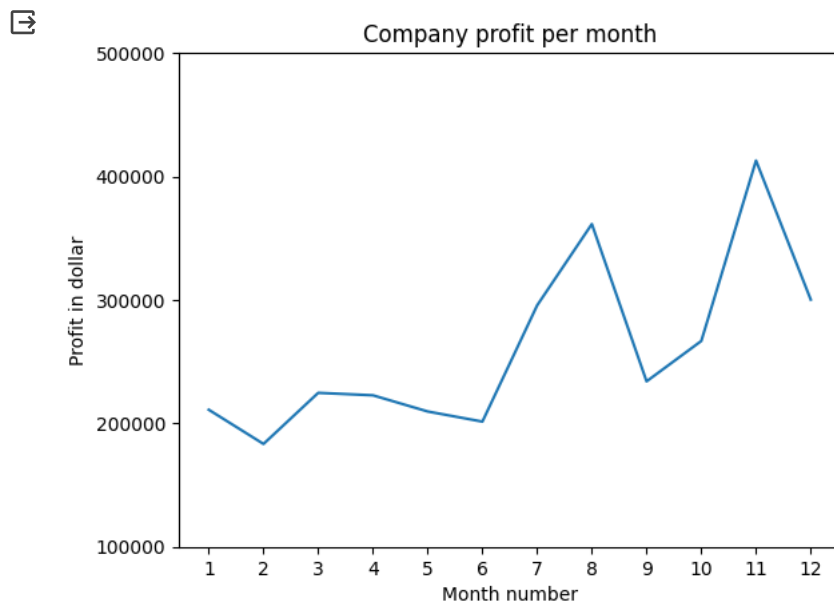


Name: Vatsal Arya

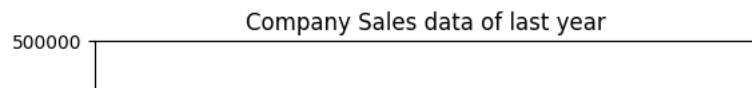
Roll No.: 12

Lab8

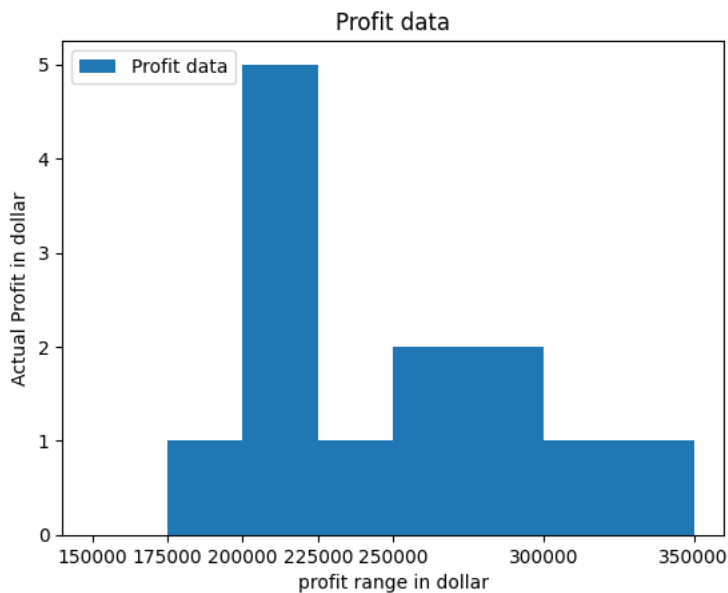
```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("company_sales_data.csv")
profitList = df ['total_profit'].tolist()
monthList = df ['month_number'].tolist()
plt.plot(monthList, profitList, label = 'Month-wise Profit data of last year')
plt.xlabel('Month number')
plt.ylabel('Profit in dollar')
plt.xticks(monthList)
plt.title('Company profit per month')
plt.yticks([100000, 200000, 300000, 400000, 500000])
plt.show()
```



