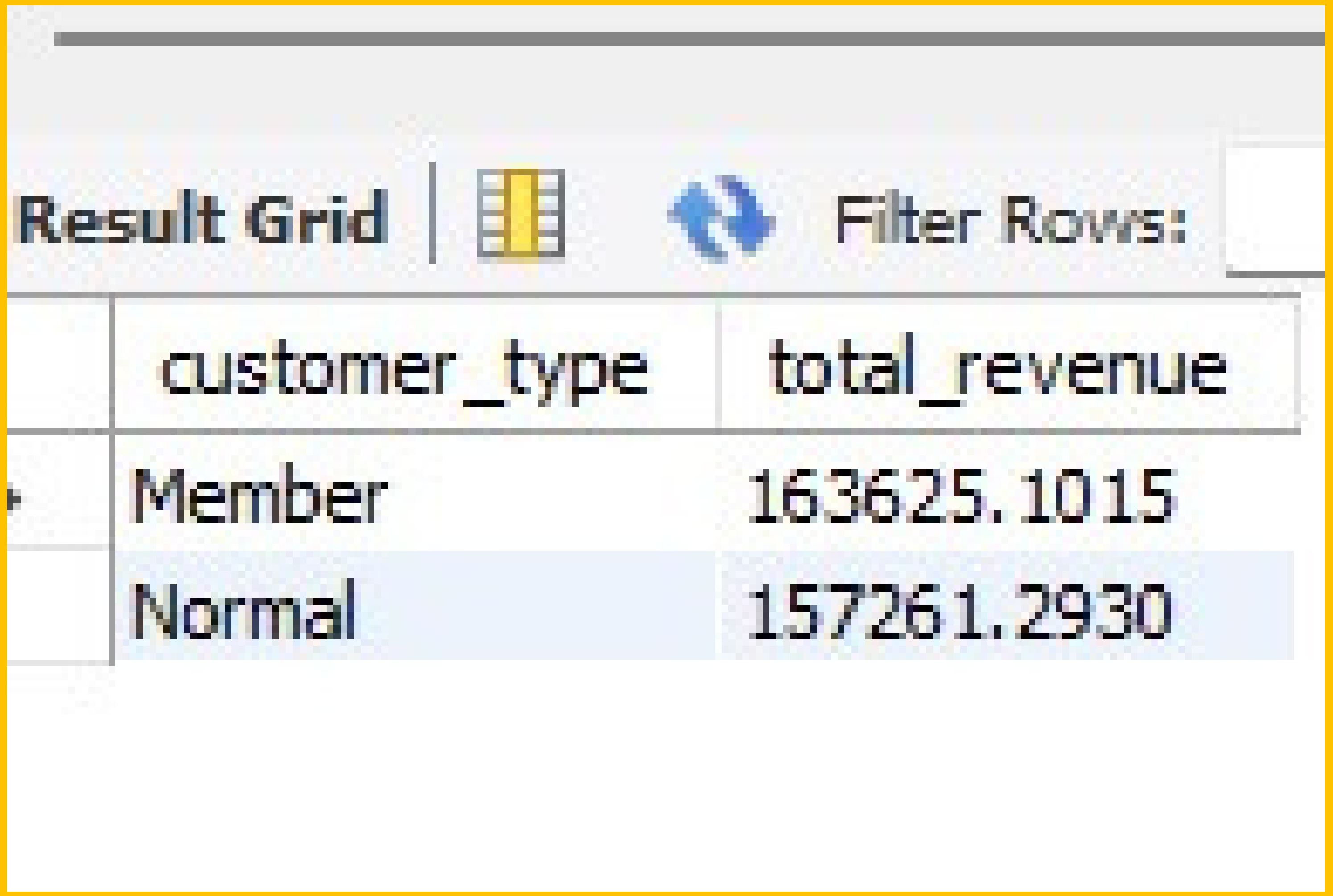
```
SELECT
time_of_day, COUNT(*) AS total_sales
FROM
sales
WHERE
day_name = 'Monday'
GROUP BY time_of_day
ORDER BY total_sales;
```



time_of_day	total_sales
Morning	20
Afternoon	48
Evening	56

which of the customer types brings the most revenue?

