

# Nata & Co

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BATH SALES DATA ANALYSIS FOR SEP 2023

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10 Oct 2023



## INTRODUCTION

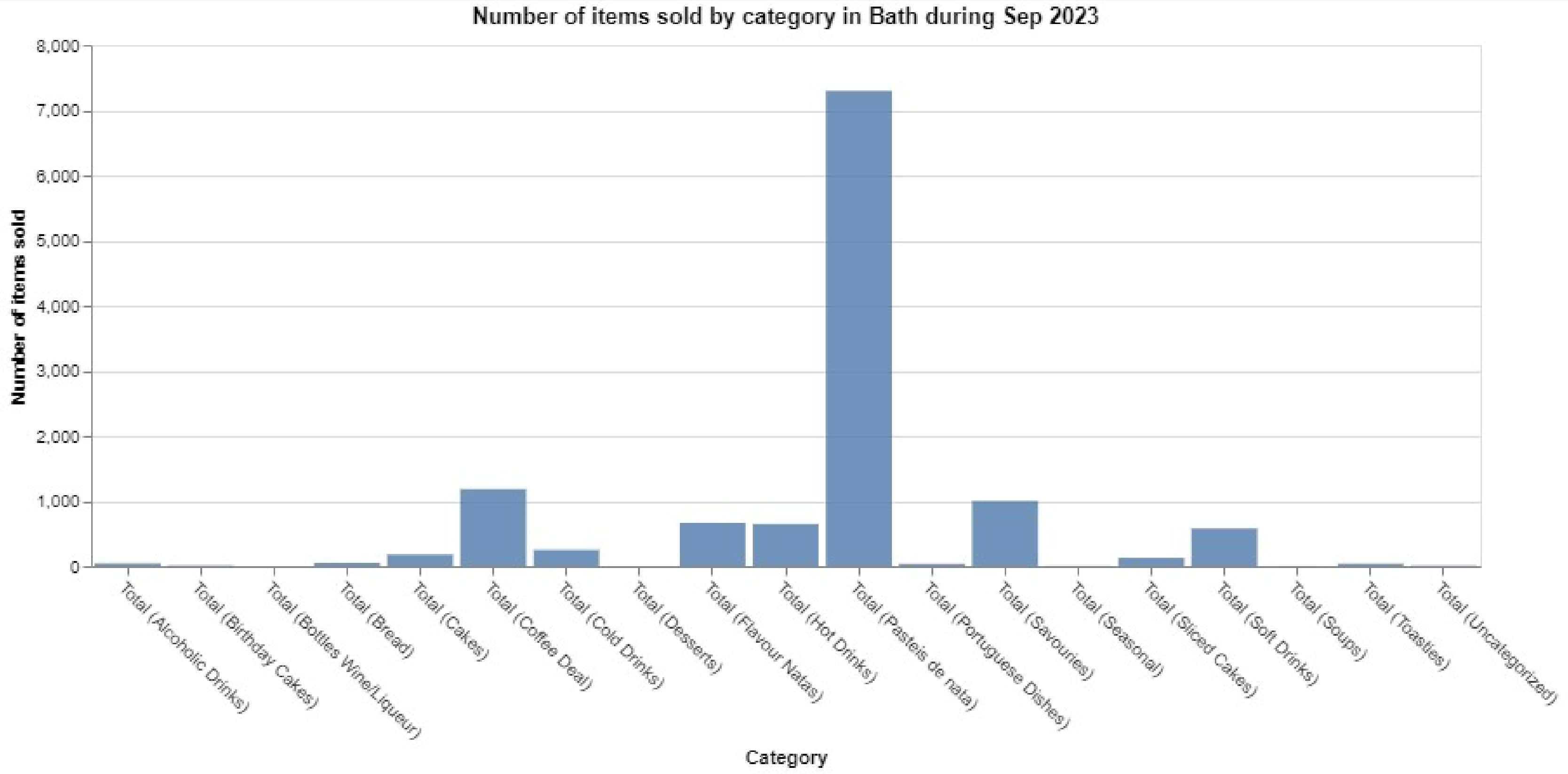
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I was provided with daily sales report for the month of September. In order to start the analysis, the first step was to clean and merge the daily data. The analysis conducted reflects the monthly sales of the most popular products at the Bath store.

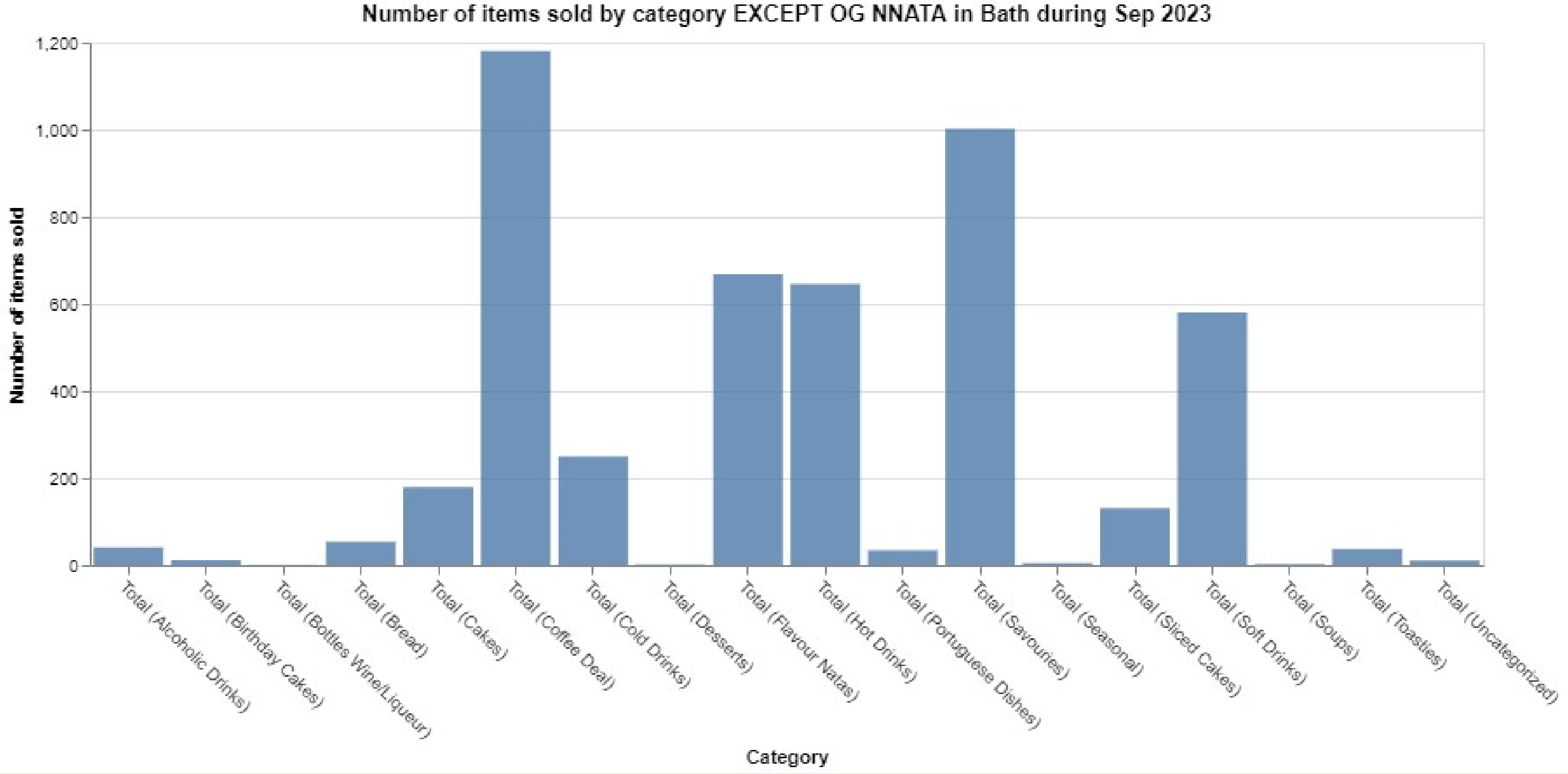
# TABLE SHOWING DIFFERENT ITEMS SOLD IN SEP 2023

Sno	Category	Total Sold
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0	TOTAL	12133.0
1	Total (Pasteis de nata)	7296.0
2	Total (Coffee Deal)	1181.0
3	Total (Savouries)	1002.0
4	Total (Flavour Natas)	668.0
5	Total (Hot Drinks)	646.0
6	Total (Soft Drinks)	580.0
7	Total (Cold Drinks)	250.0
8	Total (Cakes)	179.0
9	Total (Sliced Cakes)	131.0
10	Total (Bread)	54.0
11	Total (Alcoholic Drinks)	41.0
12	Total (Toasties)	37.0
13	Total (Portuguese Dishes)	34.0
14	Total (Birthday Cakes)	12.0
15	Total (Uncategorized)	11.0
16	Total (Seasonal)	5.0
17	Total (Soups)	3.0
18	Total (Desserts)	2.0
19	Total (Bottles Wine/Liqueur)	1.0

# VISUAL REPRESENTATION OF ALL THE ITEMS SOLD



# PLOT FOR ALL THE ITEMS EXCEPT THE OG NATAS



# INSIGHTS

From the previous table and graphs it can be concluded that top 4 most sold items are:

