22/07/23 tony1

```
In [2]: import numpy as np
        import pandas as pd
        import matplotlib.pyplot as pp
```

In [4]:
```python
x=pd.read_csv(r"C:\Users\user\Downloads\5_Instagram data.csv")
x
```

Out[4]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
0	3920	2586	1028	619	56	98	9	5	162	35	
1	5394	2727	1838	1174	78	194	7	14	224	48	
2	4021	2085	1188	0	533	41	11	1	131	62	
3	4528	2700	621	932	73	172	10	7	213	23	
4	2518	1704	255	279	37	96	5	4	123	8	
...	...	...	...	...	...	...	...	...	...	...	
114	13700	5185	3041	5352	77	573	2	38	373	73	
115	5731	1923	1368	2266	65	135	4	1	148	20	
116	4139	1133	1538	1367	33	36	0	1	92	34	
117	32695	11815	3147	17414	170	1095	2	75	549	148	

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
118	36919	13473	4176	16444	2547	653	5	26	443	611	

119 rows × 13 columns

In [5]: `x. dtypes`

Out[5]:
```
Impressions       int64
From Home         int64
From Hashtags     int64
From Explore      int64
From Other        int64
Saves             int64
Comments          int64
Shares            int64
Likes             int64
Profile Visits    int64
Follows           int64
Caption          object
Hashtags         object
dtype: object
```

In [6]: `x. dtypes`

Out[6]:
```
Impressions       int64
From Home         int64
From Hashtags     int64
From Explore      int64
From Other        int64
Saves             int64
Comments          int64
Shares            int64
Likes             int64
Profile Visits    int64
Follows           int64
Caption          object
Hashtags         object
dtype: object
```

In [7]: `x.tail()`

Out[7]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
114	13700	5185	3041	5352	77	573	2	38	373	73	
115	5731	1923	1368	2266	65	135	4	1	148	20	
116	4139	1133	1538	1367	33	36	0	1	92	34	
117	32695	11815	3147	17414	170	1095	2	75	549	148	
118	36919	13473	4176	16444	2547	653	5	26	443	611	

In [8]: `x.columns`

Out[8]:
```
Index(['Impressions', 'From Home', 'From Hashtags', 'From Explore',
       'From Other', 'Saves', 'Comments', 'Shares', 'Likes', 'Profile Visit
s',
       'Follows', 'Caption', 'Hashtags'],
      dtype='object')
```

In [9]: `x. index`

Out[9]: `RangeIndex(start=0, stop=119, step=1)`

In [10]: `x.describe()`

Out[10]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comm
count	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000	119.00
mean	5703.991597	2475.789916	1887.512605	1078.100840	171.092437	153.310924	6.66
std	4843.780105	1489.386348	1884.361443	2613.026132	289.431031	156.317731	3.54
min	1941.000000	1133.000000	116.000000	0.000000	9.000000	22.000000	0.00
25%	3467.000000	1945.000000	726.000000	157.500000	38.000000	65.000000	4.00
50%	4289.000000	2207.000000	1278.000000	326.000000	74.000000	109.000000	6.00
75%	6138.000000	2602.500000	2363.500000	689.500000	196.000000	169.000000	8.00
max	36919.000000	13473.000000	11817.000000	17414.000000	2547.000000	1095.000000	19.00

In [11]: `x["Saves"]`

Out[11]:
```
0          98
1         194
2          41
3         172
4          96
        ...
114       573
115       135
116        36
117      1095
118       653
Name: Saves, Length: 119, dtype: int64
```

In [12]: `x.iloc[0:2]`

Out[12]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Foll
0	3920	2586	1028	619	56	98	9	5	162	35	
1	5394	2727	1838	1174	78	194	7	14	224	48	

In [13]: `x.loc[0:3]`

Out[13]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Foll
0	3920	2586	1028	619	56	98	9	5	162	35	
1	5394	2727	1838	1174	78	194	7	14	224	48	
2	4021	2085	1188	0	533	41	11	1	131	62	
3	4528	2700	621	932	73	172	10	7	213	23	

In [14]: `x.loc["Saves":"Shares"]`

Out[14]:

Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Follo

In [15]:
```python
x[x["Comments"]<=2]
```

Out[15]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
38	2191	1308	809	45	18	35	2	1	72	18	
52	2941	1716	1058	84	48	48	2	1	99	12	
57	3388	1975	1018	244	44	99	1	7	112	16	
62	4239	1711	2429	36	50	109	2	1	178	8	
63	3454	1663	1284	166	234	38	0	0	107	45	
69	3601	1570	1518	174	167	51	0	3	94	48	
70	3480	1975	1019	245	72	104	1	7	114	16	
103	4609	2032	911	857	532	94	1	12	168	21	
114	13700	5185	3041	5352	77	573	2	38	373	73	
116	4139	1133	1538	1367	33	36	0	1	92	34	