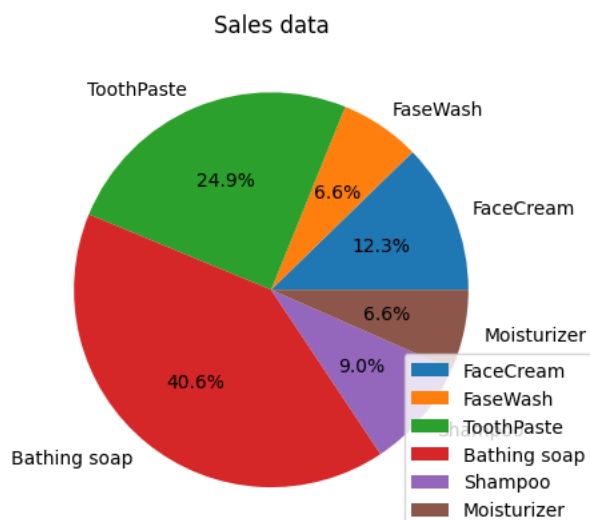
```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("company_sales_data.csv")
profitList = df ['total_profit'].tolist()
monthList = df ['month_number'].tolist()
plt.plot(monthList, profitList, label='Profit data of last year', color='r', marker='o', markerfacecolor='k', linestyle='--',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



```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("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()
```



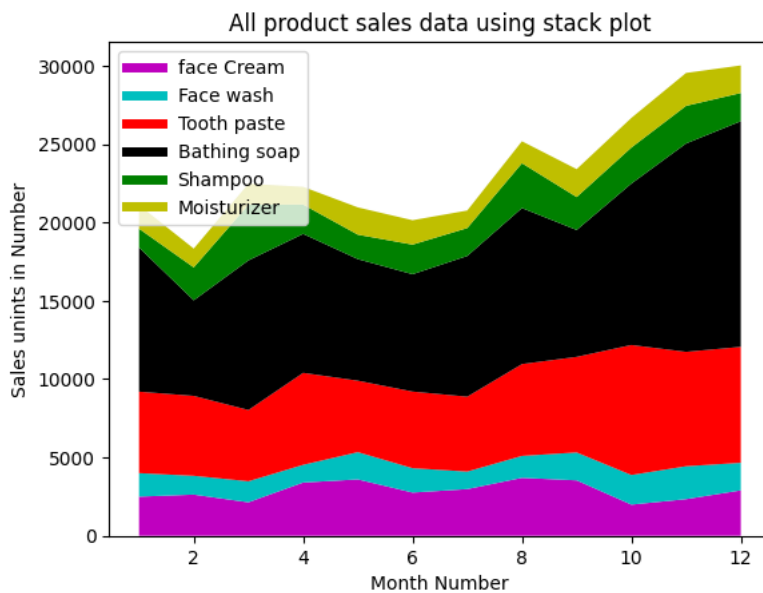
```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("company_sales_data.csv")
monthList = df ['month_number'].tolist()
labels = ['FaceCream', 'FaseWash', 'ToothPaste', 'Bathing soap', 'Shampoo', 'Moisturizer']
salesData = [df ['facecream'].sum(), df ['facewash'].sum(), df ['toothpaste'].sum(), df ['bathingshampoo'].sum(), df ['shampoo'].sum(), df ['moisturizer'].sum()]
plt.pie(salesData, labels=labels, autopct='%1.1f%%')
plt.legend(loc='lower right')
plt.title('Sales data')
plt.show()
```



```

import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("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([],[],color='m', label='face Cream', linewidth=5)
plt.plot([],[],color='c', label='Face wash', linewidth=5)
plt.plot([],[],color='r', label='Tooth paste', linewidth=5)
plt.plot([],[],color='k', label='Bathing soap', linewidth=5)
plt.plot([],[],color='g', label='Shampoo', linewidth=5)
plt.plot([],[],color='y', label='Moisturizer', linewidth=5)
plt.stackplot(monthList, faceCremSalesData, faceWashSalesData, toothPasteSalesData, bathingsoapSalesData, shampooSalesData, moisturizerSalesData)
plt.xlabel('Month Number')
plt.ylabel('Sales units in Number')
plt.title('All product sales data using stack plot')
plt.legend(loc='upper left')
plt.show()