1. Pastel de nata
2. Coffee deal
3. Savouries
4. Flavoured nata

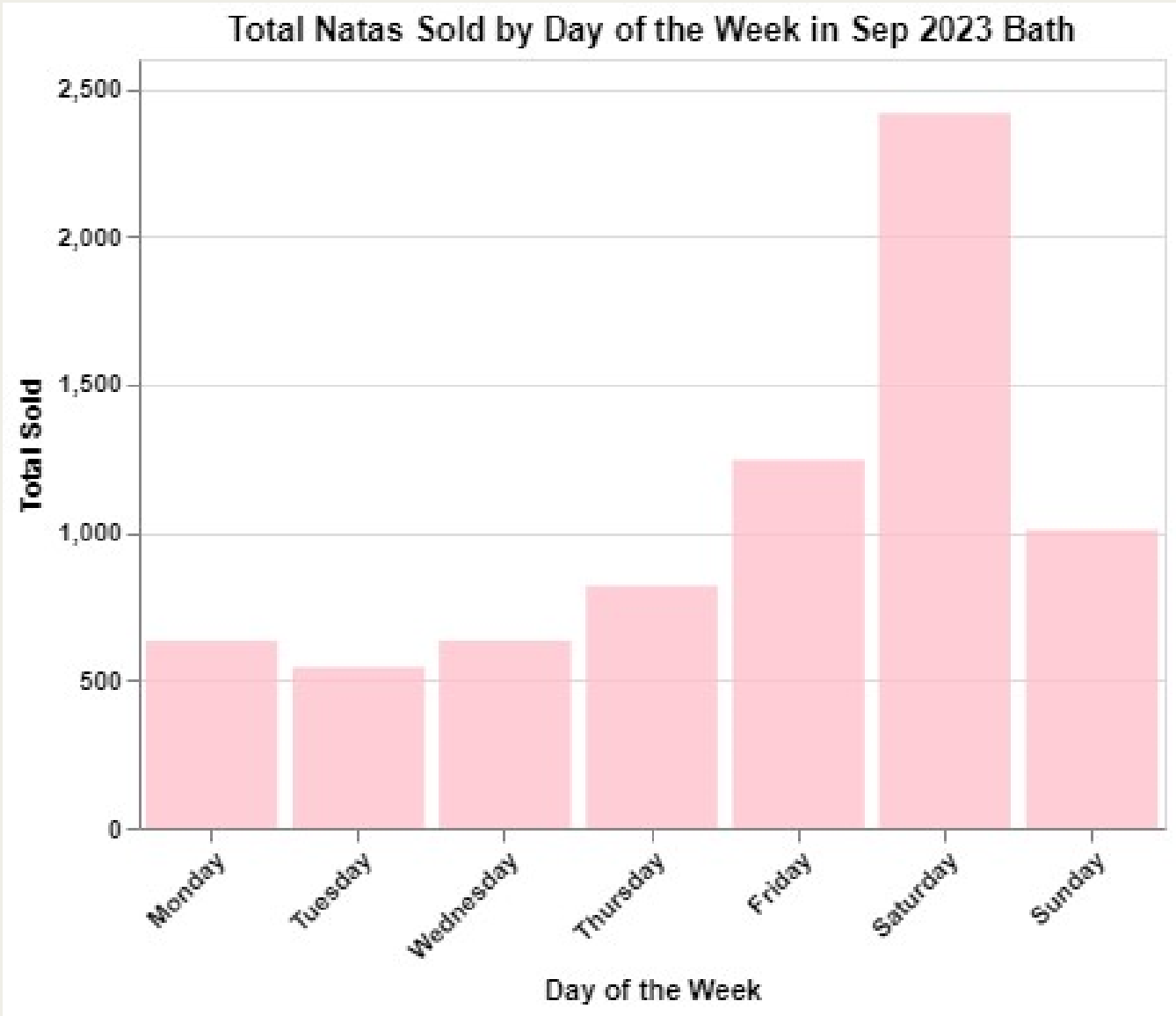
Therefore, I decided to conduct further analysis on the above 4 categories.

# P A S T E L D E N A T A A N A L Y S I S

I filtered out the data for pastel de nata and used the day of the week as one of the factors. Below is the table and the graph showing the number of natas sold on each day of the week aggregated.

**We sell most natas on Saturday. Almost 200% more than the Tuesday sales.**

	Day of Week	Sold
0	Saturday	2416.0
1	Friday	1244.0
2	Sunday	1009.0
3	Thursday	819.0
4	Wednesday	633.0
5	Monday	632.0
6	Tuesday	543.0



# P A S T E L D E N A T A A N A L Y S I S

Another factor I considered was week number. So here's the table and plot showing number of natas sold in each week.

**Last 3 weeks of September has been consistent in terms of natas sales.**

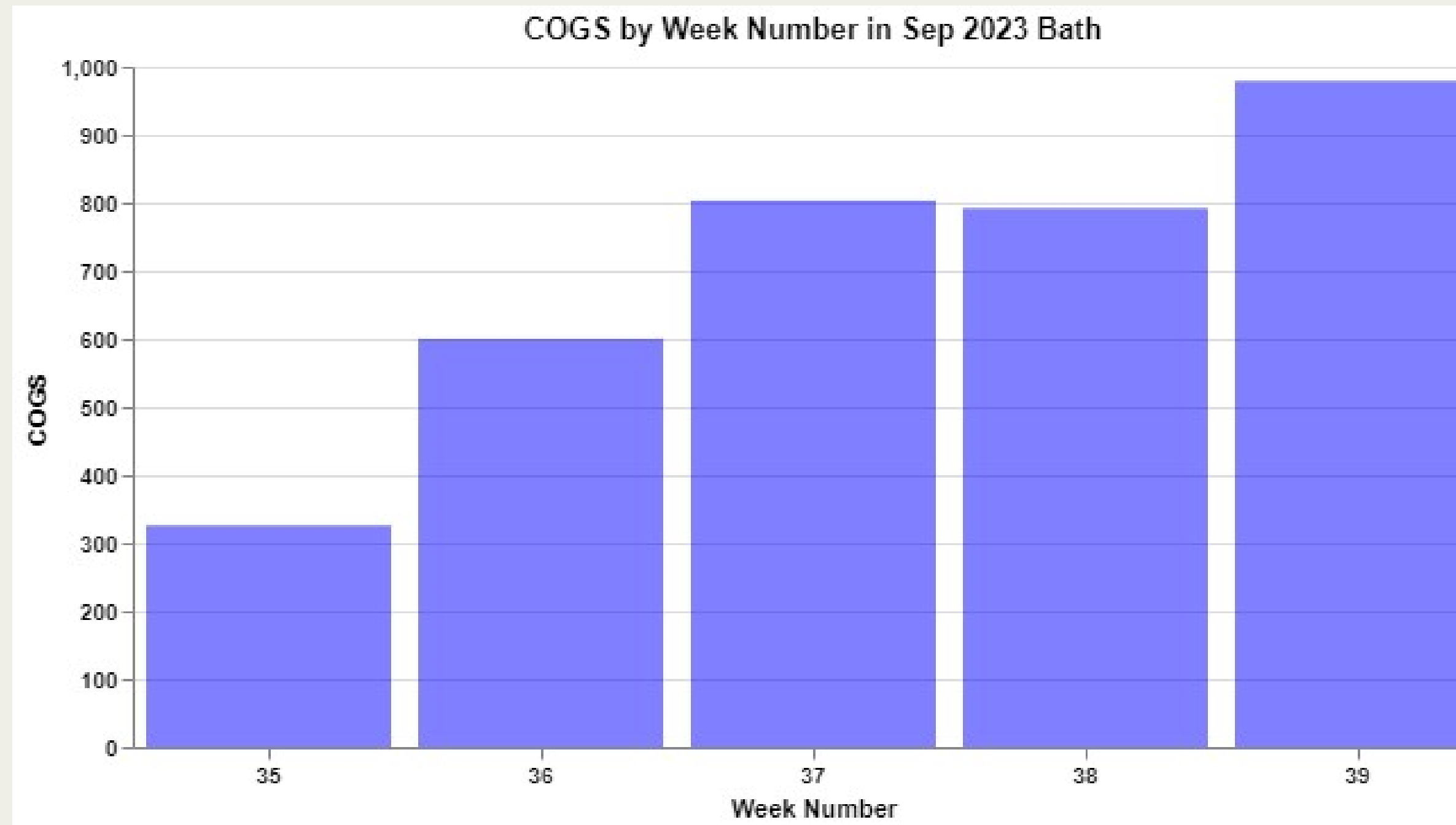
	Week Number	Sold
0	35	679.0
1	36	1242.0
2	37	1674.0
3	38	1655.0
4	39	2046.0





# P A S T E L D E N A T A A N A L Y S I S

I decided to see how the nata sales affect COGS and turns out the pattern followed is same, which basically means that COGS is directly proportional to Sales of nata



# COFFEE DEALS ANALYSIS

The **second** most sold item on the list is Coffee deals. For this analysis, I found the answers to below questions:

1. Max number of coffee deals sold and when was it.
2. The number of coffee deals sold each week of Sep.
3. Find which week has the most coffee deals sold and which coffee was sold the most.
4. Which day of the week most coffee deals are sold