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
117	32695	11815	3147	17414	170	1095	2	75	549	148	

```
In [16]: x.fillna(value=5)
```

Out[16]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
0	3920	2586	1028	619	56	98	9	5	162	35	
1	5394	2727	1838	1174	78	194	7	14	224	48	
2	4021	2085	1188	0	533	41	11	1	131	62	
3	4528	2700	621	932	73	172	10	7	213	23	
4	2518	1704	255	279	37	96	5	4	123	8	
...	...	...	...	...	...	...	...	...	...	...	
114	13700	5185	3041	5352	77	573	2	38	373	73	
115	5731	1923	1368	2266	65	135	4	1	148	20	
116	4139	1133	1538	1367	33	36	0	1	92	34	
117	32695	11815	3147	17414	170	1095	2	75	549	148	

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
118	36919	13473	4176	16444	2547	653	5	26	443	611	

119 rows × 13 columns

In [17]:
```python
x.dropna()
```

Out[17]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
0	3920	2586	1028	619	56	98	9	5	162	35	
1	5394	2727	1838	1174	78	194	7	14	224	48	
2	4021	2085	1188	0	533	41	11	1	131	62	
3	4528	2700	621	932	73	172	10	7	213	23	
4	2518	1704	255	279	37	96	5	4	123	8	
...	...	...	...	...	...	...	...	...	...	...	
114	13700	5185	3041	5352	77	573	2	38	373	73	
115	5731	1923	1368	2266	65	135	4	1	148	20	
116	4139	1133	1538	1367	33	36	0	1	92	34	
117	32695	11815	3147	17414	170	1095	2	75	549	148	

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	F
118	36919	13473	4176	16444	2547	653	5	26	443	611	

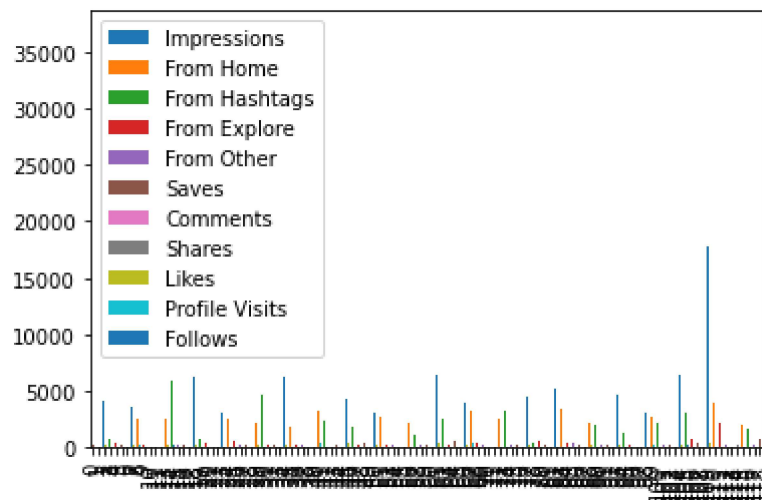119 rows × 13 columns

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

Out[18]: `<AxesSubplot:>`
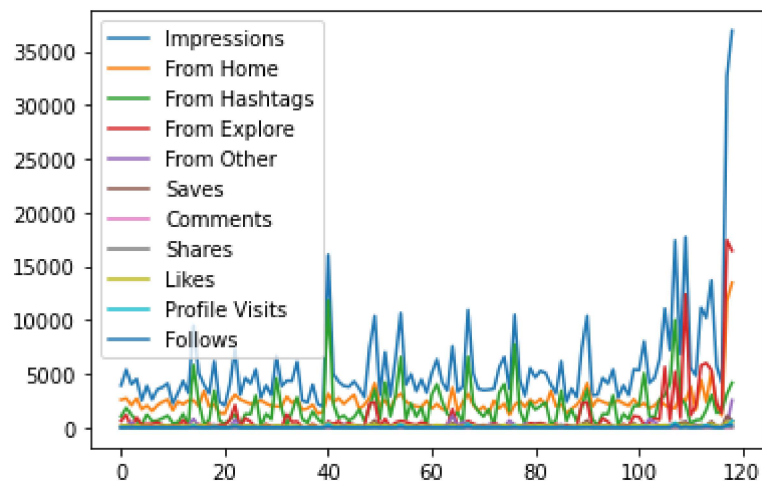
In [19]: `x.plot.bar()`