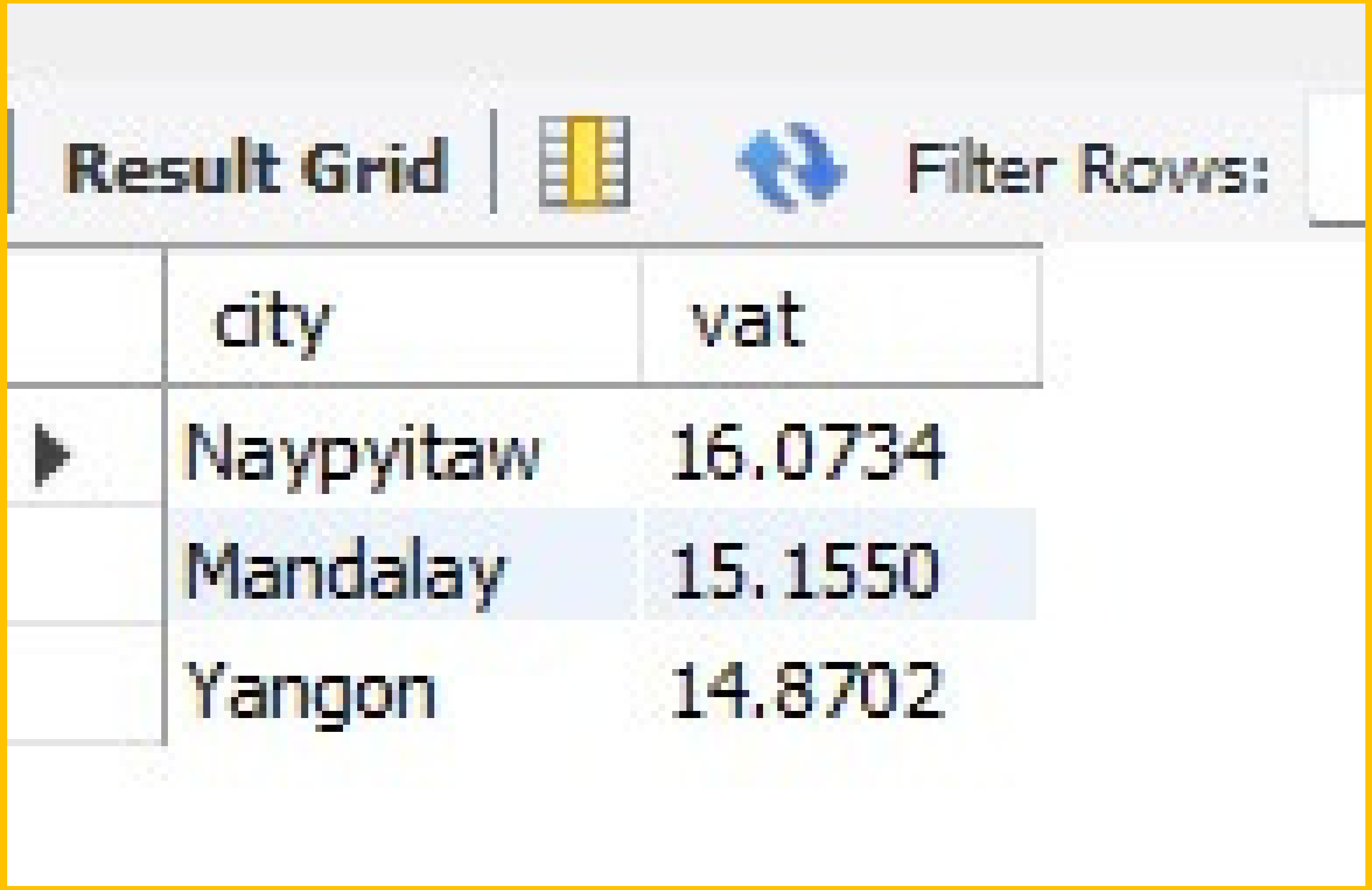
```
SELECT
customer_type, SUM(total) AS
total _revenue
FROM
sales
GROUP BY customer_type
ORDER BY total_revenue DESC;
```



customer_type	total_revenue
Member	163625.1015
Normal	157261.2930

which city has the largest avg tax %/ vat (value added tax)?

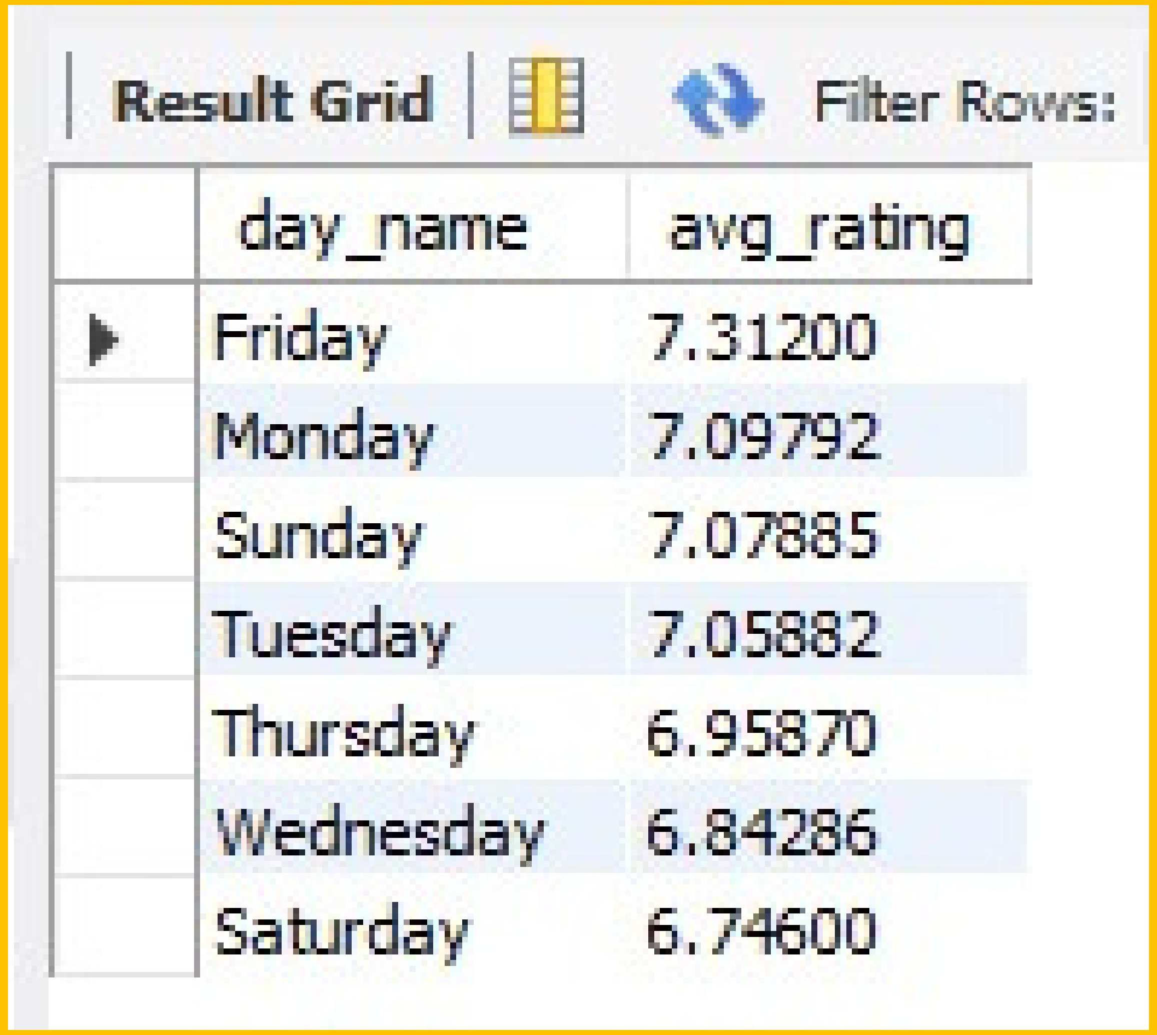
```
SELECT
city, AVG(vat) AS vat
FROM
sales
GROUP BY city
ORDER BY vat DESC;
```



city	vat
Naypyitaw	16.0734
Mandalay	15.1550
Yangon	14.8702

which day of the week has the best avg rting per branch?

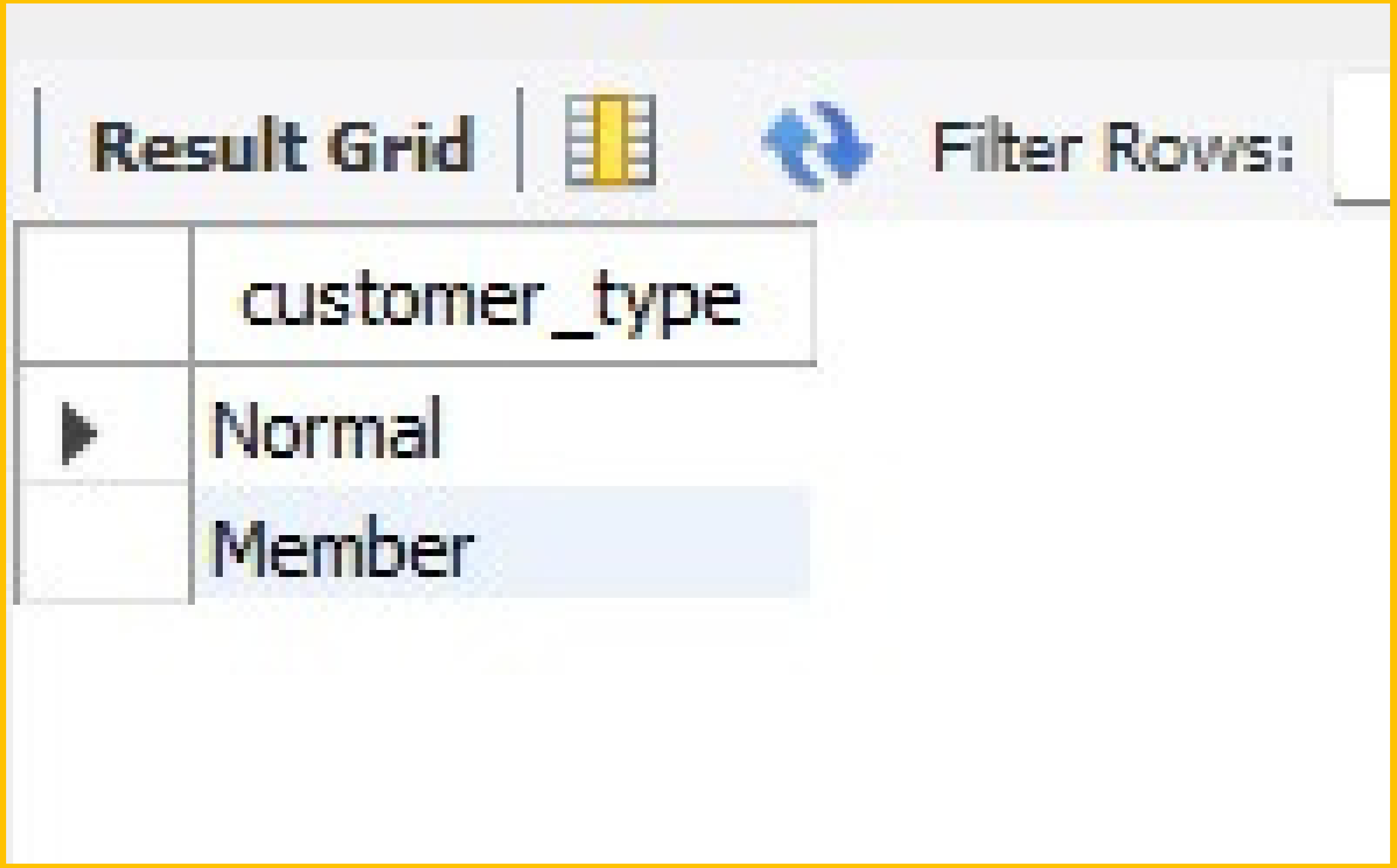
```
SELECT
day_name, AVG(rating) AS avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY day_name
ORDER BY avg_rating DESC;
```



	day_name	avg_rating
▶	Friday	7.31200
	Monday	7.09792
	Sunday	7.07885
	Tuesday	7.05882
	Thursday	6.95870
	Wednesday	6.84286
	Saturday	6.74600

how many unique customer type does the data have?

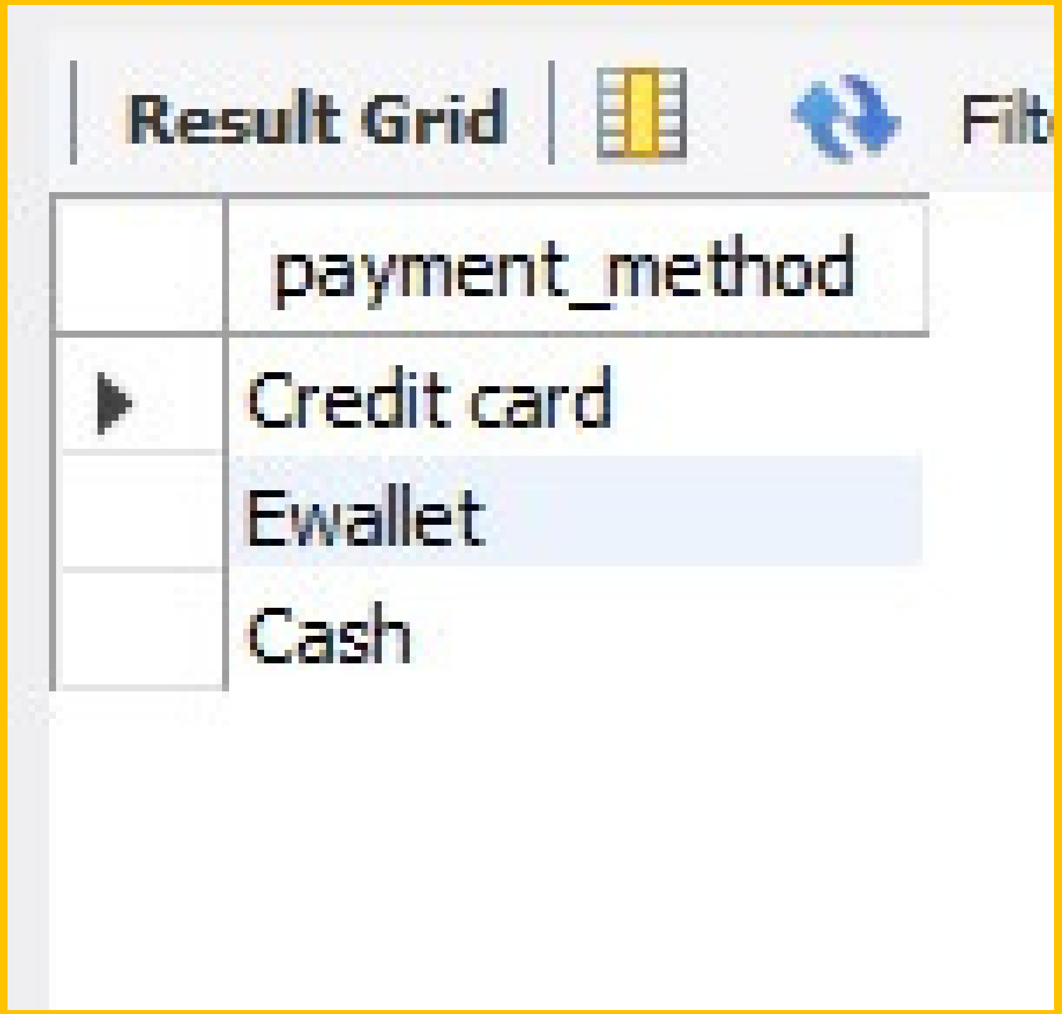
```
SELECT DISTINCT
customer_type
FROM
sales;
```



customer_type
Normal
Member

how many unique payment method the data have?

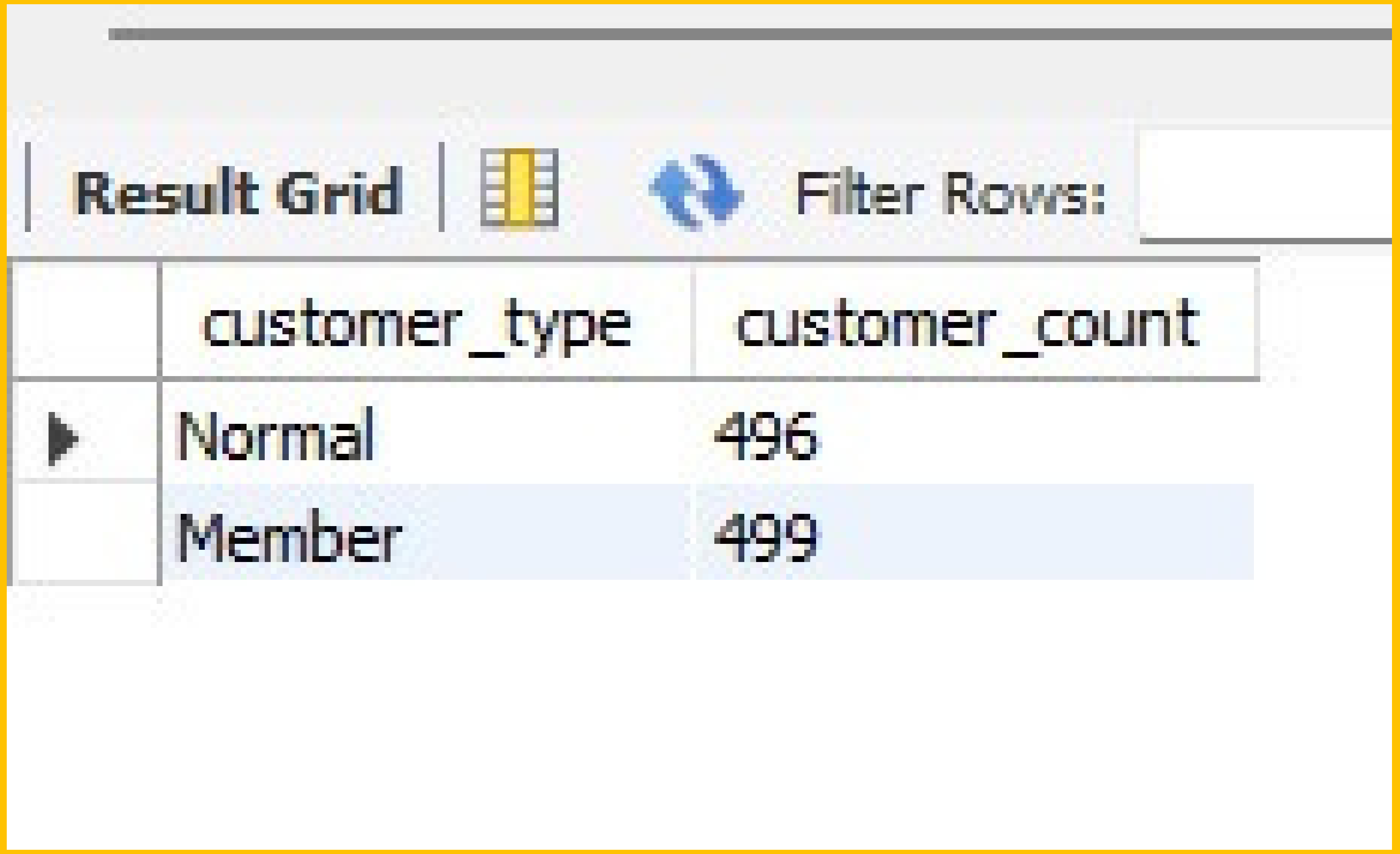
```
SELECT DISTINCT
payment_method
FROM
sales;
```



```
payment_method
Credit card
Ewallet
Cash
```