# COFFEE DEALS ANALYSIS

Max coffee deals were sold on **16th and 30th of September.**

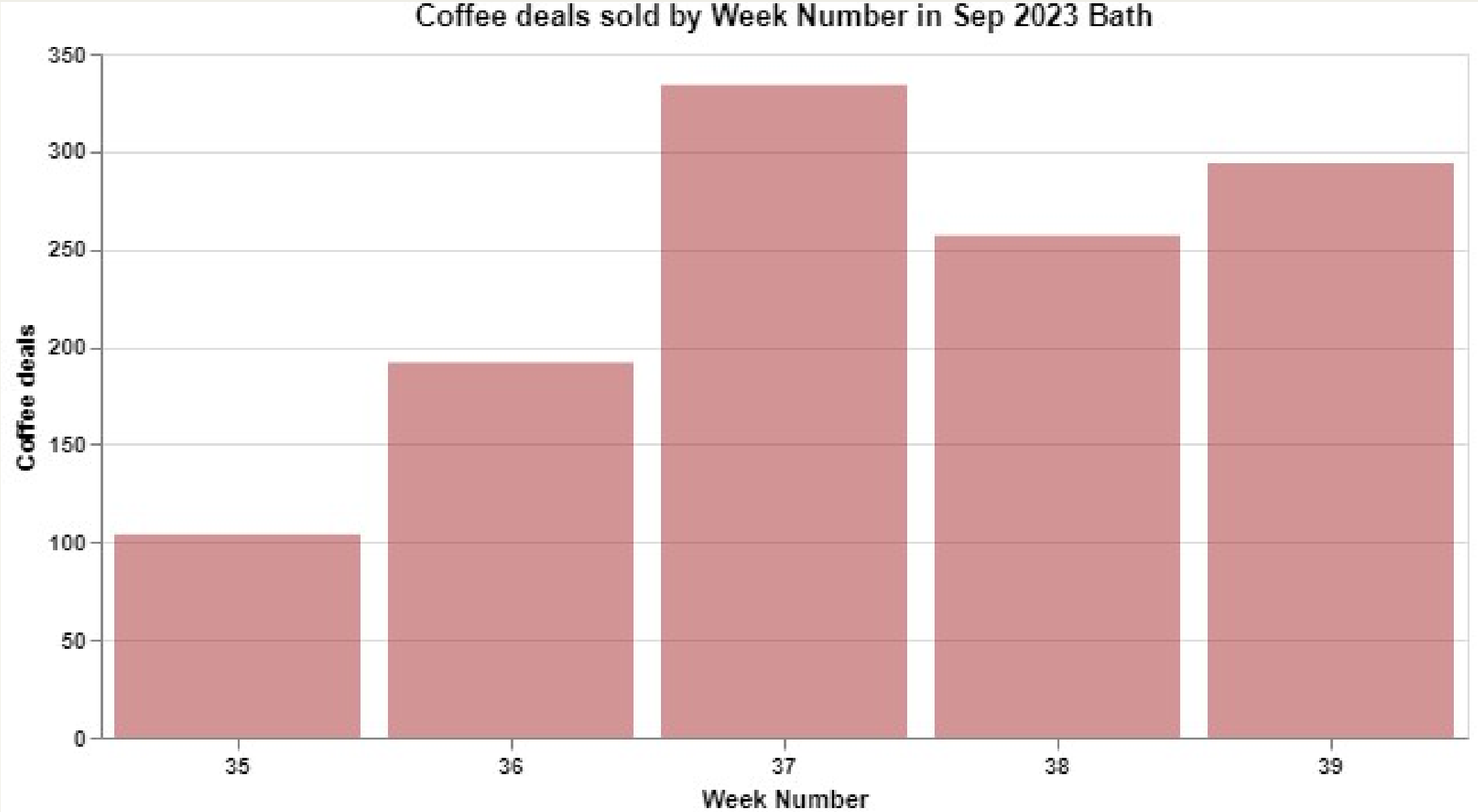
**76** Coffee deals were sold on both the above-mentioned days.

	Date	Category Name	Name	Gross Sales	Net Sales	Sold
1267	2023-09-16	Total (Coffee Deal)		311.6	302.58	76.0
2451	2023-09-30	Total (Coffee Deal)		313.7	312.88	76.0

# COFFEE DEALS ANALYSIS

Weekly distribution of coffee deals sold, in table and plot. Week 37 has the highest sale of coffee deals which is **11th -17th September**. Week 39 is also pretty good in terms of sales which is **25th -30th September**, almost **300** deals sold.

	Week Number	Category Name	Sold
0	35	Total (Coffee Deal)	104.0
1	36	Total (Coffee Deal)	192.0
2	37	Total (Coffee Deal)	334.0
3	38	Total (Coffee Deal)	257.0
4	39	Total (Coffee Deal)	294.0



# COFFEE DEALS ANALYSIS

As week 37 has the highest sale of coffee deals, I checked that we sold **19 Cappacinos on 15th Sept** which was the highest in that week.

