Practical – 3

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```
[1] import os
    import pandas as pd
    import matplotlib.pyplot as plt
```

```
[2] data = pd.read_csv('/content/company_sales_data.csv')
    data.tail()
```

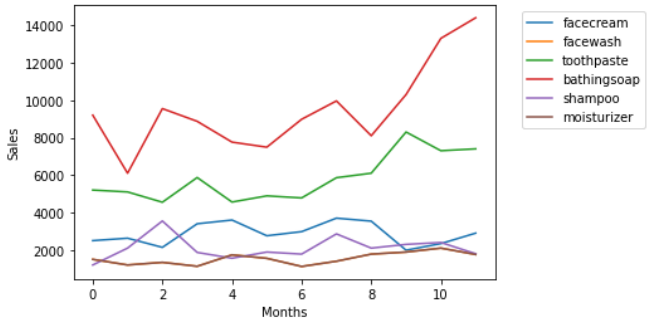
	month_number	facecream	facewash	toothpaste	bathingsoap	shampoo	moisturizer	total_units	total_profit
7	8	3700	1400	5860	9960	2860	1400	36140	361400
8	9	3540	1780	6100	8100	2100	1780	23400	234000
9	10	1990	1890	8300	10300	2300	1890	26670	266700
10	11	2340	2100	7300	13300	2400	2100	41280	412800
11	12	2900	1760	7400	14400	1800	1760	30020	300200

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

```
[3] plt.plot(data.month_number, data.total_profit, label='Total Profit')
    plt.xlabel('Months')
    plt.ylabel('Profit')
    plt.legend()
    plt.show()
```

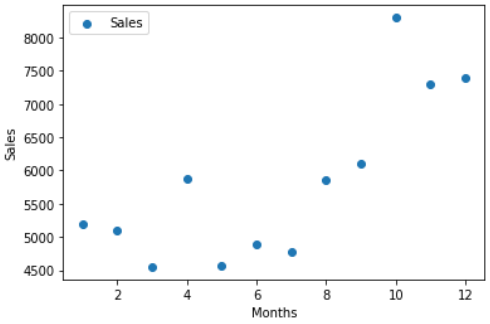
2. Read all product sales data and show it using a multiline plot

```
[4]  plt.plot(data.drop(columns=['month_number', 'total_units', 'total_profit']))
     plt.legend(['facecream', 'facewash', 'toothpaste', 'bathingsoap', 'shampoo', 'moisturizer'],
                bbox_to_anchor=(1.05, 1), loc='upper left')
     plt.xlabel('Months')
     plt.ylabel('Sales')
     plt.show()
```



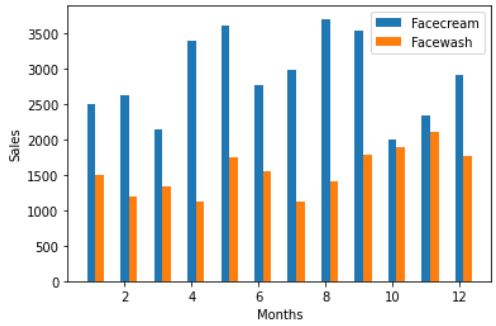
3. Read toothpaste sales data of each month and show it using a scatter plot

```
[5]  plt.scatter(data.month_number, data.toothpaste, label='Sales')
     plt.xlabel('Months')
     plt.ylabel('Sales')
     plt.legend(loc='upper left')
     plt.show()
```



4. Read face cream and facewash product sales data and show it using the bar chart

```
[6]  plt.bar(data.month_number, data.facecream, width=0.25, label='Facecream')
     plt.bar(data.month_number+0.25, data.facewash, width=0.25, label='Facewash')
     plt.xlabel('Months')
     plt.ylabel('Sales')
     plt.legend()
     plt.show()
```



5. Calculate total sale data for last year for each product and show it using a Pie chart

```
[7]  plt.pie(data.drop(columns=['month_number', 'total_units', 'total_profit']).sum(axis=0))
     plt.legend(['facecream', 'facewash', 'toothpaste', 'bathingsoap', 'shampoo', 'moisturizer'],
                bbox_to_anchor=(1.05, 1), loc='upper left')
     plt.show()
```