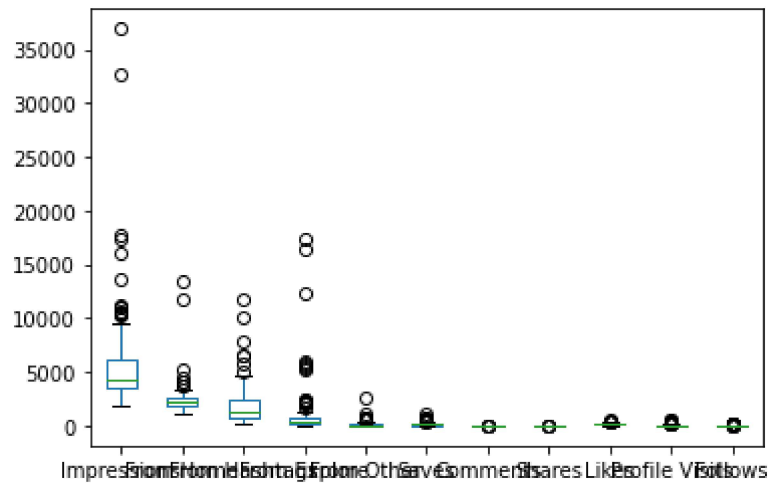Out[19]: `<AxesSubplot:>`

In [20]: `x.plot.hist()`

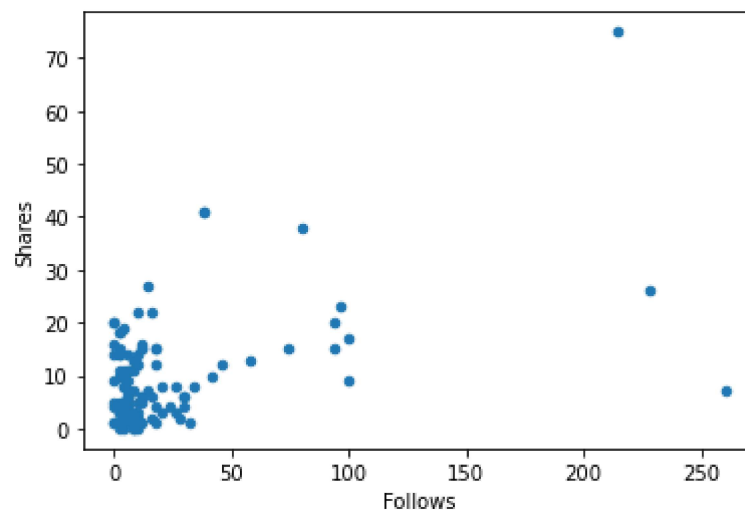Out[20]: `<AxesSubplot:ylabel='Frequency'>`
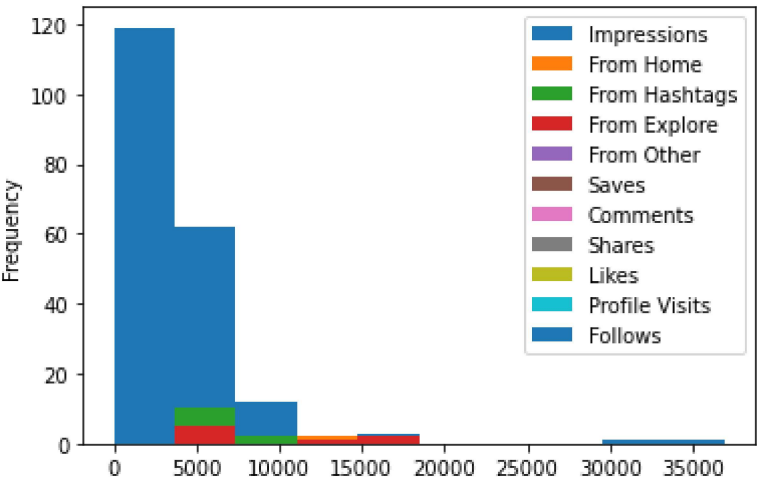
In [21]: `x.plot.pie(y='Likes')`

In [22]:
```python
x.plot.box()
```

Out[22]: <AxesSubplot:>

In [23]:
```python
x.plot.scatter(x='Follows',y='Shares')
```

Out[23]: <AxesSubplot:xlabel='Follows', ylabel='Shares'>

In [ ]: