```
import pandas as pd
import numpy as np
```

```
df=pd.read_csv("dataset_Facebook.csv", delimiter=";")
```

```
df.describe()
```

	Page total likes	Category	Post Month	Post Weekday
count	500.000000	500.000000	500.000000	500.000000
mean	123194.176000	1.880000	7.038000	4.150000
std	16272.813214	0.852675	3.307936	2.030701
min	81370.000000	1.000000	1.000000	1.000000
25%	112676.000000	1.000000	4.000000	2.000000
50%	129600.000000	2.000000	7.000000	4.000000
75%	136393.000000	3.000000	10.000000	6.000000
max	139441.000000	3.000000	12.000000	7.000000

```
df.info()
```

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

```
 18  Total Interactions                                              500 non-null
dtypes: float64(3), int64(15), object(1)
memory usage: 74.3+ KB
```

```
df.head()
```

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid
0	139441	Photo	2	12	4	3	0.0
1	139441	Status	2	12	3	10	0.0
2	139441	Photo	3	12	3	3	0.0
3	139441	Photo	2	12	2	10	1.0
4	139441	Photo	2	12	2	3	0.0

```
df.shape
```

```
(500, 19)
```

```
df.isnull().sum()
```

```
Page total likes                                                  0
Type                                                              0
Category                                                          0
Post Month                                                        0
Post Weekday                                                      0
Post Hour                                                         0
Paid                                                              1
Lifetime Post Total Reach                                         0
Lifetime Post Total Impressions                                   0
Lifetime Engaged Users                                            0
Lifetime Post Consumers                                           0
Lifetime Post Consumptions                                        0
Lifetime Post Impressions by people who have liked your Page      0
Lifetime Post reach by people who like your Page                  0
Lifetime People who have liked your Page and engaged with your post    0
comment                                                           0
like                                                              1
share                                                             4
Total Interactions                                                0
dtype: int64
```

```
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')
```

```
#Create subsets


#Subset 1
subset1= df[['Page total likes', 'Type', 'Category', 'Post Month', 'Post Weekday']].loc[0:
subset1
```

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

```
#Subset 2
subset2= df[['Page total likes', 'Type', 'Category', 'Post Month', 'Post Weekday']].loc[16:
subset2
```

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

```
#Subset 3
subset3= df[['Page total likes', 'Type', 'Category', 'Post Month', 'Post Weekday']].loc[31
subset3
```

	Page total likes	Type	Category	Post Month	Post Weekday
31	138895	Photo	2	12	3
32	138895	Photo	3	12	3
33	138895	Photo	3	12	2
34	138895	Photo	1	12	2
35	138895	Photo	2	12	1
36	138895	Photo	3	12	1
37	138895	Photo	1	12	7
38	138895	Status	2	12	7
39	138895	Photo	1	12	7
40	138895	Status	2	12	6
41	138895	Link	1	12	6
42	138353	Photo	1	12	5
43	138353	Link	1	12	5
44	138353	Photo	1	12	4
45	138353	Link	1	12	4
46	138353	Status	1	12	3
47	138353	Link	1	12	3
48	138353	Photo	1	12	2
49	138353	Link	1	12	2
50	138353	Photo	2	11	1
51	138329	Photo	1	11	1
52	138329	Photo	1	11	7
53	138329	Photo	1	11	7
54	138329	Photo	1	11	6
55	138329	Video	1	11	6

```
#Merge the data


# We have to merge three subsets that were made above


merging= pd.concat([subset1, subset2, subset3])
merging
```

	Page total likes	Type	Category	Post Month	Post Weekday
0	139441	Photo	2	12	4
1	139441	Status	2	12	3
2	139441	Photo	3	12	3
3	139441	Photo	2	12	2
4	139441	Photo	2	12	2
5	139441	Status	2	12	1
6	139441	Photo	3	12	1
7	139441	Photo	3	12	7
8	139441	Status	2	12	7
9	139441	Photo	3	12	6
10	139441	Status	2	12	5
11	139441	Photo	2	12	5
12	139441	Photo	2	12	5
13	139441	Photo	2	12	5
14	138414	Photo	2	12	4
15	138414	Status	2	12	3
16	138414	Photo	3	12	3
17	138414	Photo	1	12	2
18	138414	Status	3	12	2
19	138414	Photo	3	12	1
20	138414	Photo	2	12	1
21	138414	Photo	1	12	7
22	138414	Link	1	12	7
23	138414	Photo	3	12	7
24	138414	Status	2	12	6
25	138458	Status	2	12	6
26	138458	Status	2	12	5
27	138458	Photo	3	12	5
28	138895	Photo	2	12	5
29	138895	Video	1	12	4
30	138895	Photo	2	12	4
31	138895	Photo	2	12	3

32	138895	Photo	3	12	3
33	138895	Photo	3	12	2
34	138895	Photo	1	12	2
35	138895	Photo	2	12	1
36	138895	Photo	3	12	1
37	138895	Photo	1	12	7
38	138895	Status	2	12	7
39	138895	Photo	1	12	7
40	138895	Status	2	12	6
41	138895	Link	1	12	6
42	138353	Photo	1	12	5
43	138353	Link	1	12	5
44	138353	Photo	1	12	4
45	138353	Link	1	12	4
46	138353	Status	1	12	3
47	138353	Link	1	12	3
48	138353	Photo	1	12	2
49	138353	Link	1	12	2
50	138353	Photo	2	11	1
51	138329	Photo	1	11	1
52	138329	Photo	1	11	7
53	138329	Photo	1	11	7
54	138329	Photo	1	11	6

```
#Sort Data


sorted1= df.sort_values("Post Weekday", ascending=False)
sorted1
```

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Pa
250	129600	Photo	1	7	7	6	1
428	100732	Photo	1	3	7	15	0
430	100732	Link	1	3	7	14	0
431	100732	Photo	1	3	7	12	0
380	111620	Photo	1	4	7	14	0
...	...	...	...	...	...	...	
220	131956	Photo	2	8	1	4	0
219	131956	Photo	3	8	1	12	0
106	137020	Photo	3	10	1	11	0
107	136736	Status	2	10	1	4	0
262	128032	Photo	2	7	1	3	0

500 rows × 19 columns

```
sorted2= df.sort_values("Page total likes", ascending=False)
sorted2
```

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Pa:
0	139441	Photo	2	12	4	3	0

```
#Tranposing Data
transposed= df.transpose()
transposed
```

	0	1	2	3	4
Page total likes	139441	139441	139441	139441	139441
Type	Photo	Status	Photo	Photo	Photo
Category	2	2	3	2	2
Post Month	12	12	12	12	12
Post Weekday	4	3	3	2	2
Post Hour	3	10	3	10	3
Paid	0.0	0.0	0.0	1.0	0.0
Lifetime Post Total Reach	2752	10460	2413	50128	7244
Lifetime Post Total Impressions	5091	19057	4373	87991	13594
Lifetime Engaged Users	178	1457	177	2211	671
Lifetime Post Consumers	109	1361	113	790	410
Lifetime Post Consumptions	159	1674	154	1119	580
Lifetime Post Impressions by people who have liked your Page	3078	11710	2812	61027	6228
Lifetime Post reach by people who like your Page	1640	6112	1503	32048	3200

```
#Shape and reshape data
```