In [3]:
```
import pandas as pd
import numpy as np
df=pd.read_csv("dataset_Facebook.csv",sep=";")
```

In [4]:
```
df
```

Out[4]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	C
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	
...	...	...	...	...	...	...	...	...	...	...	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	

500 rows × 19 columns

In [5]:
```
df.head()
```

Out[5]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Cor
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	

In [6]:
```
df.tail()
```

Out[6]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Co
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	

In [8]:
```
df.shape
```

Out[8]: (500, 19)

In [10]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 500 entries, 0 to 499
Data columns (total 19 columns):
 #   Column                                                  Non
-Null Count  Dtype
---  ------                                                  ---
-----------  -----
 0   Page total likes                                        500
non-null    int64
 1   Type                                                    500
non-null    object
 2   Category                                                500
non-null    int64
 3   Post Month                                              500
non-null    int64
 4   Post Weekday                                            500
non-null    int64
 5   Post Hour                                               500
non-null    int64
 6   Paid                                                    499
non-null    float64
 7   Lifetime Post Total Reach                               500
non-null    int64
 8   Lifetime Post Total Impressions                         500
non-null    int64
 9   Lifetime Engaged Users                                  500
non-null    int64
 10  Lifetime Post Consumers                                 500
non-null    int64
 11  Lifetime Post Consumptions                              500
non-null    int64
 12  Lifetime Post Impressions by people who have liked your Page  500
non-null    int64
 13  Lifetime Post reach by people who like your Page        500
non-null    int64
 14  Lifetime People who have liked your Page and engaged with your post  500
non-null    int64
 15  comment                                                 500
non-null    int64
 16  like                                                    499
non-null    float64
 17  share                                                   496
non-null    float64
 18  Total Interactions                                      500
non-null    int64
dtypes: float64(3), int64(15), object(1)
memory usage: 74.3+ KB
```

In [12]:
```
df.describe()
```

Out[12]:

	Page total likes	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach
count	500.000000	500.000000	500.000000	500.000000	500.000000	499.000000	500.00000
mean	123194.176000	1.880000	7.038000	4.150000	7.840000	0.278557	13903.36000
std	16272.813214	0.852675	3.307936	2.030701	4.368589	0.448739	22740.78789
min	81370.000000	1.000000	1.000000	1.000000	1.000000	0.000000	238.00000
25%	112676.000000	1.000000	4.000000	2.000000	3.000000	0.000000	3315.00000
50%	129600.000000	2.000000	7.000000	4.000000	9.000000	0.000000	5281.00000
75%	136393.000000	3.000000	10.000000	6.000000	11.000000	1.000000	13168.00000
max	139441.000000	3.000000	12.000000	7.000000	23.000000	1.000000	180480.00000

In [14]:
```
df1=df[['Page total likes','Category','Post Month','Post Weekday']].loc[0:15]
df1
```

Out[14]:

	Page total likes	Category	Post Month	Post Weekday
0	139441	2	12	4
1	139441	2	12	3
2	139441	3	12	3
3	139441	2	12	2
4	139441	2	12	2
5	139441	2	12	1
6	139441	3	12	1
7	139441	3	12	7
8	139441	2	12	7
9	139441	3	12	6
10	139441	2	12	5
11	139441	2	12	5
12	139441	2	12	5
13	139441	2	12	5
14	138414	2	12	4
15	138414	2	12	3

In [15]:
```
df2=df[['Page total likes','Category','Post Month','Post Weekday']].loc[16:30]
df2
```

Out[15]:

	Page total likes	Category	Post Month	Post Weekday
16	138414	3	12	3
17	138414	1	12	2
18	138414	3	12	2
19	138414	3	12	1
20	138414	2	12	1
21	138414	1	12	7
22	138414	1	12	7
23	138414	3	12	7
24	138414	2	12	6
25	138458	2	12	6
26	138458	2	12	5
27	138458	3	12	5
28	138895	2	12	5
29	138895	1	12	4
30	138895	2	12	4

In [17]:
```
df3=df[['Page total likes','Category','Post Month','Post Weekday']].loc[31:50]
df3
```

Out[17]:

	Page total likes	Category	Post Month	Post Weekday
31	138895	2	12	3
32	138895	3	12	3
33	138895	3	12	2
34	138895	1	12	2
35	138895	2	12	1
36	138895	3	12	1
37	138895	1	12	7
38	138895	2	12	7
39	138895	1	12	7
40	138895	2	12	6
41	138895	1	12	6
42	138353	1	12	5
43	138353	1	12	5
44	138353	1	12	4
45	138353	1	12	4
46	138353	1	12	3
47	138353	1	12	3
48	138353	1	12	2
49	138353	1	12	2
50	138353	2	11	1

In [18]:
```
merging=pd.concat([df1,df2,df3])
merging
```

Out[18]:

	Page total likes	Category	Post Month	Post Weekday
0	139441	2	12	4
1	139441	2	12	3
2	139441	3	12	3
3	139441	2	12	2
4	139441	2	12	2
5	139441	2	12	1
6	139441	3	12	1
7	139441	3	12	7
8	139441	2	12	7
9	139441	3	12	6
10	139441	2	12	5
11	139441	2	12	5
12	139441	2	12	5
13	139441	2	12	5
14	138414	2	12	4
15	138414	2	12	3
31	138895	2	12	3
32	138895	3	12	3
33	138895	3	12	2
34	138895	1	12	2
35	138895	2	12	1
36	138895	3	12	1
37	138895	1	12	7
38	138895	2	12	7
39	138895	1	12	7
40	138895	2	12	6
41	138895	1	12	6
42	138353	1	12	5
43	138353	1	12	5
44	138353	1	12	4
45	138353	1	12	4
46	138353	1	12	3
47	138353	1	12	3
48	138353	1	12	2
49	138353	1	12	2

	Page total likes	Category	Post Month	Post Weekday
50	138353	2	11	1
31	138895	2	12	3
32	138895	3	12	3
33	138895	3	12	2
34	138895	1	12	2
35	138895	2	12	1
36	138895	3	12	1
37	138895	1	12	7
38	138895	2	12	7
39	138895	1	12	7
40	138895	2	12	6
41	138895	1	12	6
42	138353	1	12	5
43	138353	1	12	5
44	138353	1	12	4
45	138353	1	12	4
46	138353	1	12	3
47	138353	1	12	3
48	138353	1	12	2
49	138353	1	12	2
50	138353	2	11	1

In [20]:
```
sort_values=df.sort_values('Page total likes',ascending=False)
sort_values
```

Out[20]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	C
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	
8	139441	Status	2	12	7	3	0.0	11844	22538	1530	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	
12	139441	Photo	2	12	5	10	0.0	2847	5133	193	
11	139441	Photo	2	12	5	10	0.0	3112	5590	208	
...	...	...	...	...	...	...	...	...	...	...	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	

500 rows × 19 columns

In [21]:
```
transpose=df.transpose()
transpose
```

Out[21]:

	0	1	2	3	4	5	6	7	8	
Page total likes	139441	139441	139441	139441	139441	139441	139441	139441	139441	1394
Type	Photo	Status	Photo	Photo	Photo	Status	Photo	Photo	Status	Phc
Category	2	2	3	2	2	2	3	3	2	
Post Month	12	12	12	12	12	12	12	12	12	
Post Weekday	4	3	3	2	2	1	1	7	7	
Post Hour	3	10	3	10	3	9	3	9	3	
Paid	0	0	0	1	0	0	1	1	0	
Lifetime Post Total Reach	2752	10460	2413	50128	7244	10472	11692	13720	11844	46
Lifetime Post Total Impressions	5091	19057	4373	87991	13594	20849	19479	24137	22538	86
Lifetime Engaged Users	178	1457	177	2211	671	1191	481	537	1530	2
Lifetime Post Consumers	109	1361	113	790	410	1073	265	232	1407	1
Lifetime Post Consumptions	159	1674	154	1119	580	1389	364	305	1692	2
Lifetime Post Impressions by people who have liked your Page	3078	11710	2812	61027	6228	16034	15432	19728	15220	43
Lifetime Post reach by people who like your Page	1640	6112	1503	32048	3200	7852	9328	11056	7912	23
Lifetime People who have liked your Page and engaged with your post	119	1108	132	1386	396	1016	379	422	1250	1
comment	4	5	0	58	19	1	3	0	0	
like	79	130	66	1572	325	152	249	325	161	1
share	17	29	14	147	49	33	27	14	31	
Total Interactions	100	164	80	1777	393	186	279	339	192	1

19 rows × 500 columns

In [22]:
```
shape=df.shape
shape
```

Out[22]:
```
(500, 19)
```

In [23]:
```
pt=pd.pivot_table(df,index=['Type','Category'],values='comment')
print(pt)
```

```
                   comment
Type   Category
Link   1          2.900000
       2          2.000000
       3          2.000000
Photo  1          5.897297
       2         11.692308
       3          6.913333
Status 1          4.333333
       2          9.921053
       3          2.750000
Video  1         12.285714
```

In [25]:
```
ra=np.array([1,2,3,4,5,6,7,8,9,10])
ra.reshape(5,2)
```

Out[25]:
```
array([[ 1,  2],
       [ 3,  4],
       [ 5,  6],
       [ 7,  8],
       [ 9, 10]])
```