In [ ]:

```
Read Total profit of all months and show it using a line plot
```

Generated line plot must include following Style properties: –

Line Style dotted and Line-color should be red Show legend at the lower right location. X label name = Month Number Y label name = Sold units number Add a circle marker. Line marker color as read Line width should be 3

In [ ]:

```python
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("/content/company_sales_data.csv")
profitList = df ['total_profit'].tolist()
monthList  = df ['month_number'].tolist()
plt.plot(monthList, profitList,
         label = 'Profit data of last year',
      color='r', marker='o', markerfacecolor='r',
      linestyle='--', linewidth=3)

plt.xlabel('Month Number')
plt.ylabel('Profit in dollar')
plt.legend(loc='lower right')
plt.title('Company Sales data of last year')
plt.xticks(monthList)
plt.yticks([100000, 200000, 300000, 400000, 500000])
plt.show()
```
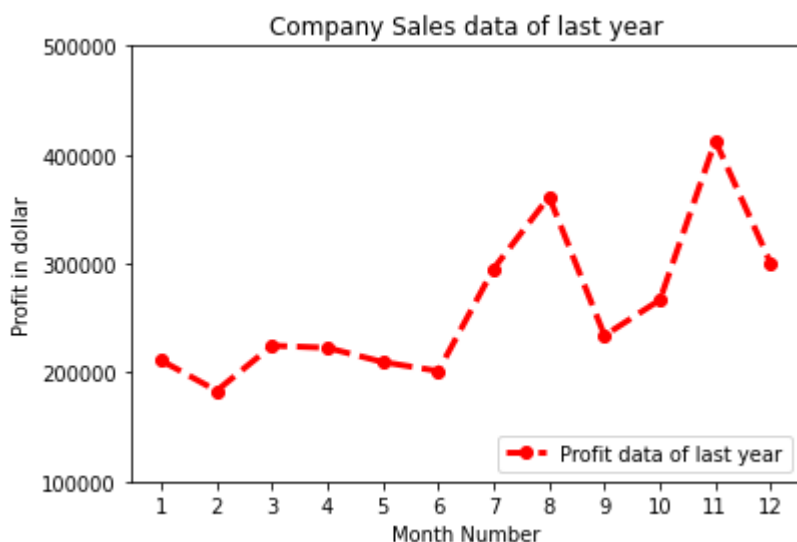

