```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```
df = pd.read_csv("/content/drive/MyDrive/DSBDA_dataset/dataset_Facebook.csv", sep=';')
df.head(100)
```

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	Lifetime Post Impressions by people who have liked your Page	Lifetime Post reach by people who like your Page
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	159	3078	1640
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	1674	11710	6112
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	154	2812	1503
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	1119	61027	32048
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	580	6228	3200
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95	137059	Photo	3	10	6	10	0.0	3090	5744	391	257	360	3521	1796
96	137059	Photo	1	10	6	3	0.0	1101	2548	324	287	2418	1284	704
97	137059	Photo	2	10	5	11	0.0	2819	5230	318	218	303	3128	1622
98	137020	Status	2	10	5	3	1.0	12468	24917	2143	1966	2576	15850	7636
99	137020	Photo	1	10	4	10	0.0	12776	21893	785	539	881	13272	7800

100 rows × 19 columns

```
df.shape
```

```
(500, 19)
```

```
df.columns
```

```
Index(['Page total likes', 'Type', 'Category', 'Post Month', 'Post Weekday',
       'Post Hour', 'Paid', 'Lifetime Post Total Reach',
       'Lifetime Post Total Impressions', 'Lifetime Engaged Users',
       'Lifetime Post Consumers', 'Lifetime Post Consumptions',
       'Lifetime Post Impressions by people who have liked your Page',
       'Lifetime Post reach by people who like your Page',
       'Lifetime People who have liked your Page and engaged with your post',
       'comment', 'like', 'share', 'Total Interactions'],
      dtype='object')
```

```
video = df['Type']
video
```

```
0       Photo
1      Status
2       Photo
3       Photo
4       Photo
        ...
495     Photo
496     Photo
497     Photo
498     Photo
499     Photo
Name: Type, Length: 500, dtype: object
```

```
default_columns = df[['like','share']]
default_columns
```

	like	share
0	79.0	17.0
1	130.0	29.0
2	66.0	14.0
3	1572.0	147.0
4	325.0	49.0
...	...	...
495	53.0	26.0
496	53.0	22.0
497	93.0	18.0
498	91.0	38.0
499	91.0	28.0

500 rows × 2 columns

```
subset = df.loc[5:10, ['like','share']]
subset
```

	like	share
5	152.0	33.0
6	249.0	27.0
7	325.0	14.0
8	161.0	31.0
9	113.0	26.0
10	233.0	19.0

```
subset1 = df.iloc[5:11, [16,17]]
subset1
```

	like	share
5	152.0	33.0
6	249.0	27.0
7	325.0	14.0
8	161.0	31.0
9	113.0	26.0
10	233.0	19.0

```
sort = df.sort_values(by = 'like', ascending = True)
sort
```

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Co
21	138414	Photo	1	12	7	10	0.0	1384	2467	15	15	
417	104070	Photo	1	3	3	10	0.0	1874	2474	25	25	
100	137020	Photo	1	10	4	9	1.0	1357	2453	37	37	
76	137893	Photo	1	11	3	2	0.0	1228	2392	17	17	
441	98195	Photo	1	3	5	4	1.0	1845	2670	9	9	

```
transpose = df.transpose()
transpose
```

	0	1	2	3	4	5	6	7	8	9	...	4
Page total likes	139441	139441	139441	139441	139441	139441	139441	139441	139441	139441	...	859
Type	Photo	Status	Photo	Photo	Photo	Status	Photo	Photo	Status	Photo	...	Phc
Category	2	2	3	2	2	2	3	3	2	3	...	
Post Month	12	12	12	12	12	12	12	12	12	12	...	
Post Weekday	4	3	3	2	2	1	1	7	7	6	...	
Post Hour	3	10	3	10	3	9	3	9	3	10	...	
Paid	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	...	0
Lifetime Post Total Reach	2752	10460	2413	50128	7244	10472	11692	13720	11844	4694	...	52
Lifetime Post Total Impressions	5091	19057	4373	87991	13594	20849	19479	24137	22538	8668	...	87
Lifetime Engaged Users	178	1457	177	2211	671	1191	481	537	1530	280	...	9
Lifetime Post Consumers	109	1361	113	790	410	1073	265	232	1407	183	...	9
Lifetime Post Consumptions	159	1674	154	1119	580	1389	364	305	1692	250	...	12
Lifetime Post Impressions by people who have liked your Page	3078	11710	2812	61027	6228	16034	15432	19728	15220	4309	...	57
Lifetime Post reach by people who like your Page	1640	6112	1503	32048	3200	7852	9328	11056	7912	2324	...	33

```
selective_df = pd.DataFrame(df,columns =['like','share','Category','Type'])
selective_df.head(20)
```

	like	share	Category	Type
0	79.0	17.0	2	Photo
1	130.0	29.0	2	Status
2	66.0	14.0	3	Photo
3	1572.0	147.0	2	Photo
4	325.0	49.0	2	Photo
5	152.0	33.0	2	Status
6	249.0	27.0	3	Photo
7	325.0	14.0	3	Photo
8	161.0	31.0	2	Status
9	113.0	26.0	3	Photo
10	233.0	19.0	2	Status
11	88.0	18.0	2	Photo
12	90.0	14.0	2	Photo
13	137.0	10.0	2	Photo
14	577.0	20.0	2	Photo
15	86.0	18.0	2	Status
16	40.0	12.0	3	Photo
17	678.0	20.0	1	Photo
18	54.0	17.0	3	Status
19	34.0	8.0	3	Photo

```
pivot_table = pd.pivot_table(selective_df,index= ['Category','like'])
pivot_table
```

		share
Category	**like**	
1	**0.0**	0.000000
	1.0	2.000000
	2.0	0.000000
	3.0	0.666667
	4.0	1.000000
...	**...**	...
3	**1155.0**	102.000000
	1372.0	47.000000
	1546.0	181.000000
	1639.0	122.000000
	1998.0	128.000000

368 rows × 1 columns

```
melted_df = selective_df.melt(id_vars=['Type', 'Category'], var_name='reach', value_name='count')
melted_df
```

	Type	Category	reach	count
0	Photo	2	like	79.0
1	Status	2	like	130.0
2	Photo	3	like	66.0
3	Photo	2	like	1572.0
4	Photo	2	like	325.0
...	...	...	...	...
995	Photo	3	share	26.0
996	Photo	2	share	22.0
998	Photo	3	share	38.0