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In [21]:  ▶ most_sold_deal

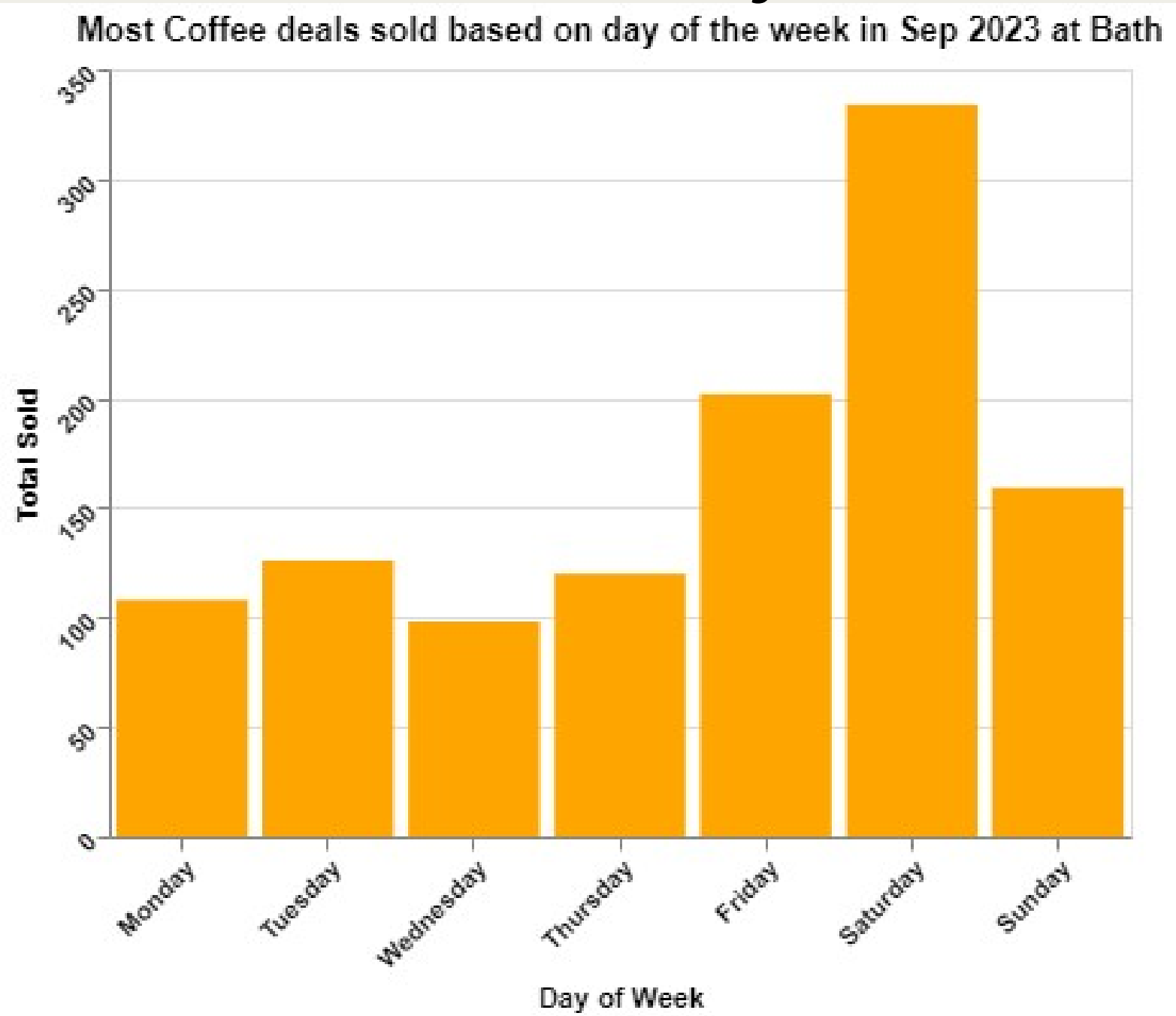
Out[21]: Date                2023-09-15 00:00:00
          Category Name
          Name
          Gross Sales
          Net Sales
          Sold
          Refunded
          Modifier Name      Cappuccino
          Modifier Sold       19.0
          Modifier Amount     0.0
          Discounts
          Refunds
          % Net Sales
          Avg Item Size
          COGS
          Gross Profit
          Repayments
          Day of Week        Friday
          Week Number        37
          Name: 1176, dtype: object
```

# COFFEE DEALS ANALYSIS

Distribution of coffee deals based on the day of the week. We sell **3.4X more** coffee deals on Saturdays than Wednesdays.

We sell almost **1.5X more** coffee deals on Weekends than Weekday.

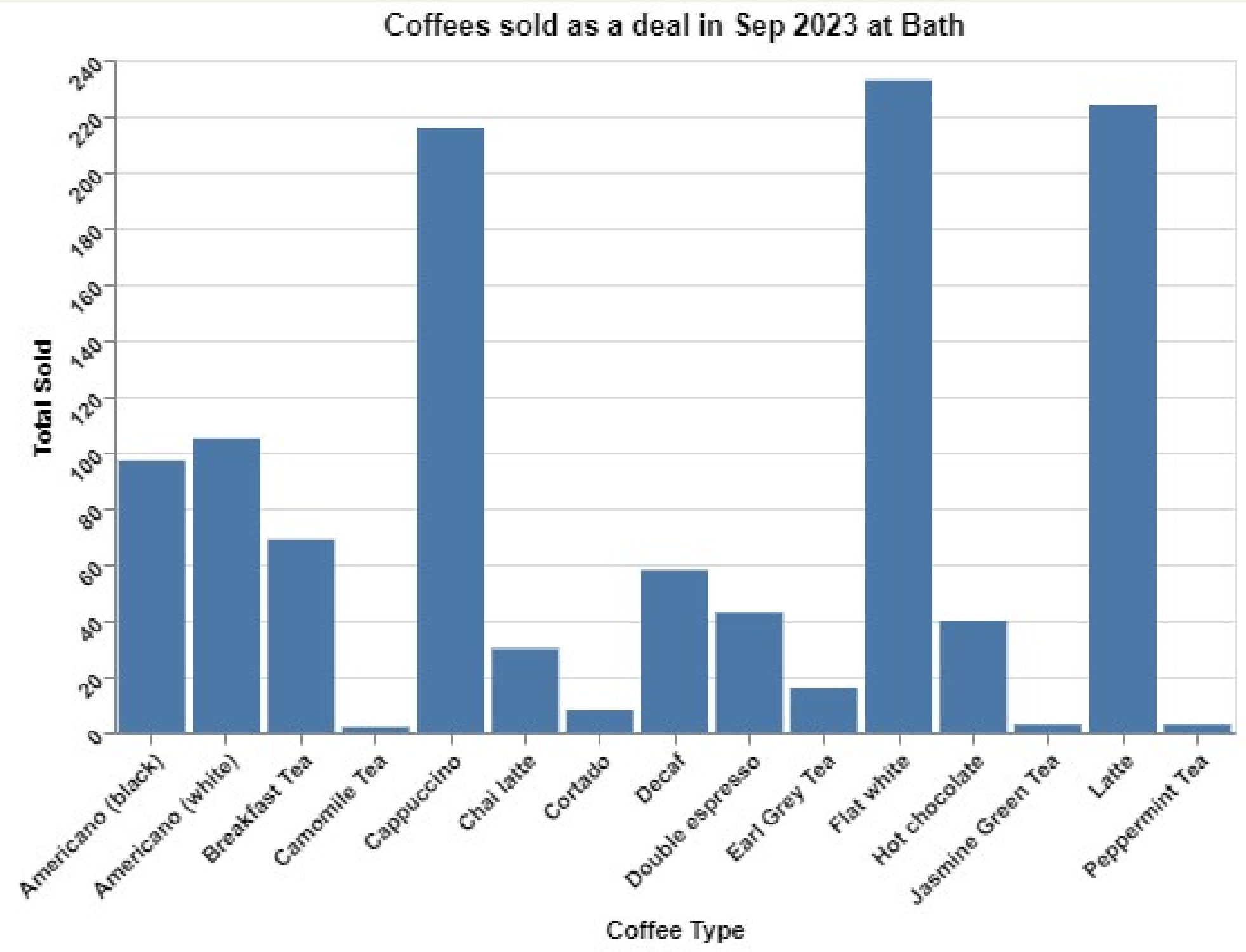
	Day of Week	Modifier Sold
2	Saturday	334.0
0	Friday	202.0
3	Sunday	159.0
5	Tuesday	126.0
4	Thursday	120.0
1	Monday	108.0
6	Wednesday	98.0



# COFFEE DEALS ANALYSIS

Distribution of different coffee deals sols. Most popular coffee ordered in a deal is **Flat white**, followed by **Latte** and **Cappuccino**.

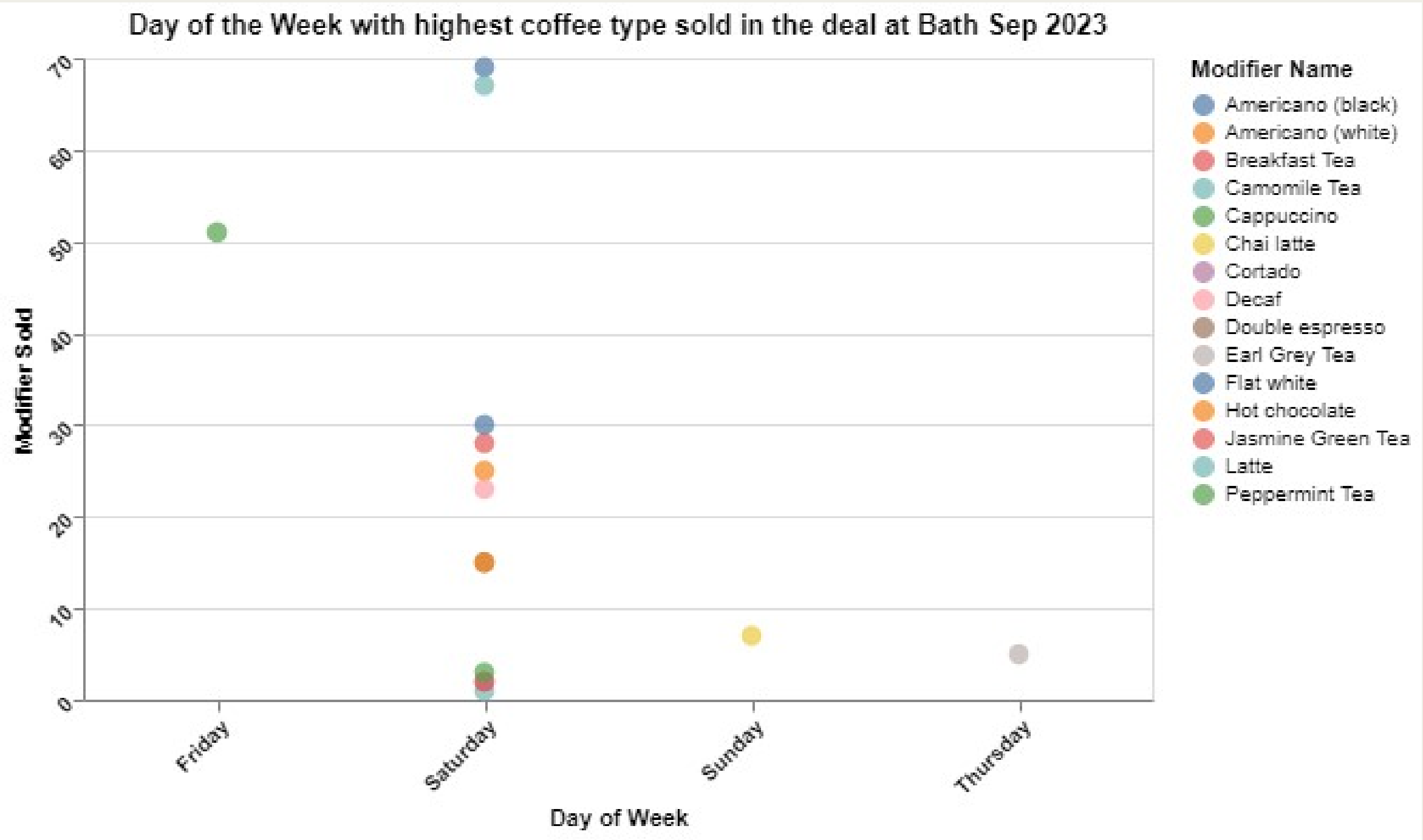
	Modifier Name	Modifier Sold
10	Flat white	233.0
13	Latte	224.0
4	Cappuccino	216.0
1	Americano (white)	105.0
0	Americano (black)	97.0
2	Breakfast Tea	69.0
7	Decaf	58.0
8	Double espresso	43.0
11	Hot chocolate	40.0
5	Chai latte	30.0
9	Earl Grey Tea	16.0
6	Cortado	8.0
12	Jasmine Green Tea	3.0
14	Peppermint Tea	3.0
3	Camomile Tea	2.0



# COFFEE DEALS ANALYSIS

This table represents the day on which that particular type of coffee had the maximum sales. So Max **Black Americanos** were sold on a **Saturday**, whereas Max **Earl Grey** teas were sold on a **Thursday**.

	Day of Week	Modifier Name	Modifier Sold
23	Saturday	Americano (black)	30.0
24	Saturday	Americano (white)	25.0
25	Saturday	Breakfast Tea	28.0
26	Saturday	Camomile Tea	1.0
3	Friday	Cappuccino	51.0
43	Sunday	Chai latte	7.0
29	Saturday	Cortado	2.0
30	Saturday	Decaf	23.0
31	Saturday	Double espresso	15.0
59	Thursday	Earl Grey Tea	5.0
33	Saturday	Flat white	69.0
34	Saturday	Hot chocolate	15.0
35	Saturday	Jasmine Green Tea	2.0
36	Saturday	Latte	67.0
37	Saturday	Peppermint Tea	3.0





# SAVOURIES ANALYSIS

The **third** most sold item on the list is Savouries. For this analysis, I found the answers to below questions:

- Max number of Savouries sold and when was it.
- The number of Savouries sold each week of Sep.
- Find which week has the most Savouries were sold and which savory was sold the most.
- Which day of the week most Savouries are sold.

# SAVOURIES ANALYSIS

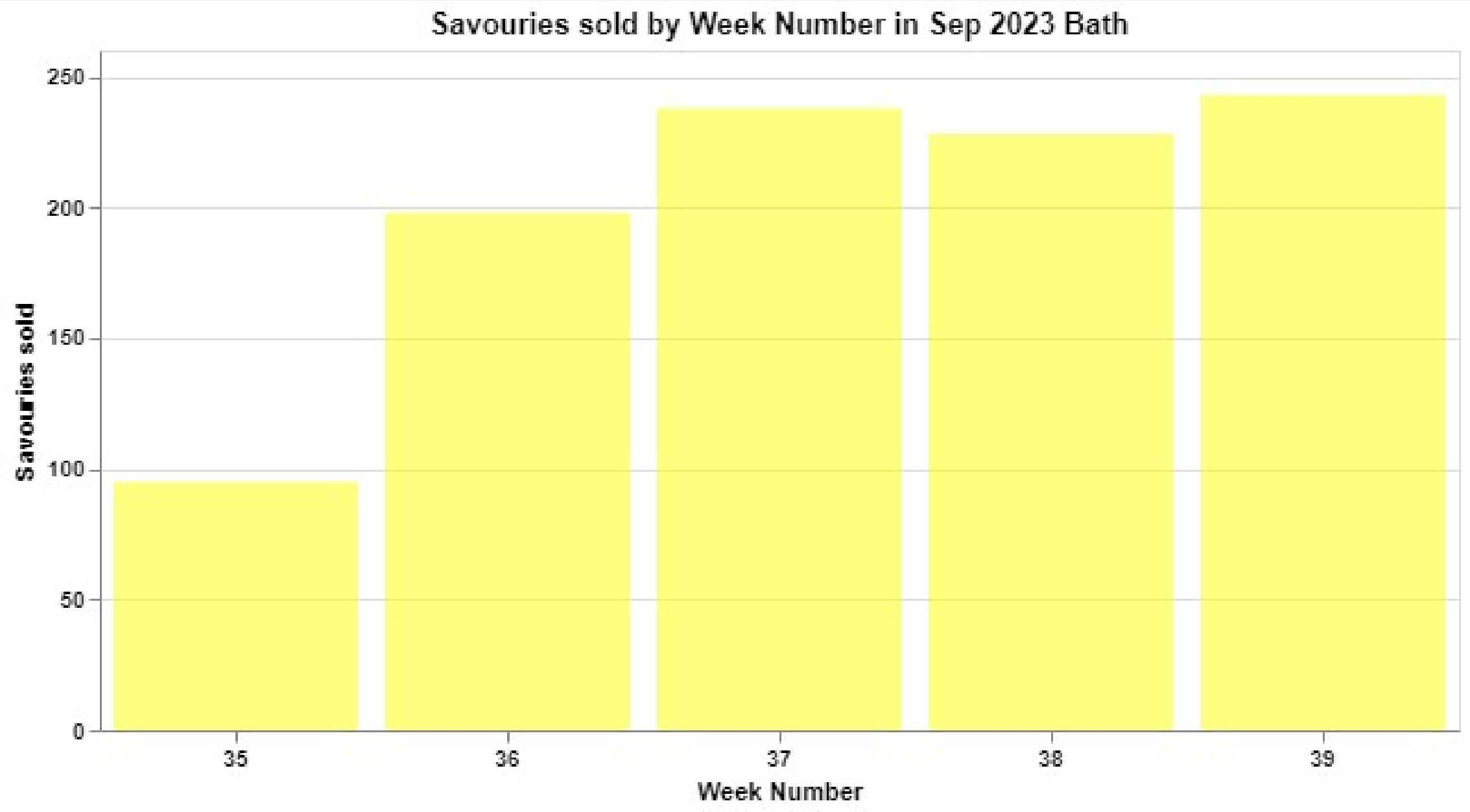
Maximum number of Savouries were sold on **2nd and 30th Sep** . 58 units of savouries were sold on these 2 days.

	Date	Category Name	Name	Gross Sales	Net Sales	Sold	Refunded	Modifier Name	Modifier Sold	Modifier Amount	Discounts	Refunds	% Net Sales	Avg Item Size	COGS	Gross Profit
135	2023-09-02	Total (Savouries)		194.35	182.74	59.0	0.0	-		0.0	-11.61	0.0	12.11	3.1	47.96	134.8
2464	2023-09-30	Total (Savouries)		205.25	198.97	59.0	0.0	-		0.0	-6.28	0.0	9.72	3.37	42.64	156.34

# SAVOURIES ANALYSIS

Weekly distribution of savouries sold, in table and plot. Week 39 has the highest sale of coffee deals which is **25th -30th September**. Week 37 is also pretty good in terms of sales which is **11th -17th September, over 200 different savouries sold**.

	Week Number	Category Name	Sold
0	35	Total (Savouries)	95.0
1	36	Total (Savouries)	198.0
2	37	Total (Savouries)	238.0
3	38	Total (Savouries)	228.0
4	39	Total (Savouries)	243.0



# SAVOURIES ANALYSIS

Max number of savoury sold in a day was **Cheese bread**, we sold **18** of those on **2nd September**.

As week 39 has the most sales in savouries, on checking I found we sold **10 coxinha** on **25th September**.