Read all product sales data and show it using a multiline plot Display the number of units sold per month for each product using multiline plots. (i.e., Separate Plotline for each product).
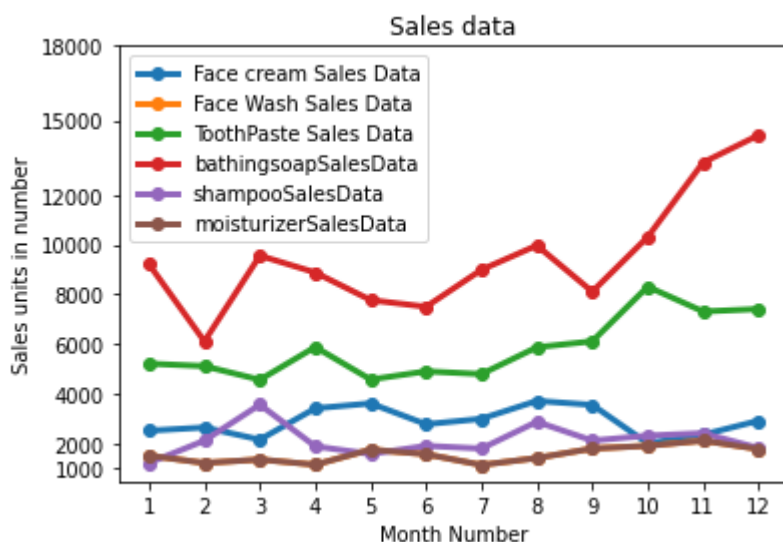
```python
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("/content/company_sales_data.csv")
monthList  = df ['month_number'].tolist()
faceCremSalesData   = df ['facecream'].tolist()
faceWashSalesData   = df ['facewash'].tolist()
toothPasteSalesData = df ['toothpaste'].tolist()
bathingsoapSalesData  = df ['bathingsoap'].tolist()
shampooSalesData   = df ['shampoo'].tolist()
moisturizerSalesData = df ['moisturizer'].tolist()

plt.plot(monthList, faceCremSalesData,   label = 'Face cream Sales Data', marker='o', l
inewidth=3)
plt.plot(monthList, faceWashSalesData,   label = 'Face Wash Sales Data',  marker='o', l
inewidth=3)
plt.plot(monthList, toothPasteSalesData, label = 'ToothPaste Sales Data', marker='o', l
inewidth=3)
plt.plot(monthList, bathingsoapSalesData, label = 'bathingsoapSalesData', marker='o', l
inewidth=3)
plt.plot(monthList, shampooSalesData, label = 'shampooSalesData', marker='o', linewidth
=3)
plt.plot(monthList, moisturizerSalesData, label = 'moisturizerSalesData', marker='o', l
inewidth=3)

plt.xlabel('Month Number')
plt.ylabel('Sales units in number')
plt.legend(loc='upper left')
plt.xticks(monthList)
plt.yticks([1000, 2000, 4000, 6000, 8000, 10000, 12000, 15000, 18000])
plt.title('Sales data')
plt.show()
```
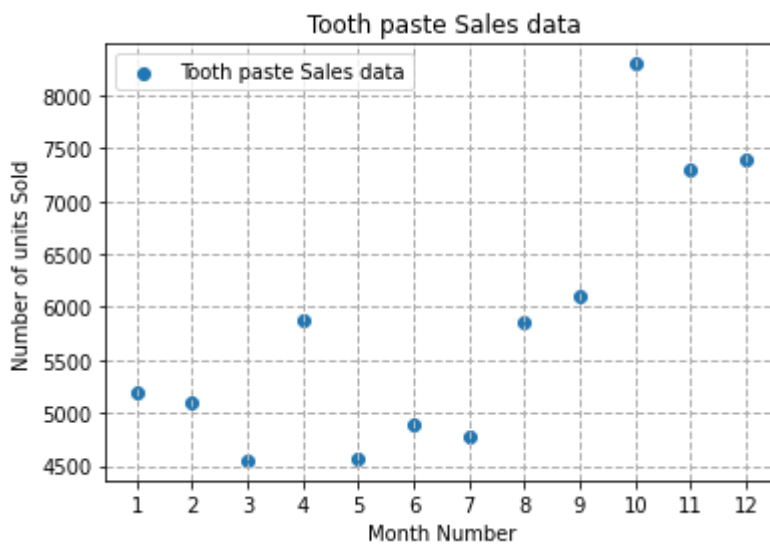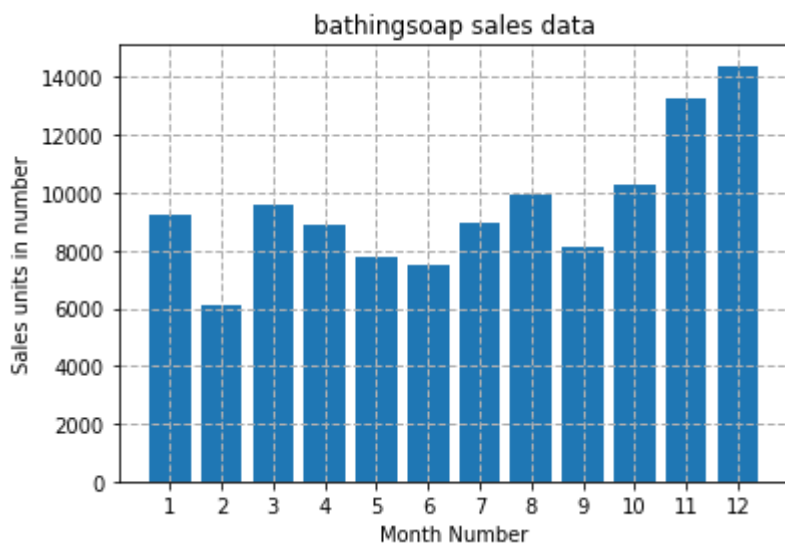
In [ ]:

```python
#Read toothpaste sales data of each month and show it
 using a scatter plot
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("/content/company_sales_data.csv")
monthList  = df ['month_number'].tolist()
toothPasteSalesData = df ['toothpaste'].tolist()
plt.scatter(monthList, toothPasteSalesData, label
            = 'Tooth paste Sales data')
plt.xlabel('Month Number')
plt.ylabel('Number of units Sold')