which customer type buy the most?

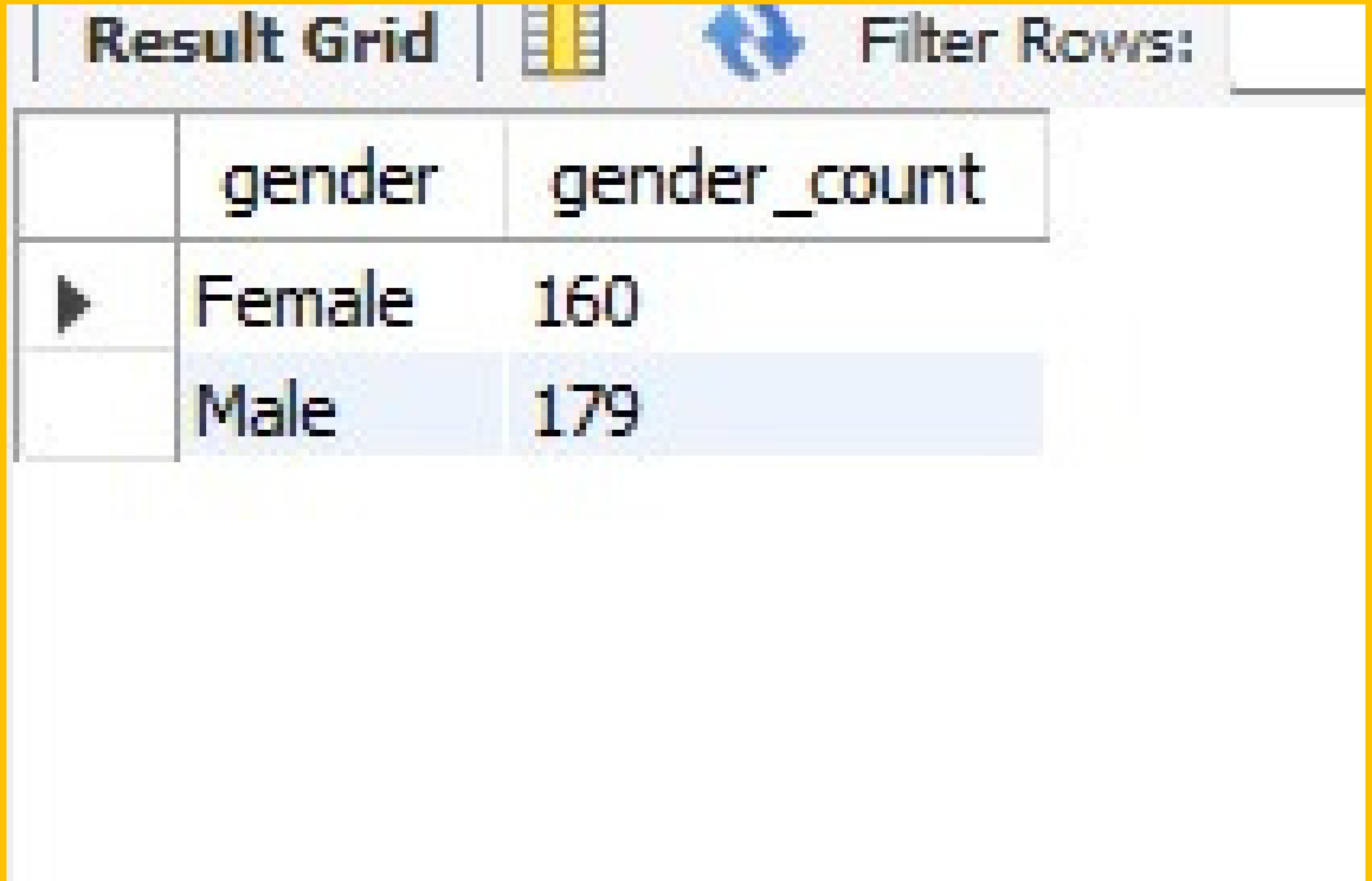
```
SELECT
customer_type, COUNT(*) AS customer_count
FROM
sales
GROUP BY customer_type;
```



customer_type	customer_count
Normal	496
Member	499

what is the gender distribution per branch?

