

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

```
In [2]: import pandas as pd
```

## Pre-processing

```
In [4]: data=pd.read_csv(r"C:\Users\user\Downloads\3_Fitness-1.csv")
data
```

Out[4]:

	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 [5]: data.head()
```

Out[5]:

	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 [6]: data.tail()
```

Out[6]:

	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 [7]: data.describe()
```

Out[7]:

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 [8]: print(np.shape(data))
```

(9, 5)

```
In [9]: print(np.size(data))
```

45

```
In [10]: data.isna()
```

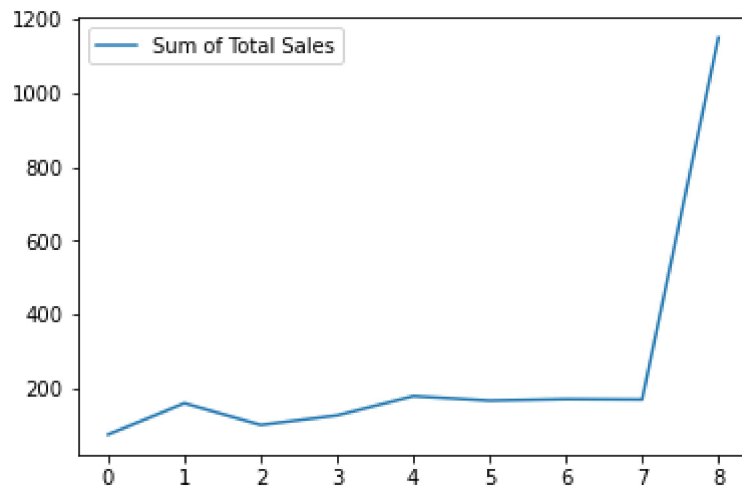
Out[10]:

	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

## Visualization

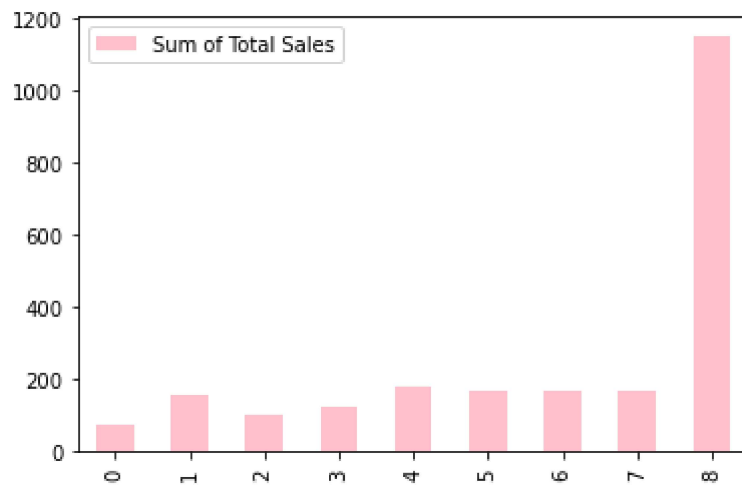
```
In [12]: data.plot.line()
```

```
Out[12]: <AxesSubplot:>
```



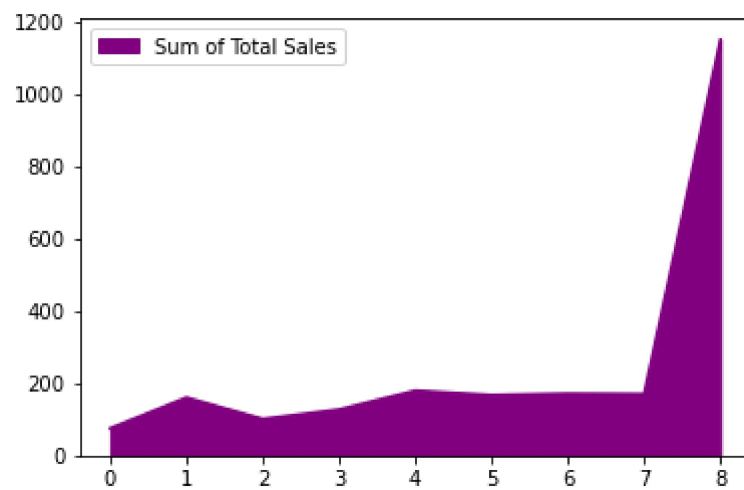
```
In [14]: data.plot.bar(color='pink')
```

```
Out[14]: <AxesSubplot:>
```



