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

In [8]:
```
df=pd.read_csv('dataset_Facebook.csv', sep=";")
df
```

Out[8]:

	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 [11]:
```
#describing the dataset-----------------------------
df.describe()
```

Out[11]:

	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]:
```
df.shape
```

Out[14]:
```
(500, 19)
```

In [15]:
```
#----------------------#CREATINH SUBSETS#-------------------#
```

In [21]:
```
df1 = df[['Page total likes' , 'Category' , 'Post Month' ]].loc[0:12]
df1
```

Out[21]:

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

In [23]:
```
df2 = df[['Post Weekday' , 'Post Hour' , 'Paid' ]].loc[0:15]
df2
```

Out[23]:

	Post Weekday	Post Hour	Paid
0	4	3	0.0
1	3	10	0.0
2	3	3	0.0
3	2	10	1.0
4	2	3	0.0
5	1	9	0.0
6	1	3	1.0
7	7	9	1.0
8	7	3	0.0
9	6	10	0.0
10	5	10	0.0
11	5	10	0.0
12	5	10	0.0
13	5	3	0.0
14	4	5	1.0
15	3	10	0.0

In [24]:
```
#------------------#MERGE_DATA #------------------#
```

In [27]:
```
mearg = pd.concat([df1,df2])
mearg
```

Out[27]:

	Page total likes	Category	Post Month	Post Weekday	Post Hour	Paid
0	139441.0	2.0	12.0	NaN	NaN	NaN
1	139441.0	2.0	12.0	NaN	NaN	NaN
2	139441.0	3.0	12.0	NaN	NaN	NaN
3	139441.0	2.0	12.0	NaN	NaN	NaN
4	139441.0	2.0	12.0	NaN	NaN	NaN
5	139441.0	2.0	12.0	NaN	NaN	NaN
6	139441.0	3.0	12.0	NaN	NaN	NaN
7	139441.0	3.0	12.0	NaN	NaN	NaN
8	139441.0	2.0	12.0	NaN	NaN	NaN
9	139441.0	3.0	12.0	NaN	NaN	NaN
10	139441.0	2.0	12.0	NaN	NaN	NaN
11	139441.0	2.0	12.0	NaN	NaN	NaN
12	139441.0	2.0	12.0	NaN	NaN	NaN
0	NaN	NaN	NaN	4.0	3.0	0.0
1	NaN	NaN	NaN	3.0	10.0	0.0
2	NaN	NaN	NaN	3.0	3.0	0.0
3	NaN	NaN	NaN	2.0	10.0	1.0
4	NaN	NaN	NaN	2.0	3.0	0.0
5	NaN	NaN	NaN	1.0	9.0	0.0
6	NaN	NaN	NaN	1.0	3.0	1.0
7	NaN	NaN	NaN	7.0	9.0	1.0
8	NaN	NaN	NaN	7.0	3.0	0.0
9	NaN	NaN	NaN	6.0	10.0	0.0
10	NaN	NaN	NaN	5.0	10.0	0.0
11	NaN	NaN	NaN	5.0	10.0	0.0
12	NaN	NaN	NaN	5.0	10.0	0.0
13	NaN	NaN	NaN	5.0	3.0	0.0
14	NaN	NaN	NaN	4.0	5.0	1.0
15	NaN	NaN	NaN	3.0	10.0	0.0

In [28]:
```
#------------------# SORT DATA #------------------#
```

In [32]:
```
sortdata=df.sort_values('Category',ascending=False)
sortdata
```

Out[32]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	C
108	136736	Photo	3	10	7	9	0.0	2426	4469	320	
322	123047	Photo	3	6	2	5	1.0	3662	6476	560	
331	119198	Photo	3	5	3	5	0.0	4344	8025	692	
330	120050	Photo	3	5	3	12	0.0	21248	34095	1049	
329	120050	Photo	3	5	4	4	1.0	4032	7278	684	
...	...	...	...	...	...	...	...	...	...	...	
111	136736	Photo	1	10	6	8	0.0	1261	2158	37	
110	136736	Photo	1	10	6	10	0.0	1673	3655	338	
339	117764	Photo	1	5	4	10	0.0	18056	32576	1062	
105	137020	Photo	1	10	2	4	0.0	70144	111745	3216	
250	129600	Photo	1	7	7	6	1.0	5848	9068	622	

500 rows × 19 columns

In [33]:
```
#------------------# TRANSPORT #------------------#
```

In [38]:
```
trans=df.transpose()
trans
```

Out[38]:

	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	Pho
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	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	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	79.0	130.0	66.0	1572.0	325.0	152.0	249.0	325.0	161.0	113
share	17.0	29.0	14.0	147.0	49.0	33.0	27.0	14.0	31.0	26
Total Interactions	100	164	80	1777	393	186	279	339	192	1

19 rows × 500 columns

In [37]:
```
#------------------# SHAPE AND RESHAPE #------------------#
```

In [40]:
```
shap=df.shape
shap
```

Out[40]:
```
(500, 19)
```

In [46]:
```
reshap=pd.pivot_table(df,index=['Type','Category'] , values= 'share')
print(reshap)
```

```
                    share
Type   Category
Link   1         12.700000
       2         15.000000
       3         15.000000
Photo  1         17.961326
       2         35.505495
       3         33.193333
Status 1         27.000000
       2         32.105263
       3         28.250000
Video  1         52.142857
```

In [ ]:
```

```