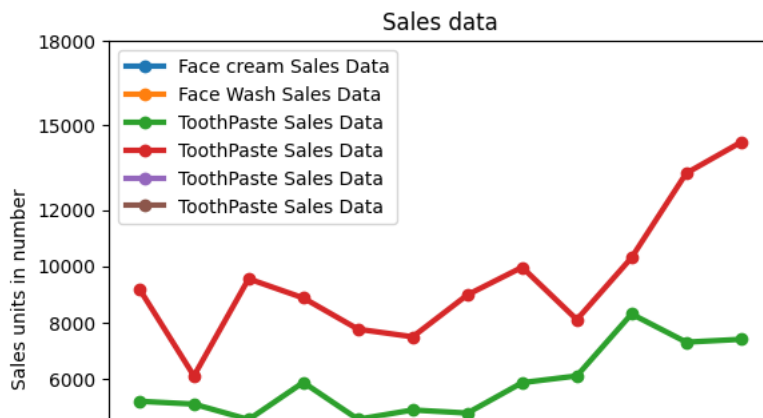
```



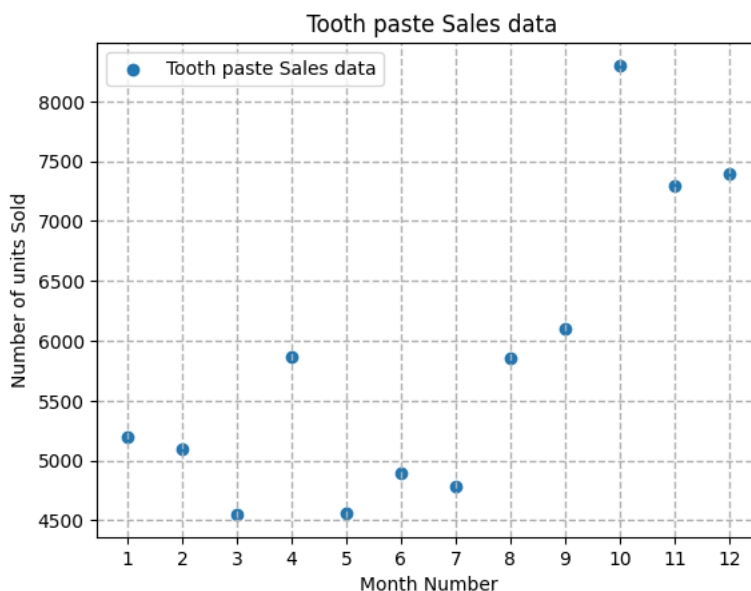
```

import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("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', linewidth=3)
plt.plot(monthList, faceWashSalesData, label = 'Face Wash Sales Data', marker='o', linewidth=3)
plt.plot(monthList, toothPasteSalesData, label = 'ToothPaste Sales Data', marker='o', linewidth=3)
plt.plot(monthList, bathingsoapSalesData, label = 'ToothPaste Sales Data', marker='o', linewidth=3)
plt.plot(monthList, shampooSalesData, label = 'ToothPaste Sales Data', marker='o', linewidth=3)
plt.plot(monthList, moisturizerSalesData, label = 'ToothPaste Sales Data', marker='o', linewidth=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()

```



```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("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()
```



```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("company_sales_data.csv")
monthList = df ['month_number'].tolist()
faceCremSalesData = df ['facecream'].tolist()
faceWashSalesData = df ['facewash'].tolist()
plt.bar([a+0.25 for a in monthList], faceCremSalesData, width= 0.25, label = 'Face Cream sales data', align='edge')
plt.bar([a+0.25 for a in monthList], faceWashSalesData, width= -0.25, label = 'Face Wash sales data', align='edge')
plt.xlabel('Month Number')
plt.ylabel('Sales units in number')
plt.legend(loc='upper left')
plt.title(' Sales data')
plt.xticks(monthList)
plt.grid(True, linewidth= 1, linestyle="--")
plt.title('Facewash and facecream sales data')
plt.show()
```