plt.legend(loc='upper left')
plt.title(' Tooth paste Sales data')
plt.xticks(monthList)
plt.grid(True, linewidth= 1, linestyle="--")
plt.show()
```
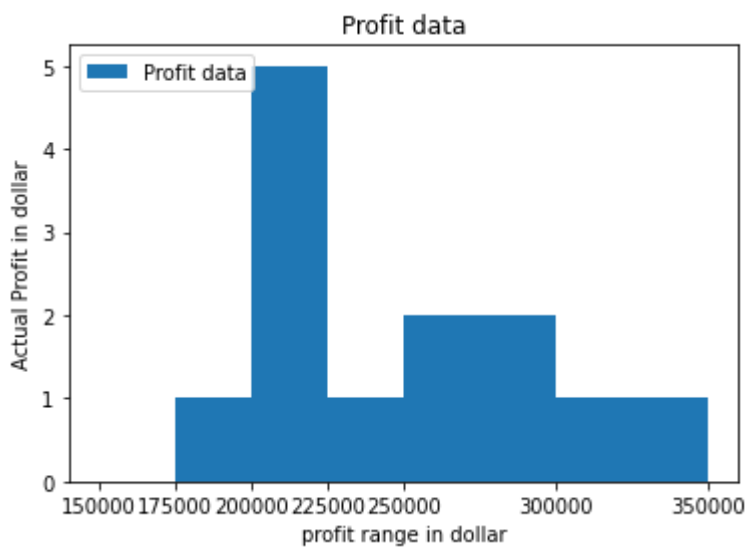
```python
# Read sales data of bathing soap of
#all months and show it using a bar chart.
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("/content/company_sales_data.csv")
monthList   = df ['month_number'].tolist()
bathingsoapSalesData    = df ['bathingsoap'].tolist()
plt.bar(monthList, bathingsoapSalesData)
plt.xlabel('Month Number')
plt.ylabel('Sales units in number')
plt.title(' Sales data')
plt.xticks(monthList)
plt.grid(True, linewidth= 1, linestyle="--")
plt.title('bathingsoap sales data')
plt.show()
```

```python
#Read the total profit of each month and show it using the histogram
 #to see the most common profit ranges
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("/content/company_sales_data.csv")
profitList = df ['total_profit'].tolist()
labels = ['low', 'average', 'Good', 'Best']
profit_range = [150000, 175000, 200000, 225000, 250000, 300000, 350000]
plt.hist(profitList, profit_range, label = 'Profit data')
plt.xlabel('profit range in dollar')
plt.ylabel('Actual Profit in dollar')
plt.legend(loc='upper left')
plt.xticks(profit_range)
plt.title('Profit data')
plt.show()
```

In [ ]:

```python
#Calculate total sale data for last year for each product
 #and#show it using a Pie chart
 import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("/content/company_sales_data.csv")
monthList  = df ['month_number'].tolist()

labels = ['FaceCream', 'FaseWash', 'ToothPaste', 'Bathing soap', 'Shampoo', 'Moisturize
r']
salesData   = [df ['facecream'].sum(), df ['facewash'].sum(), df ['toothpaste'].sum(),
         df ['bathingsoap'].sum(), df ['shampoo'].sum(), df ['moisturizer'].sum()]
plt.axis("equal")
plt.pie(salesData, labels=labels,autopct='%1.1f%%')
plt.legend(loc='lower right')
plt.title('Sales data')
plt.show()
```


Sales data