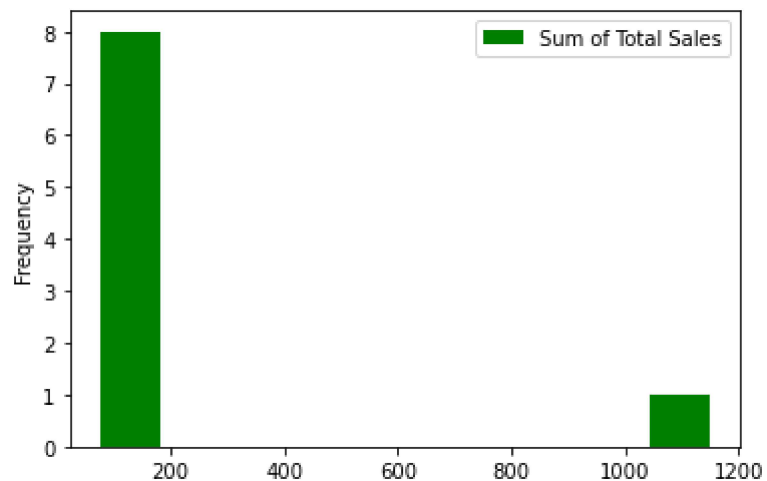
```
In [16]: data.plot.area(color='purple')
```

```
Out[16]: <AxesSubplot:>
```



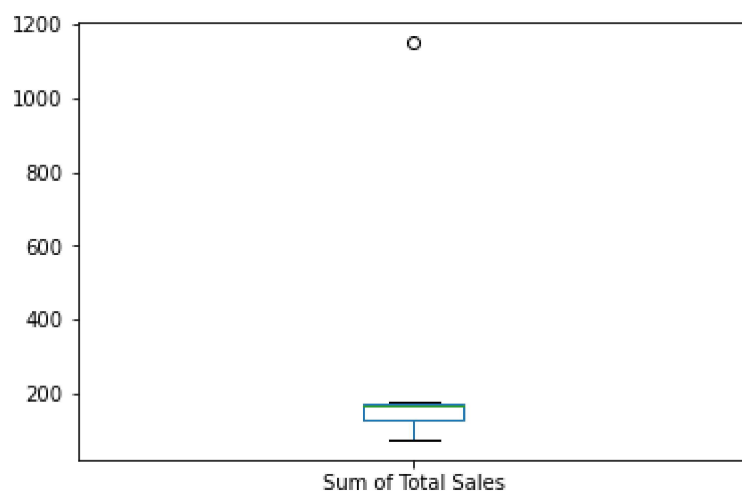
```
In [18]: data.plot.hist(color='green')
```

```
Out[18]: <AxesSubplot:ylabel='Frequency'>
```



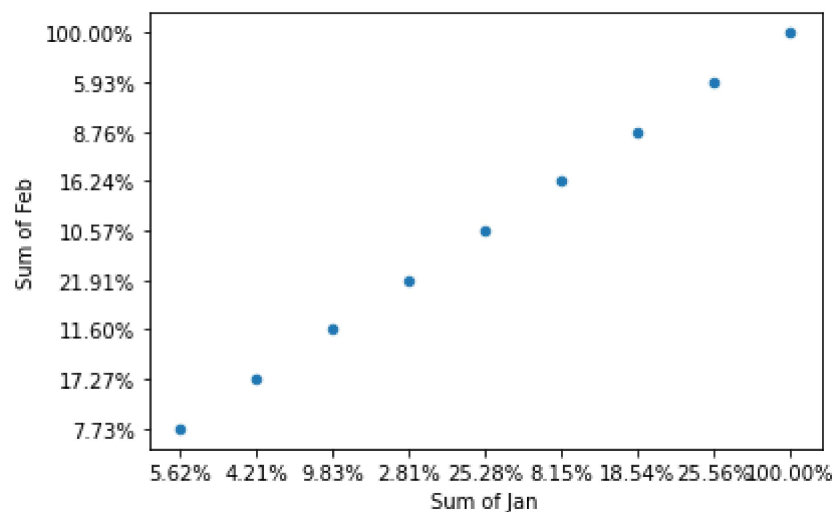
```
In [19]: data.plot.box()
```

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



```
In [20]: data.plot.scatter(x='Sum of Jan',y='Sum of Feb')
```

```
Out[20]: <AxesSubplot:xlabel='Sum of Jan', ylabel='Sum of Feb'>
```



```
In [ ]:
```