```
Date                2023-09-02 00:00:00
Category Name
Name                Brazilian cheese bread
Gross Sales         38.7
Net Sales           35.23
Sold                18.0
Refunded            0.0
Modifier Name
Modifier Sold
Modifier Amount
Discounts           -3.47
Refunds             0.0
% Net Sales         2.33
Avg Item Size       1.96
COGS                7.56
Gross Profit        27.67
Repayments
Day of Week         Saturday
Week Number         35
Name: 127, dtype: object
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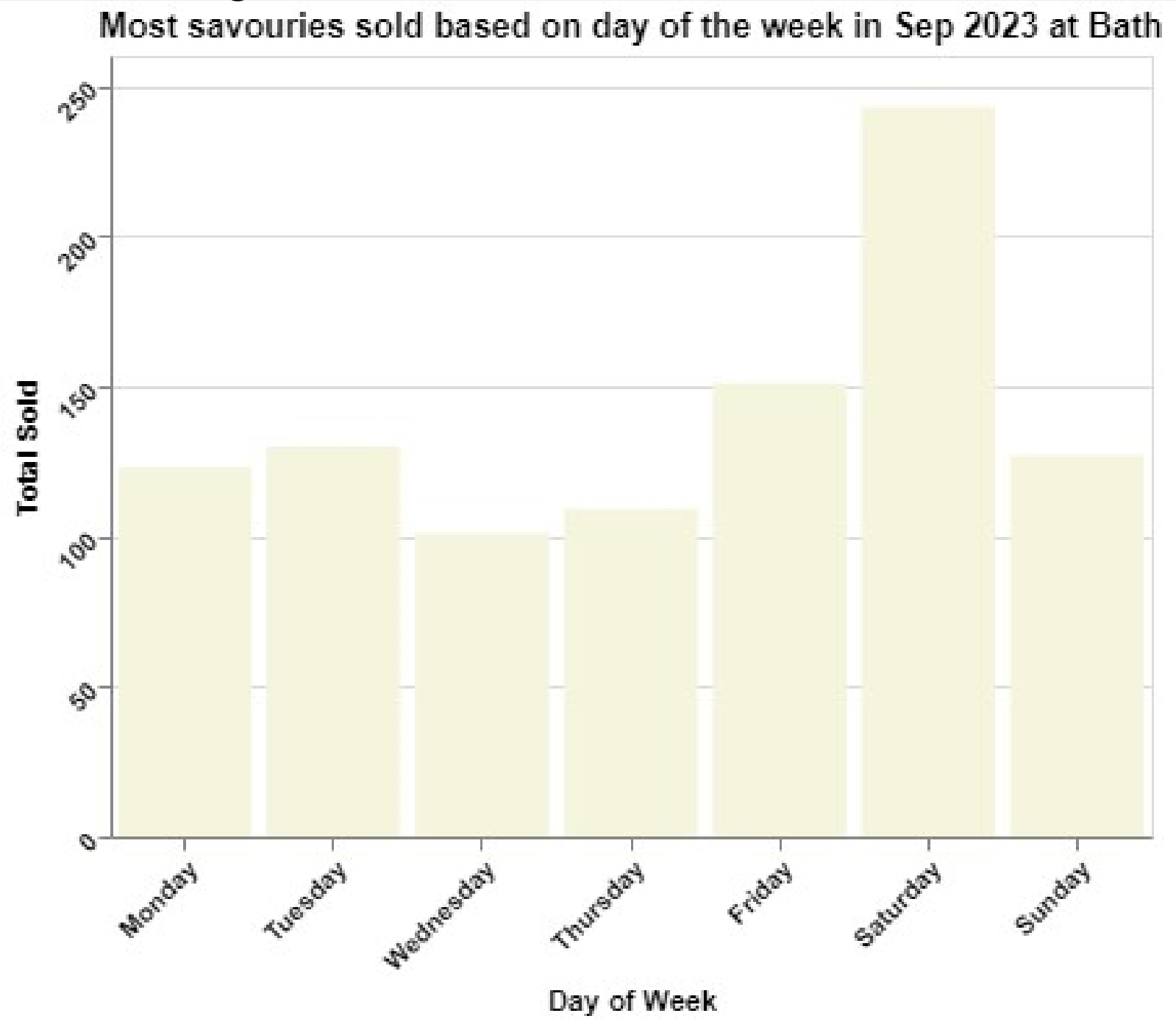
```
Date                2023-09-25 00:00:00
Category Name
Name                Coxinha
Gross Sales         32.5
Net Sales           31.2
Sold                10.0
Refunded            0.0
Modifier Name
Modifier Sold
Modifier Amount
Discounts           -1.3
Refunds             0.0
% Net Sales         3.38
Avg Item Size       3.12
COGS                6.8
Gross Profit        24.4
Repayments
Day of Week         Monday
Week Number         39
Name: 2071, dtype: object
```

# SAVOURIES ANALYSIS

Total units of Savouries sold based on the day of the week. Again Saturday is the highest with **2.5X more** than Wednesday.

Clearly Saturday is the busiest and Wednesday is least active.

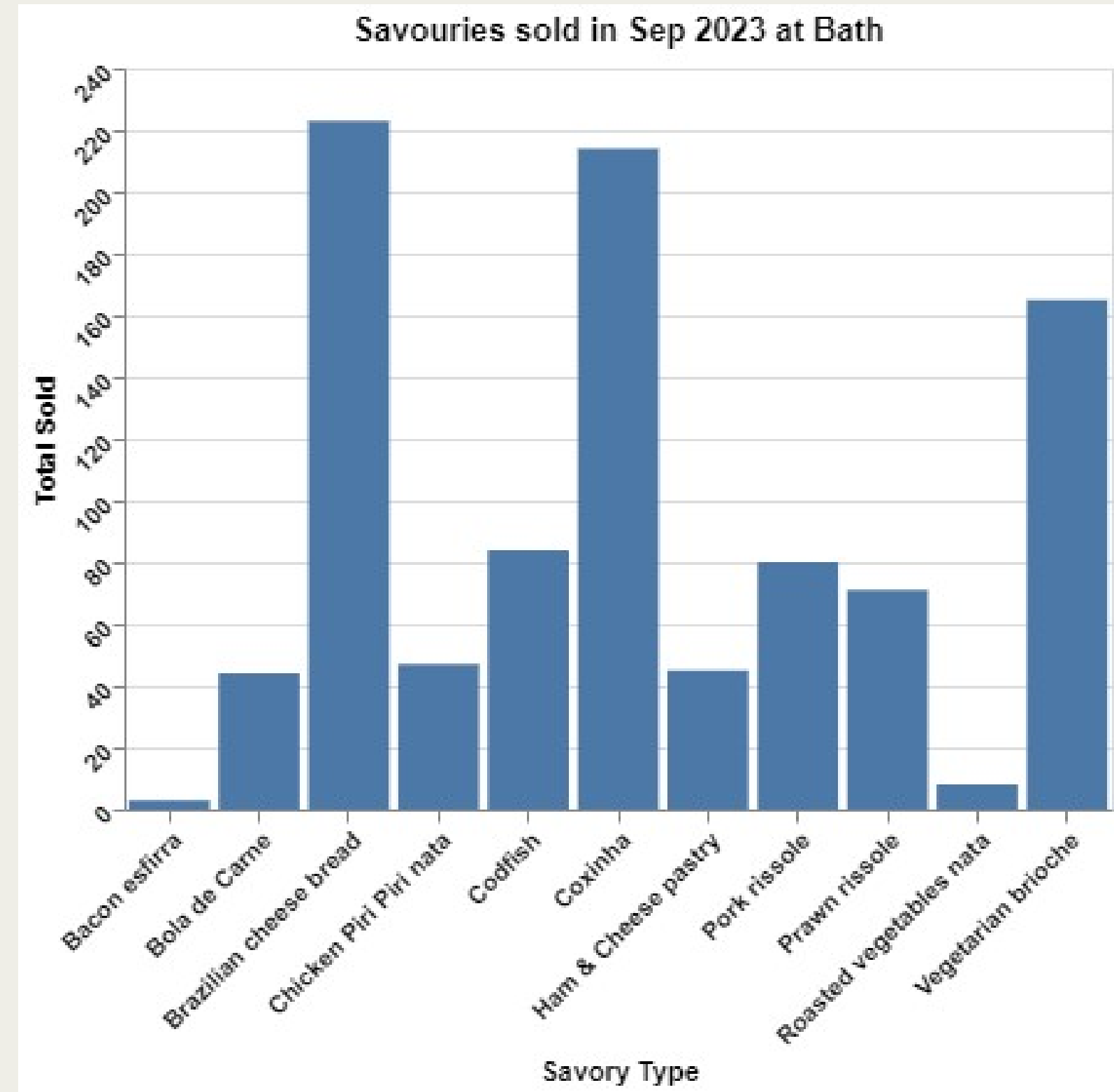
	Day of Week	Sold
2	Saturday	243.0
0	Friday	151.0
5	Tuesday	130.0
3	Sunday	127.0
1	Monday	123.0
4	Thursday	109.0
6	Wednesday	101.0



# SAVOURIES ANALYSIS

Apparantly the **most sold** savoury is **cheese bread** followed by **coxinha** and **veg brioche**.

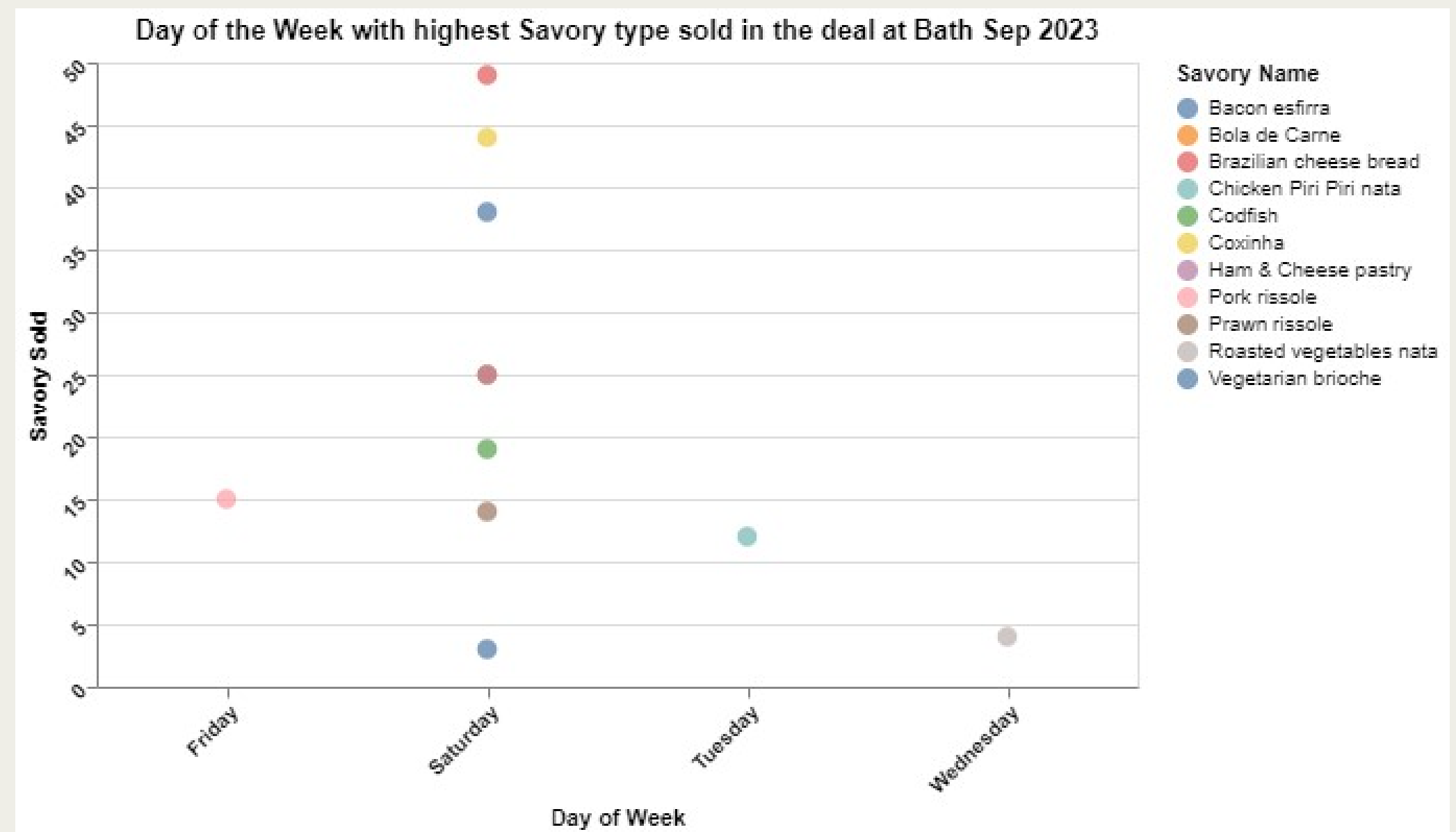
	Name	Sold
2	Brazilian cheese bread	223.0
5	Coxinha	214.0
10	Vegetarian brioche	165.0
4	Codfish	84.0
7	Pork rissole	80.0
8	Prawn rissole	71.0
3	Chicken Piri Piri nata	47.0
6	Ham & Cheese pastry	45.0
1	Bola de Carne	44.0
9	Roasted vegetables nata	8.0
0	Bacon esfirra	3.0



# SAVOURIES ANALYSIS

This table represents the day on which that particular type of savory had the maximum sales. The majority of **coxinha** are sold on Saturdays but most **chicken piri piri nata** was sold on a **Tuesday**

	Day of Week	Name	Sold
17	Saturday	Bacon esfirra	3.0
18	Saturday	Bola de Carne	25.0
19	Saturday	Brazilian cheese bread	49.0
47	Tuesday	Chicken Piri Piri nata	12.0
21	Saturday	Codfish	19.0
22	Saturday	Coxinha	44.0
23	Saturday	Ham & Cheese pastry	25.0
5	Friday	Pork rissole	15.0
25	Saturday	Prawn rissole	14.0
63	Wednesday	Roasted vegetables nata	4.0
27	Saturday	Vegetarian brioche	38.0



# FLAVOURED NATAS ANALYSIS

Followed the set of questions as the previous two. The highest flavoured natas were sold on **24th September** with a total of **89 flavoured natas** sold.

