```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

my_walmart= pd.read_excel('/content/Walmart Sales.xls

my_walmart.shape
```

```
(1000, 12)
```

```
my_walmart.isnull()
```

| | Invoice ID | Branch | City | Customer type | Gender | Product line | Unit price | Quantity | Date | Time | Payment | Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | False | False | False | False | False | False | False | False | False | False | False | False |
| **1** | False | False | False | False | False | False | False | False | False | False | False | False |
| **2** | False | False | False | False | False | False | False | False | False | False | False | False |
| **3** | False | False | False | False | False | False | False | False | False | False | False | False |
| **4** | False | False | False | False | False | False | False | False | False | False | False | False |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **995** | False | False | False | False | False | False | False | False | False | False | False | False |
| **996** | False | False | False | False | False | False | False | False | False | False | False | False |
| **997** | False | False | False | False | False | False | False | False | False | False | False | False |
| **998** | False | False | False | False | False | False | False | False | False | False | False | False |
| **999** | False | False | False | False | False | False | False | False | False | False | False | False |

1000 rows × 12 columns

```
my_walmart.isnull().sum()
```

```
Invoice ID      0
Branch          0
City            0
Customer type   0
Gender          0
Product line    0
Unit price      0
Quantity        0
Date            0
Time            0
Payment         0
Rating          0
dtype: int64
```

```
#1. Walmart Sales Analysis:
#A. Analyze the performance of sales and revenue at t

City_Re=my_walmart.groupby('City')['Quantity'].sum().
print(City_Re)
```

```
        City  Quantity
0   Mandalay      1820
1  Naypyitaw      1831
2     Yangon      1859
```

```
City_Re_1=my_walmart.groupby('City')['Unit price'].su
print(City_Re_1)
```

```
       City  Unit price
0   Mandalay    18478.88
1  Naypyitaw    18567.76
2     Yangon    18625.49
```

```
City_Re['Total Revenue'] = City_Re['Quantity'] * City

print('Total Revenue by City:')
print(City_Re[['City', 'Total Revenue']])
```

```
Total Revenue by City:
       City  Total Revenue
0   Mandalay    33631561.60
1  Naypyitaw    33997568.56
2     Yangon    34624785.91
```

```
#Branch Wise Revenue


Branch_Wise_Revenue=my_walmart.groupby('Branch')['Qua
print(Branch_Wise_Revenue)
```

```
  Branch  Quantity
0      A      1883
1      B      1899
2      C      1728
```

```
Branch_Wise_Revenue1=my_walmart.groupby('Branch')['Ur
print(Branch_Wise_Revenue1)
```

```
  Branch  Unit price
0      A    18645.54
1      B    19251.62
2      C    17774.97
```

```
Branch_Wise_Revenue['Total Revenue'] = Branch_Wise_Re
print('Total Revenue by Branch Wise:')
print(Branch_Wise_Revenue[['Branch', 'Total Revenue']
```

```
Total Revenue by Branch Wise:
  Branch  Total Revenue
0      A    35109551.82
1      B    36558826.38
2      C    30715148.16
```

```
# b) What is the average price of an item sold at eac

Avg_price = my_walmart.groupby(['City', 'Branch'])['U
print('Average Price by Branch:')
print(Avg_price)
```

```
Average Price by Branch:
       City Branch  Unit price
```

```
0   Mandalay      A   53.353866
1   Mandalay      B   56.133305
2   Mandalay      C   57.958316
3  Naypyitaw      A   54.123182
4  Naypyitaw      B   57.785688
5  Naypyitaw      C   57.941009
6     Yangon      A   55.639298
7     Yangon      B   56.011062
8     Yangon      C   52.684602
```

```
#Analyze the performance of sales and revenue, Month

my_walmart['Date'] = pd.to_datetime(my_walmart['Date'

# Add month column
my_walmart['Month'] = my_walmart['Date'].dt.month

# Monthly sales by product line
monthly_sales = my_walmart.groupby(['Month', 'Product
print('Monthly Sales by Product Line:')
print(monthly_sales)
```

```
Monthly Sales by Product Line:
    Month            Product line  Quantity
0       1  Electronic accessories       333
1       1     Fashion accessories       336
2       1      Food and beverages       325
3       1       Health and beauty       254
4       1      Home and lifestyle       342
5       1       Sports and travel       375
6       2  Electronic accessories       313
7       2     Fashion accessories       295
8       2      Food and beverages       349
9       2       Health and beauty       266
10      2      Home and lifestyle       205
11      2       Sports and travel       226
12      3  Electronic accessories       325
13      3     Fashion accessories       271
14      3      Food and beverages       278
15      3       Health and beauty       334
16      3      Home and lifestyle       364
17      3       Sports and travel       319
```

```
Gender_monthly = my_walmart.groupby(['Month', 'Gender
print('\nMonthly Sales by Gender:')
print(Gender_monthly)
```

```
Monthly Sales by Gender:
   Month  Gender  Quantity
0      1  Female      1019
1      1    Male       946
2      2  Female       951
3      2    Male       703
4      3  Female       899
5      3    Male       992
```

```
# Monthly sales by payment method
Payment_monthly = my_walmart.groupby(['Month', 'Payme
print('\nMonthly Sales by Payment Method:')
print(Payment_monthly)
```

```
Monthly Sales by Payment Method:
   Month      Payment  Quantity
0      1         Cash       708
1      1  Credit card       622
2      1      Ewallet       635
3      2         Cash       596
4      2  Credit card       505
5      2      Ewallet       553
6      3         Cash       592
7      3  Credit card       595
8      3      Ewallet       704
```

Start coding or generate with AI.