

How many unique cities in the data?

3

In which city is each branch located?

city	branch
Yangon	A
Naypyitaw	C
Mandalay	B

## ***PRODUCT ANALYSIS:***

How many unique product lines does the data have?

product_line	6 unique product lines
Food and beverages	
Health and beauty	
Sports and travel	
Fashion accessories	
Home and lifestyle	
Electronic accessories	

What is the most common payment method?

The data shows Cash as being the most common payment method, but EWallet seems to be used a similar amount of times as Cash

^ overall, all 3 payment methods seem to be used commonly by customers

payment_meth...	cnt
Cash	344
Ewallet	342
Credit card	309

What's the most selling product line?

Fashion accessories

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

What's the total revenue by month?

month	total_revenue
February	95727.3765
March	108867.1500
January	116291.8680

What month had the largest COGS?

Cost of goods sold (COGS) represents the total cost to produce a product

JANUARY = largest COGS

month	cogs
January	110754.16
March	103683.00
February	91168.93

What product line had the largest revenue?

Food and beverages (56144.8440)

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

City with the largest revenue?

Best performing city is Naypyitaw (branch C)

- difference between branch A and branch B is not that significant, but branch C is ahead by a total revenue of around 10,000 units

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

What product line had the largest VAT?

Home and lifestyle

product_line	avg_tax
Home and lifestyle	16.03033124
Sports and travel	15.75697549
Health and beauty	15.40661591
Food and beverages	15.36531029
Electronic accessories	15.15447632
Fashion accessories	14.52806181

Which branch sold more products than average product sold?

b	qty
A	1849
C	1828
B	1795

Branch A sold 1849 products, B sold 1828 products, C sold 1795 products

### Most common product line by gender?

We get various results, such as:

- The data shows that female customers are leading in the FASHION ACCESSORIES product line
- Male customers are leading in the Health and Beauty product line (the data shows 25 more male customers for this product line than female customers)
- No significant difference between male and female customers in the Home and Lifestyle product line (male customers lead by only a difference of 2 customers)

gender	product_line	total_cnt
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
Male	Sports and travel	77
Female	Health and beauty	63

### The average rating of each product line?

FOOD AND BEVERAGES has the highest rating amongst the 6 product lines

avg_rating	product_line
7.11	Food and beverages
7.03	Fashion accessories
6.98	Health and beauty
6.91	Electronic accessories
6.86	Sports and travel
6.84	Home and lifestyle

## **SALES ANALYSIS**

day_name	time_of_day	sum(quantit...	sum(total)
Wednesday	Afternoon	359	18041.1735
Wednesday	Evening	300	16579.9515
Wednesday	Morning	125	8182.2930
Tuesday	Afternoon	303	19674.9735
Tuesday	Evening	386	21997.9200
Tuesday	Morning	173	9809.3520
Thursday	Afternoon	257	14945.4480
Thursday	Evening	319	19115.6805
Thursday	Morning	179	11288.1195
Sunday	Afternoon	296	16725.3240
Sunday	Evening	329	18408.0435
Sunday	Morning	144	8804.1135
Saturday	Afternoon	320	19413.3765
Saturday	Evening	438	27924.5295
Saturday	Morning	161	8782.9035
Monday	Afternoon	248	15630.4260
Monday	Evening	274	15657.6000
Monday	Morning	106	6056.7570
Friday	Afternoon	319	17845.8840
Friday	Evening	296	17681.5485
Friday	Morning	140	8320.9770

### No. of sales made in each time of the day per weekday?

OR

For each weekday, highest quantity of products sold in different parts of the day?

Mornings seem to have the least sales compared to Afternoons and Evenings for all the weekdays.

Evenings have the highest quantity of products sold for 5 out of the 7 weekdays.

Which customer type (MEMBER customers OR NORMAL customers) brings the most revenue?

- Some businesses, often retailers, use 'member' to distinguish between those who buy regularly from them compared to those who do not.
- Customers who are members can bring more revenue than 'normal' customers - however, the data shows that there's no significant difference in the amount of revenue brought by Member customers, compared to Normal/Non-member customers.

customer_type	total_rev
Member	163625.1015
Normal	157261.2930

Which city has the largest tax percent/ VAT?

Naypyitaw

city	VAT	
Naypyitaw	16.09010850	
Mandalay	15.13020824	
Yangon	14.87020798	

Which customer type (member or normal) pays the most in VAT?

- Members; however, both customer types seem to pay around the same amount in VAT
- So, it seems that customer status doesn't give an advantage over VAT

customer_type	VAT
Member	15.61457214
Normal	15.09805040

## **CUSTOMER ANALYSIS**

How many unique customer types does the data have?

2 - Normal and Member

How many unique payment methods does the data have?

3 - credit, Ewallet, cash

Which customer type buys the most?

Members

- However, there's no significant difference between the amount that members or normal customers buy

customer_type	cstm_cnt
Normal	496
Member	499

The gender of most of the customers?

The data shows quite an even split between female and male customers

- so, gender doesn't seem to have an impact on who shops at these Walmart stores

gender	gender_cnt
Male	498
Female	497

What's the gender distribution per branch?

Branch A = 179 males, 160 females

Branch B = 169 males, 160 females

Branch C = 150 males, 177 females

Which time of the day do customers give the most positive ratings?

Understanding times that get the most positive/negative ratings can help these Walmart stores identify the time of day when issues are most likely to occur, e.g., staffing needs, product availability. This insight can lead to targeted improvements in the areas during those specific times.

- However, the data shows that the time of the day doesn't seem to affect the quality of the service experienced by customers in these Walmart stores, as each time of the day (morning, afternoon, evening) seem to have similar ratings.

time_of_day	avg_rating
Afternoon	7.02340
Morning	6.94474
Evening	6.90536

Which time of the day do customers give most ratings per branch?

BRANCH A:

time_of_day	avg_rating
Afternoon	7.18889
Morning	7.00548
Evening	6.87143

BRANCH B:

time_of_day	avg_rating
Morning	6.83793
Afternoon	6.81129
Evening	6.75102

BRANCH C:

time_of_day	avg_rating
Evening	7.09859
Afternoon	7.06667
Morning	6.97458

Which day of the week has the best average ratings?

Monday

- However, the ratings are pretty much similar for all days of the week; we can say that the quality of service is constant throughout the week

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