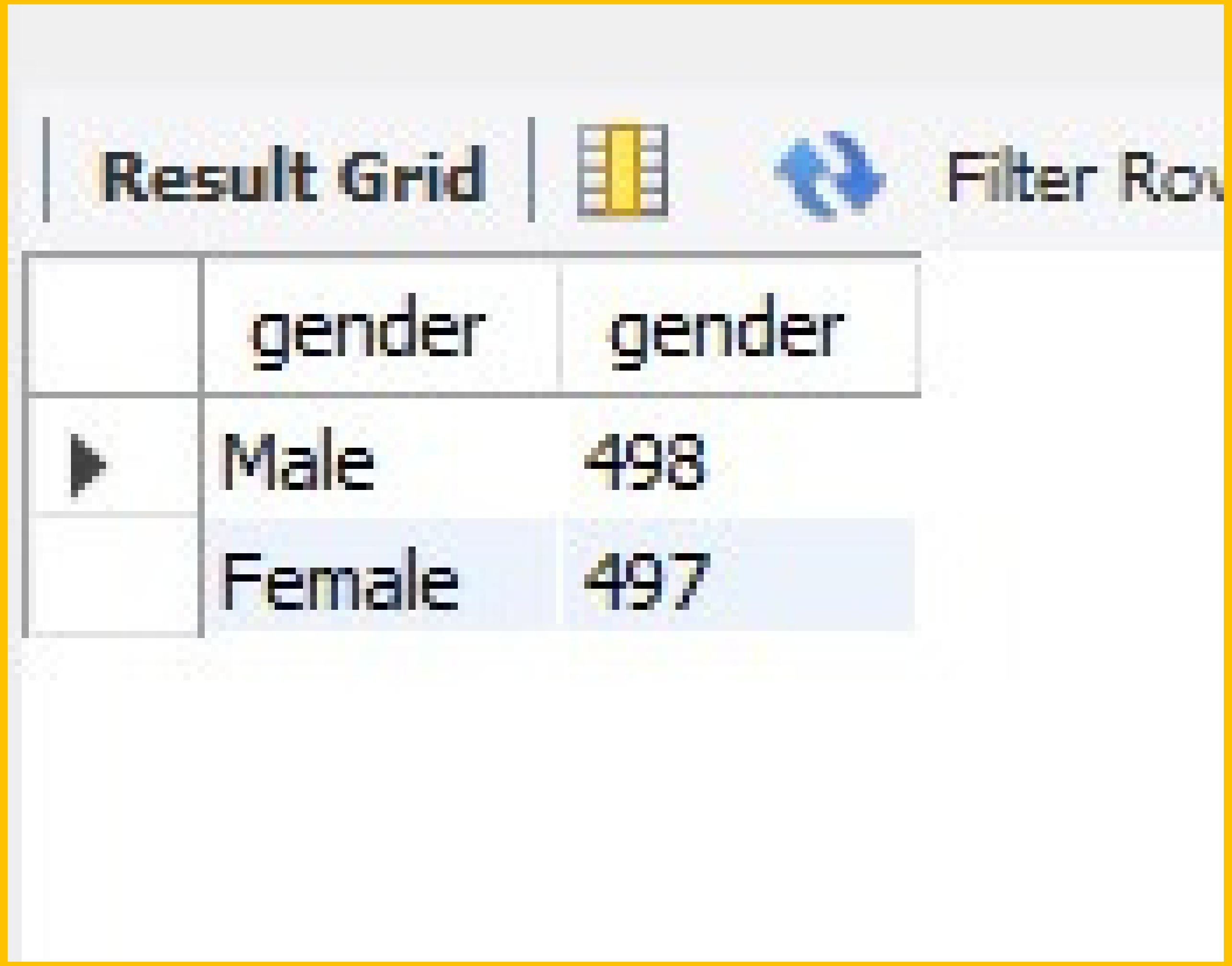
```
SELECT
gender, COUNT(*) AS gender_count
FROM
sales
WHERE
branch = 'a'
GROUP BY gender
ORDER BY gender_count;
```



gender	gender_count
Female	160
Male	179

what is the gender type buy the most?

