

importing libraries

```
In [1]: import numpy as np
import pandas as pd
```

importing dataset

```
data=pd.read_csv(r"C:\Users\user\Downloads\3_Fitness-1 - 3_Fitness-1.csv")
data
```

Data PreProcessing

```
In [3]: data.head()
```

Out[3]:

	Row Labels	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
0	A	5.62%	7.73%	6.16%	75
1	B	4.21%	17.27%	19.21%	160
2	C	9.83%	11.60%	5.17%	101
3	D	2.81%	21.91%	7.88%	127
4	E	25.28%	10.57%	11.82%	179

```
In [4]: data.tail()
```

Out[4]:

	Row Labels	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
4	E	25.28%	10.57%	11.82%	179
5	F	8.15%	16.24%	18.47%	167
6	G	18.54%	8.76%	17.49%	171
7	H	25.56%	5.93%	13.79%	170
8	Grand Total	100.00%	100.00%	100.00%	1150

```
In [5]: data.describe()
```

Out[5]:

Sum of Total Sales	
count	9.000000
mean	255.555556
std	337.332963
min	75.000000
25%	127.000000
50%	167.000000
75%	171.000000
max	1150.000000

```
In [7]: print(np.shape(data))
```

(9, 5)

```
In [8]: print(np.size(data))
```

45

```
data.isnull()
```

```
In [11]: data.fillna(0)
```

Out[11]:

	Row Labels	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
0	A	5.62%	7.73%	6.16%	75
1	B	4.21%	17.27%	19.21%	160
2	C	9.83%	11.60%	5.17%	101
3	D	2.81%	21.91%	7.88%	127
4	E	25.28%	10.57%	11.82%	179
5	F	8.15%	16.24%	18.47%	167
6	G	18.54%	8.76%	17.49%	171
7	H	25.56%	5.93%	13.79%	170
8	Grand Total	100.00%	100.00%	100.00%	1150

```
In [12]: data.dropna(0)
```

Out[12]:

	Row Labels	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
0	A	5.62%	7.73%	6.16%	75
1	B	4.21%	17.27%	19.21%	160
2	C	9.83%	11.60%	5.17%	101
3	D	2.81%	21.91%	7.88%	127
4	E	25.28%	10.57%	11.82%	179
5	F	8.15%	16.24%	18.47%	167
6	G	18.54%	8.76%	17.49%	171
7	H	25.56%	5.93%	13.79%	170
8	Grand Total	100.00%	100.00%	100.00%	1150

```
In [13]: data.isna()
```

Out[13]:

	Row Labels	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
0	False	False	False	False	False
1	False	False	False	False	False
2	False	False	False	False	False
3	False	False	False	False	False
4	False	False	False	False	False
5	False	False	False	False	False
6	False	False	False	False	False
7	False	False	False	False	False
8	False	False	False	False	False

Data Visualization

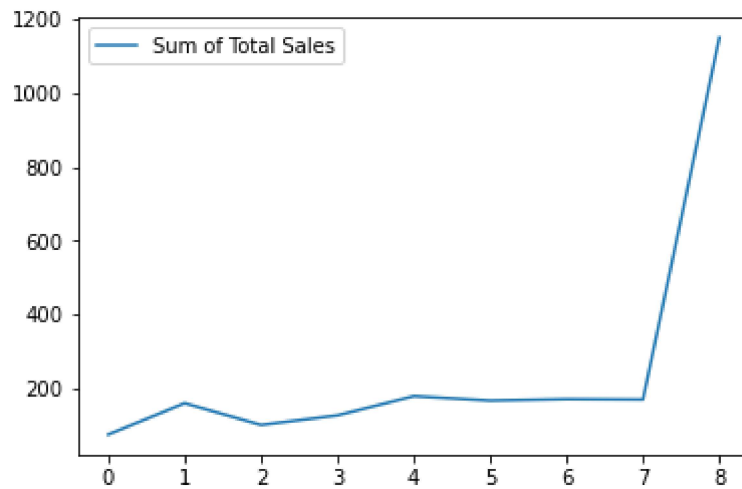
```
In [17]: data=data[['Sum of Jan','Sum of Feb','Sum of Mar','Sum of Total Sales']]
data
```

Out[17]:

	Sum of Jan	Sum of Feb	Sum of Mar	Sum of Total Sales
0	5.62%	7.73%	6.16%	75
1	4.21%	17.27%	19.21%	160
2	9.83%	11.60%	5.17%	101
3	2.81%	21.91%	7.88%	127
4	25.28%	10.57%	11.82%	179
5	8.15%	16.24%	18.47%	167
6	18.54%	8.76%	17.49%	171
7	25.56%	5.93%	13.79%	170
8	100.00%	100.00%	100.00%	1150

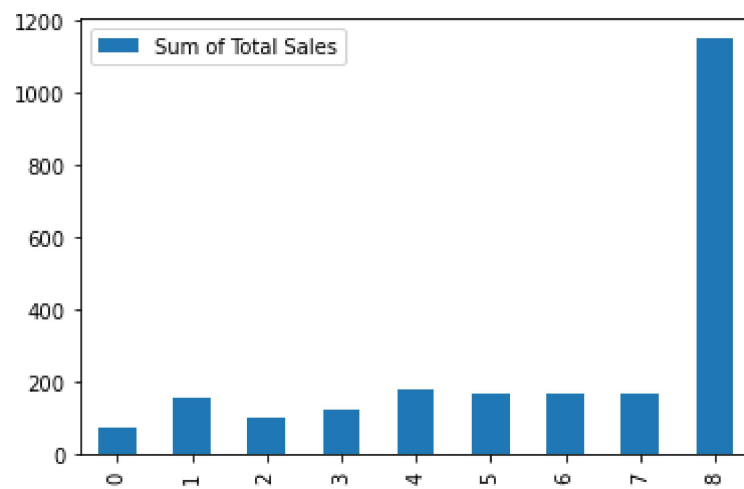
```
In [18]: data.plot.line()
```

Out[18]: <AxesSubplot:>



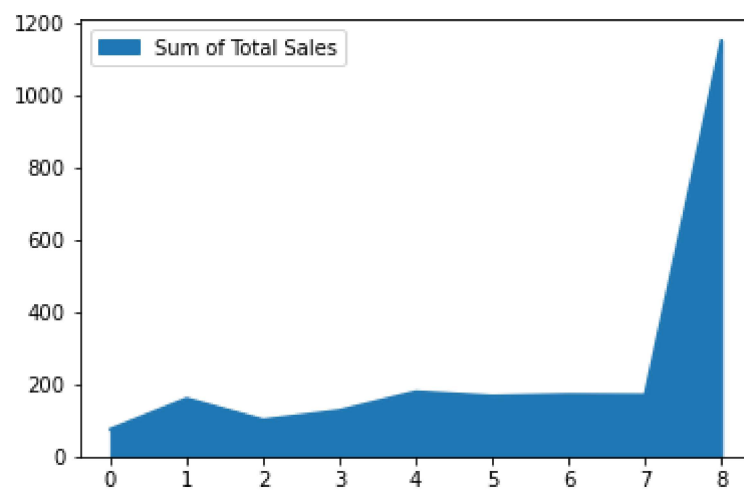
```
In [19]: data.plot.bar()
```

```
Out[19]: <AxesSubplot:>
```



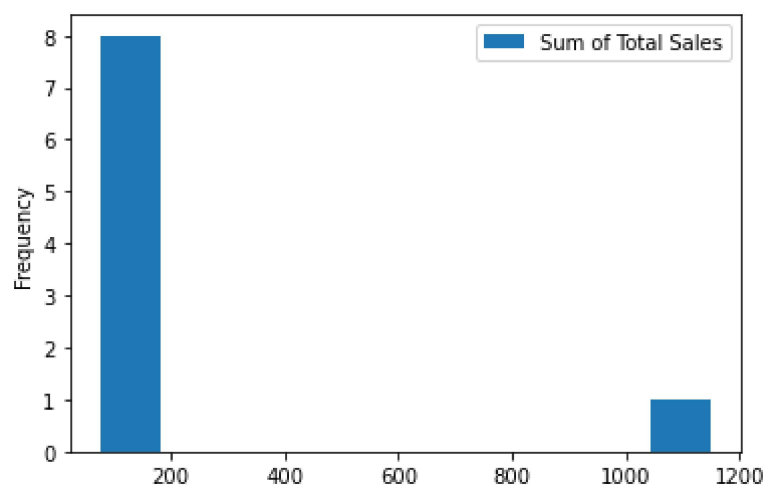
```
In [20]: data.plot.area()
```

```
Out[20]: <AxesSubplot:>
```



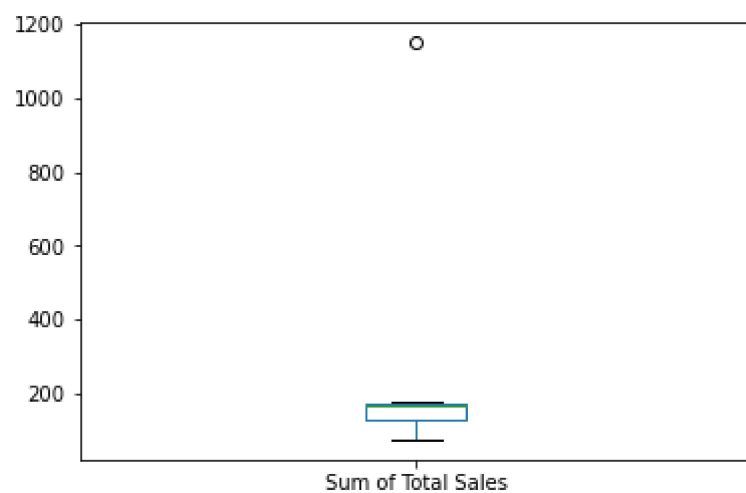
```
In [21]: data.plot.hist()
```

```
Out[21]: <AxesSubplot:ylabel='Frequency'>
```



```
In [22]: data.plot.box()
```

```
Out[22]: <AxesSubplot:>
```



```
In [24]: data.plot.scatter(x="Sum of Jan",y="Sum of Feb")
```

```
Out[24]: <AxesSubplot:xlabel='Sum of Jan', ylabel='Sum of Feb'>
```