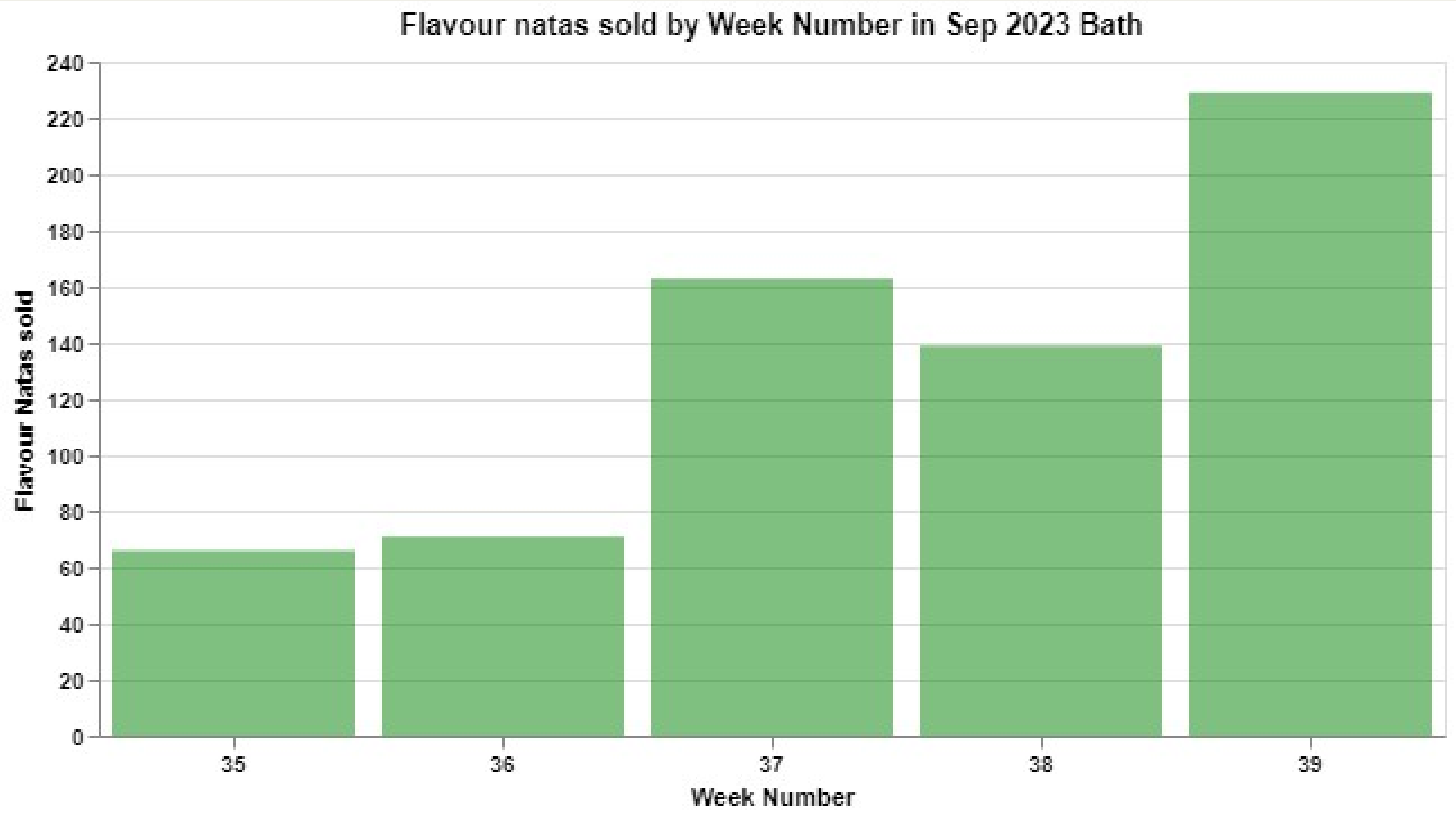
	Date	Category Name	Name	Gross Sales	Net Sales	Sold
1983	2023-09-24	Total (Flavour Natas)		253.65	217.11	89.0



# FLAVOURED NATAS ANALYSIS

Weekly distribution of flavoured natas sold and again **Week 39 wins.**

Week Number		Category Name	Sold
0	35	Total (Flavour Natas)	66.0
1	36	Total (Flavour Natas)	71.0
2	37	Total (Flavour Natas)	163.0
3	38	Total (Flavour Natas)	139.0
4	39	Total (Flavour Natas)	229.0



# FLAVOURED NATAS ANALYSIS

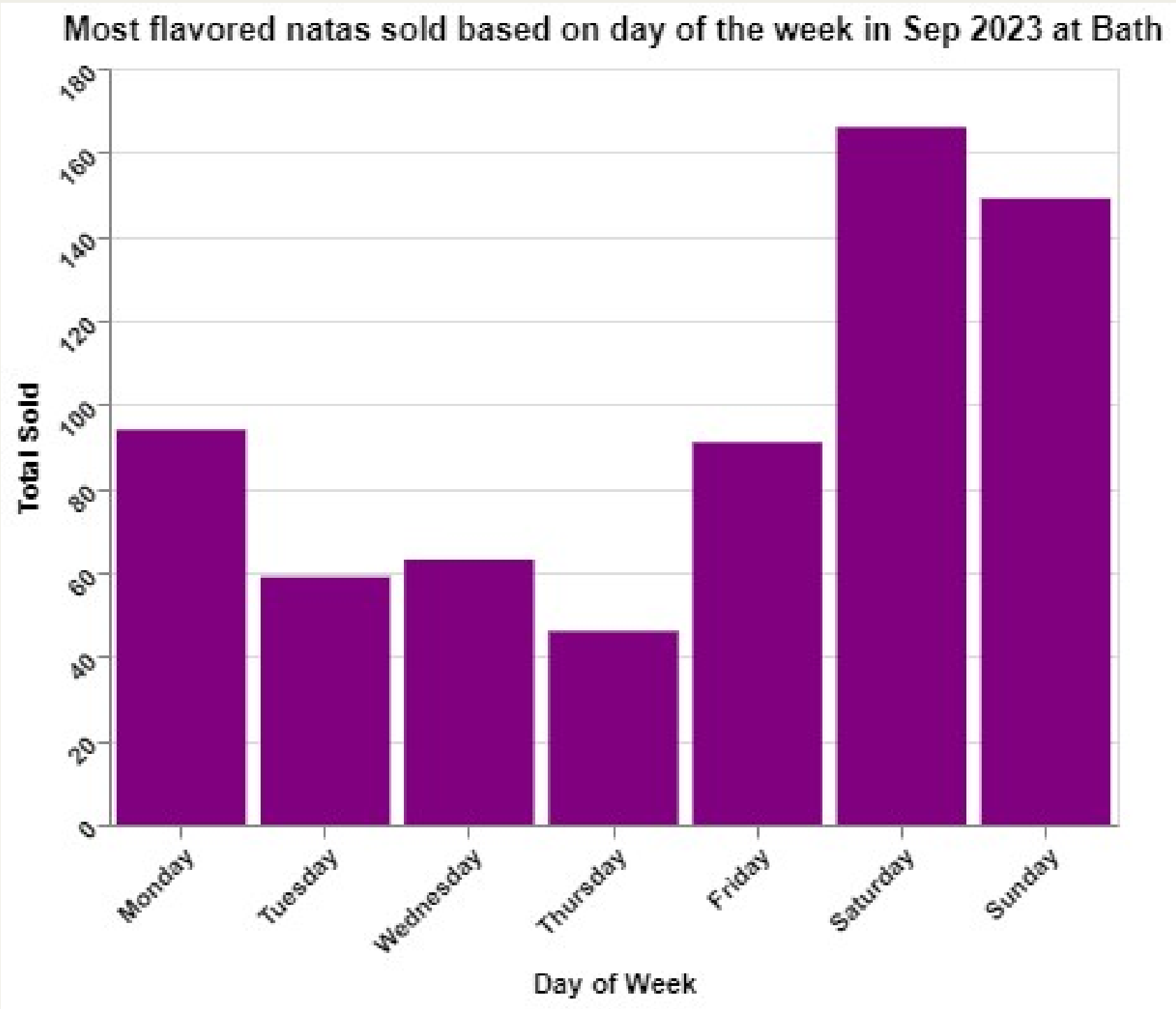
The most sold flavoured nata of the month is **Nutella nata**, we sold **32** of those on **24th Sep**

Date	2023-09-24 00:00:00
Category Name	
Name	Nutella nata
Gross Sales	91.2
Net Sales	76.36
Sold	32.0
Refunded	0.0
Modifier Name	
Modifier Sold	
Modifier Amount	
Discounts	-14.84
Refunds	0.0
% Net Sales	6.49
Avg Item Size	2.39
COGS	15.36
Gross Profit	61.0
Repayments	
Day of Week	Sunday
Week Number	39
Name: 1978, dtype: object	

# FLAVOURED NATAS ANALYSIS

The **least** amount of flavoured natas are sold on **Thursdays** and **most** on **Saturdays**.