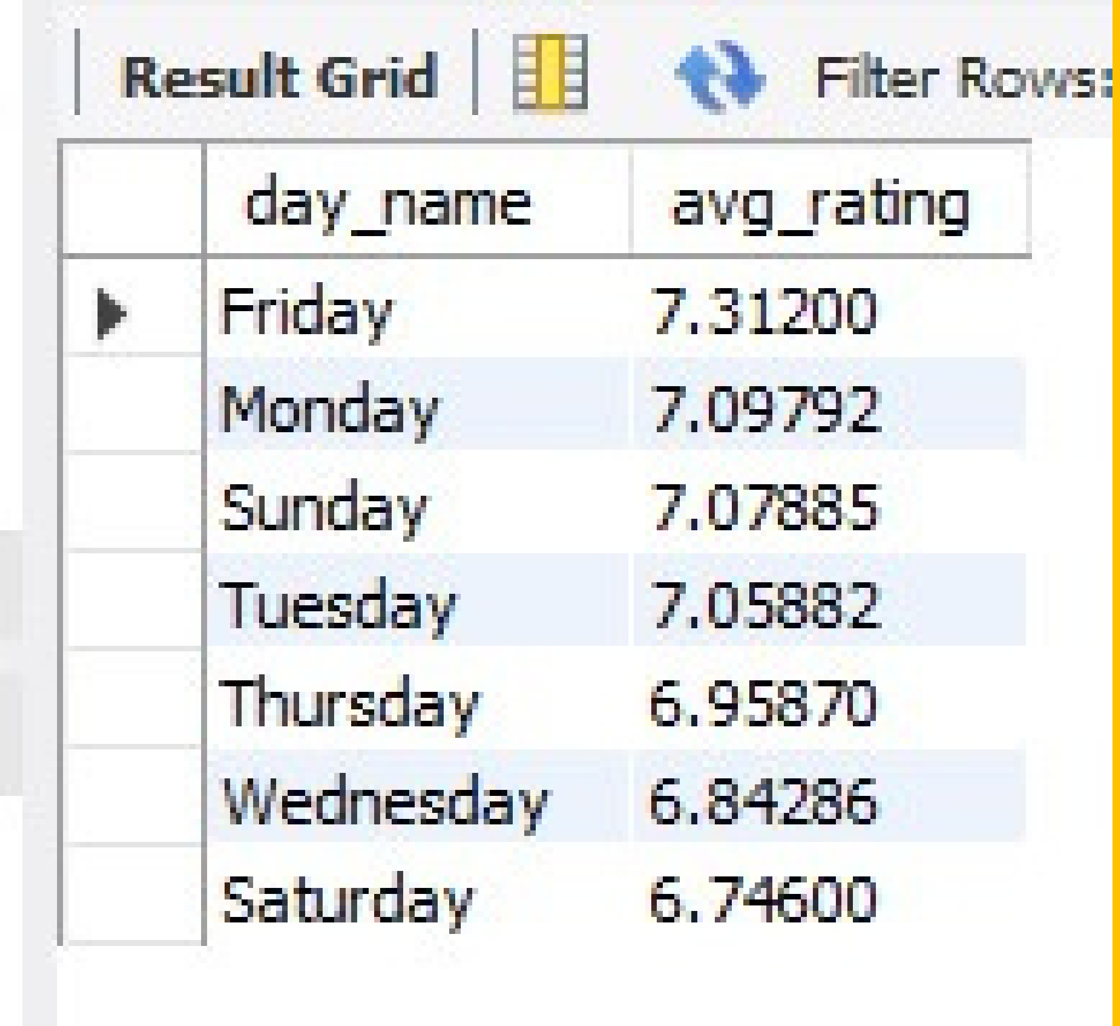
```
SELECT
gender, COUNT(*) AS gender
FROM
sales
GROUP BY gender
ORDER BY gender DESC;
```



	gender	gender
▶	Male	498
	Female	497

which day of the week has the best avg rting per branch?

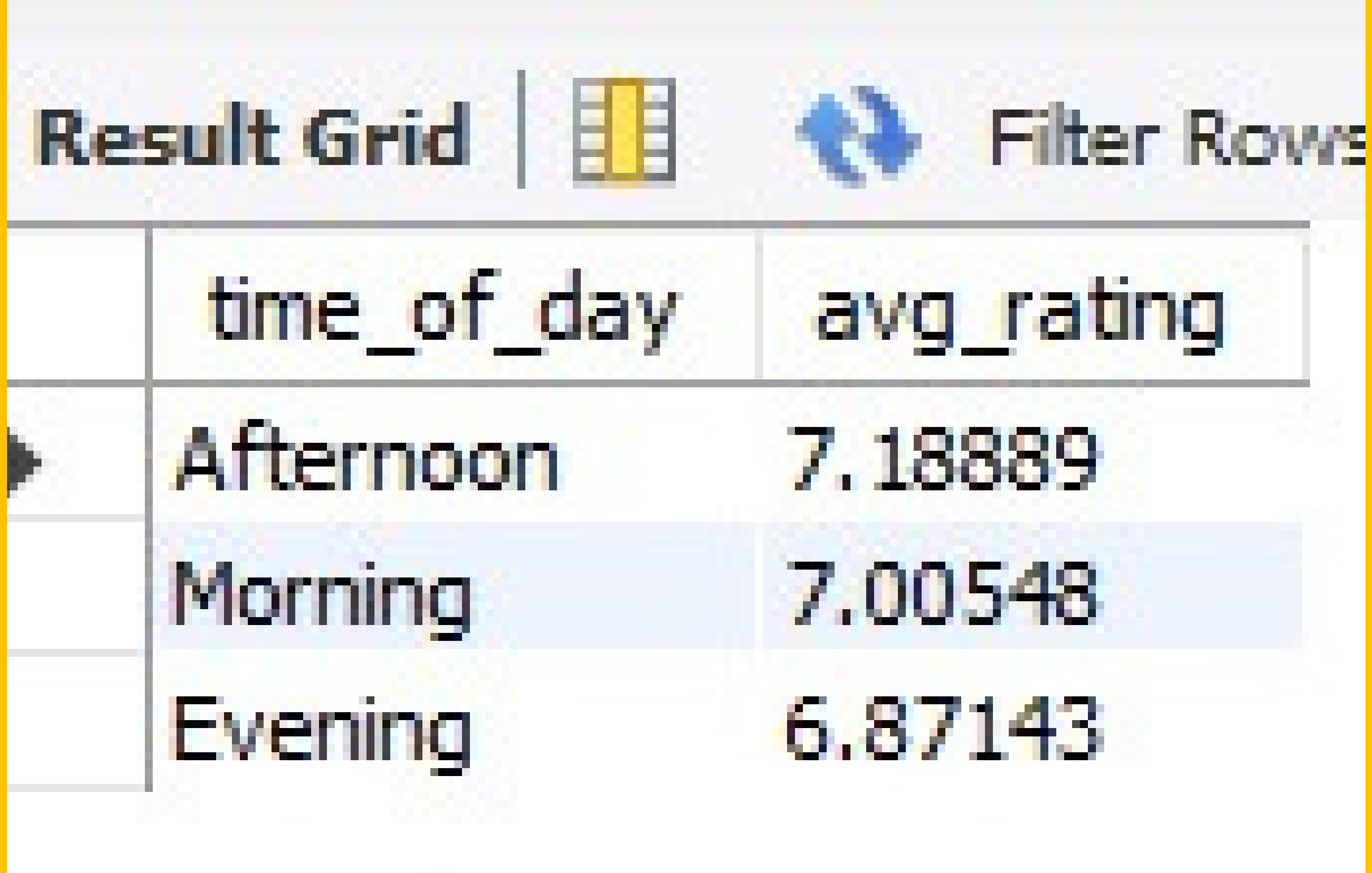
```
SELECT
day_name, AVG(rating) AS avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY day_name
ORDER BY avg_rating DESC;
```



day_name	avg_rating
Friday	7.31200
Monday	7.09792
Sunday	7.07885
Tuesday	7.05882
Thursday	6.95870
Wednesday	6.84286
Saturday	6.74600

which time of the day customer give most rating par branch?

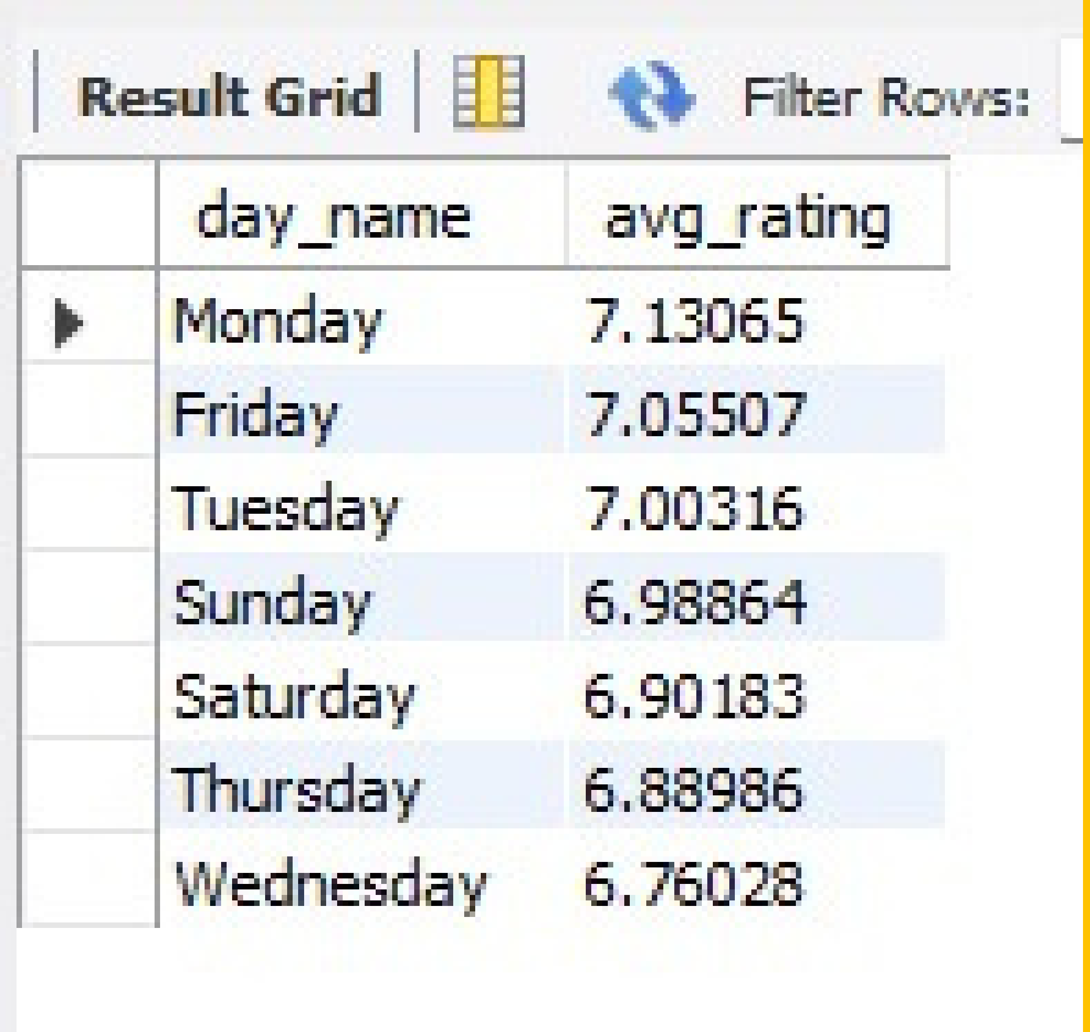
```
SELECT
time_of_day, AVG(rating) AS avg_rating
FROM
sales
WHERE
branch = 'a'
GROUP BY time_of_day
ORDER BY avg_rating DESC;
```



time_of_day	avg_rating
Afternoon	7.18889
Morning	7.00548
Evening	6.87143

which day of the week has the best avg rating?

```
SELECT
day_name, AVG(rating) AS avg_rating
FROM
sales
GROUP BY day_name
ORDER BY avg_rating DESC;
```



day_name	avg_rating
Monday	7.13065
Friday	7.05507
Tuesday	7.00316
Sunday	6.98864
Saturday	6.90183
Thursday	6.88986
Wednesday	6.76028