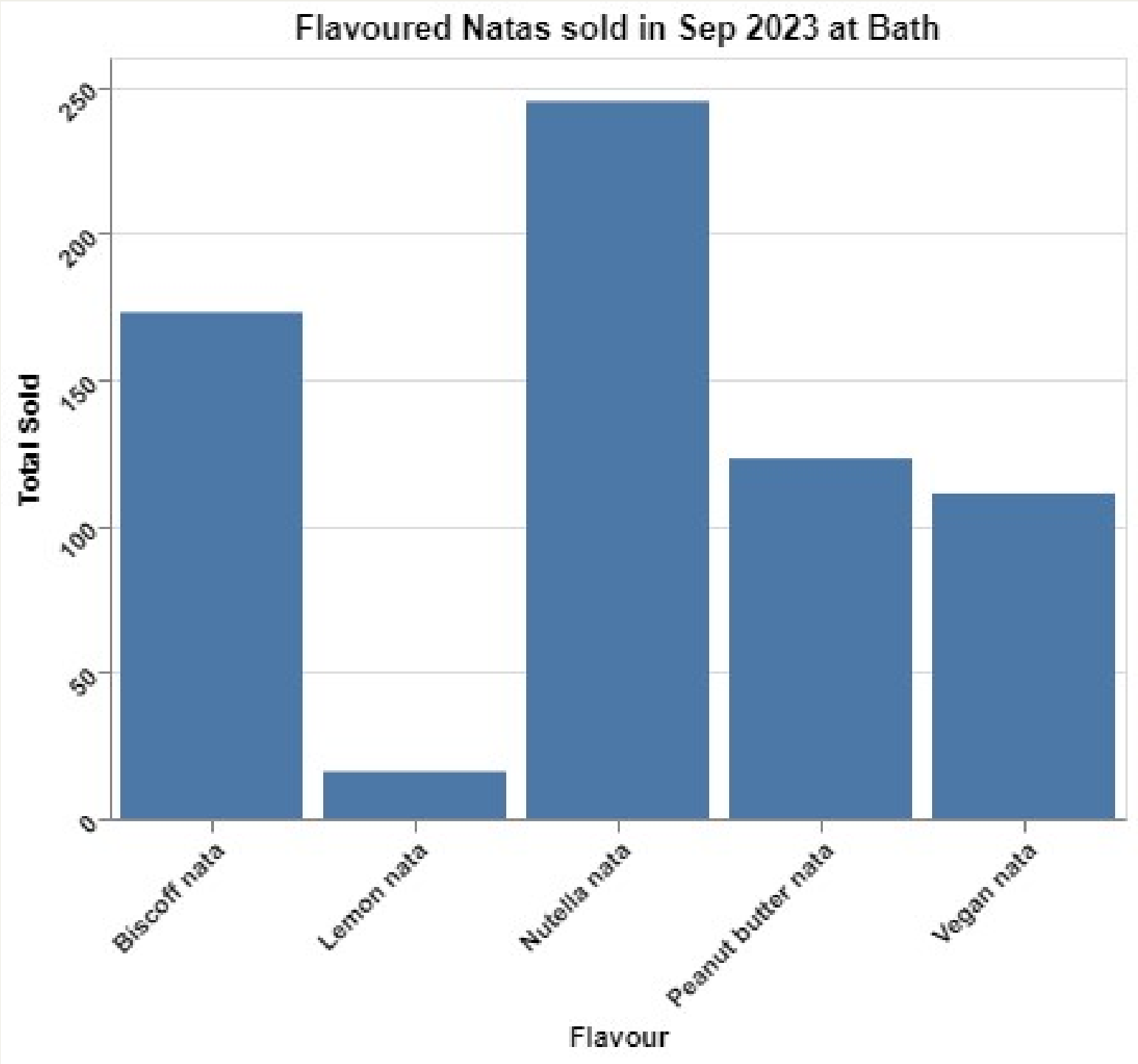
	Day of Week	Sold
2	Saturday	166.0
3	Sunday	149.0
1	Monday	94.0
0	Friday	91.0
6	Wednesday	63.0
5	Tuesday	59.0
4	Thursday	46.0



# FLAVOURED NATAS ANALYSIS

We sold 245 **Nutella** nata in sep and 173 Biscoff which is the second highest, but nutells is **1.4X more than Biscoff's sale**.

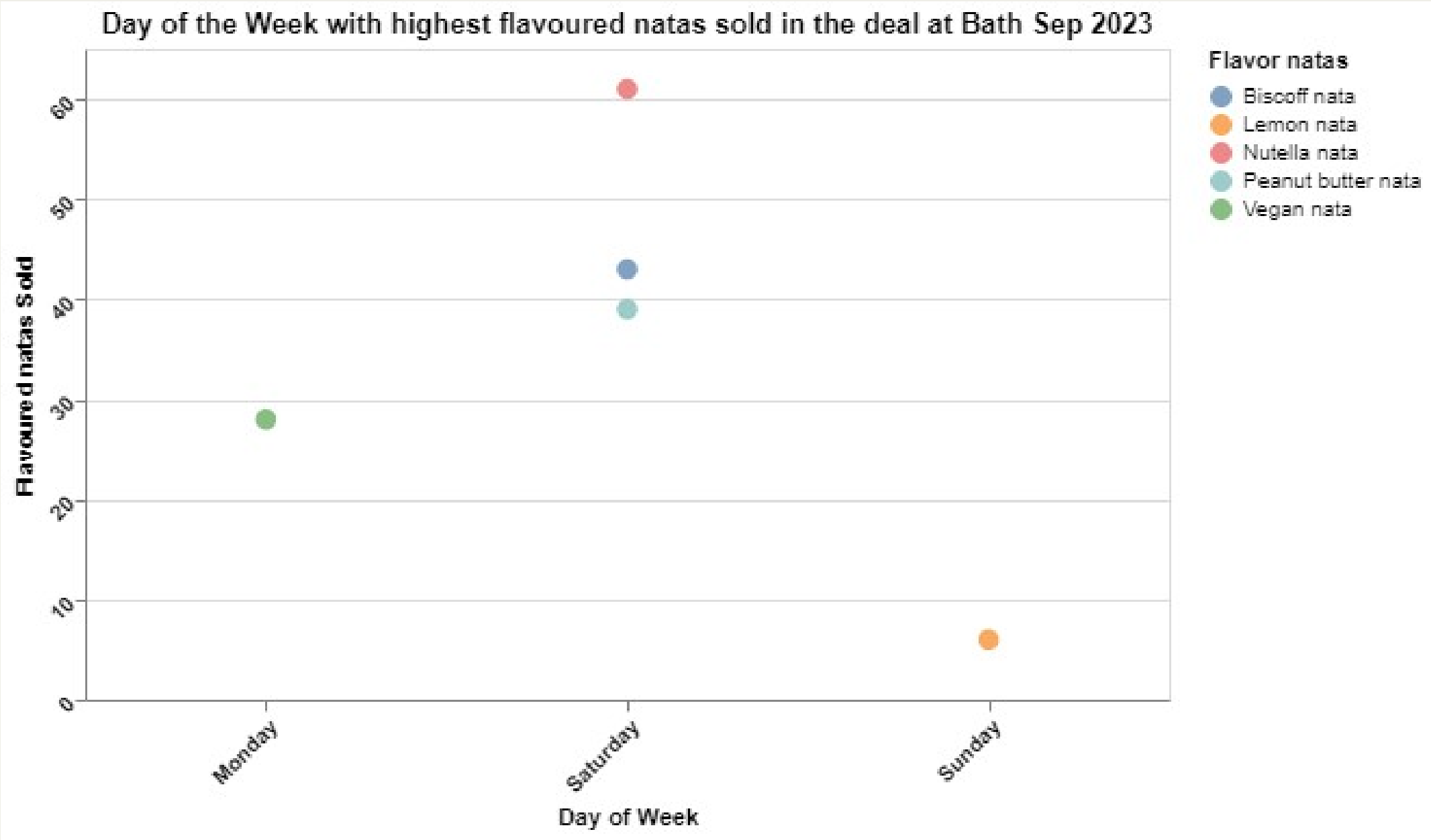
	Name	Sold
2	Nutella nata	245.0
0	Biscoff nata	173.0
3	Peanut butter nata	123.0
4	Vegan nata	111.0
1	Lemon nata	16.0



# FLAVOURED NATAS ANALYSIS

Saturday and Sunday as expected have the most sales for majority of flavoured natas, except the vegan ones most **vegan natas** are sold on **Mondays**.

	Day of Week	Name	Sold
9	Saturday	Biscoff nata	43.0
14	Sunday	Lemon nata	6.0
10	Saturday	Nutella nata	61.0
11	Saturday	Peanut butter nata	39.0
8	Monday	Vegan nata	28.0



ALL DONE!

