```
import pandas as pd
```

```
pwd
```

```
'/content'
```

```
df = pd.read_csv(r'/content/dataset_Facebook.csv', ';');
```

```
<ipython-input-8-629e9ce8c81f>:1: FutureWarning: In a future version of pandas all arguments of read_csv except for the argument 'f
  df = pd.read_csv(r'/content/dataset_Facebook.csv', ';');
```

```
df
```

	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	C
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	
...	...	...	...	...	...	...	...	...	...	...	...	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	

500 rows × 19 columns

```
df.shape
```

```
(500, 19)
```

```
df.describe()
```

```
df.head()
```

	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	Cons
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	

```
df.tail()
```

	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	Con
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	

```
df.dtypes
```

```
Page total likes                                                  int64
Type                                                             object
Category                                                          int64
Post Month                                                        int64
Post Weekday                                                      int64
Post Hour                                                         int64
Paid                                                            float64
Lifetime Post Total Reach                                         int64
Lifetime Post Total Impressions                                   int64
Lifetime Engaged Users                                            int64
Lifetime Post Consumers                                           int64
Lifetime Post Consumptions                                        int64
Lifetime Post Impressions by people who have liked your Page      int64
Lifetime Post reach by people who like your Page                  int64
Lifetime People who have liked your Page and engaged with your post  int64
comment                                                           int64
like                                                            float64
share                                                           float64
Total Interactions                                                int64
dtype: object
```

```
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')
```

```
df['share']
```

```
0       17.0
1       29.0
2       14.0
3      147.0
4       49.0
       ...
495     26.0
496     22.0
497     18.0
498     38.0
499     28.0
Name: share, Length: 500, dtype: float64
```

```
df.share
```

```
0       17.0
1       29.0
2       14.0
3      147.0
4       49.0
       ...
495     26.0
496     22.0
497     18.0
498     38.0
499     28.0
Name: share, Length: 500, dtype: float64
```

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

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

500 rows × 2 columns

```
df[['share']]
```

share

```
df[1:5]
```

	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	Cons
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	

```
df['share']
```

```
0       17.0
1       29.0
2       14.0
3      147.0
4       49.0
       ...
495     26.0
496     22.0
497     18.0
498     38.0
499     28.0
Name: share, Length: 500, dtype: float64
```

```
df.iloc[:, 1:17]
```

	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifet Pr Consumpti
0	Photo	2	12	4	3	0.0	2752	5091	178	109	
1	Status	2	12	3	10	0.0	10460	19057	1457	1361	1(
2	Photo	3	12	3	3	0.0	2413	4373	177	113	
3	Photo	2	12	2	10	1.0	50128	87991	2211	790	1
4	Photo	2	12	2	3	0.0	7244	13594	671	410	
...	...	...	...	...	...	...	...	...	...	...	
495	Photo	3	1	7	2	0.0	4684	7536	733	708	
496	Photo	2	1	5	8	0.0	3480	6229	537	508	
497	Photo	1	1	5	2	0.0	3778	7216	625	572	
498	Photo	3	1	4	11	0.0	4156	7564	626	574	
499	Photo	2	1	4	4	NaN	4188	7292	564	524	

500 rows × 16 columns

```
start = df.iloc[:5]
end = df.iloc[-5:]
```

```
start
```

	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	Cons
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	

```
end
```

	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	Cons
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	

```
merged_data = pd.concat([start, end])
```

```
merged_data
```

```
data = df[df['like'] > 100]
```

```
data
```

	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	C
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	
5	139441	Status	2	12	1	9	0.0	10472	20849	1191	1073	
6	139441	Photo	3	12	1	3	1.0	11692	19479	481	265	
...	...	...	...	...	...	...	...	...	...	...	...	
488	85979	Photo	3	1	7	10	0.0	9700	17442	1407	1271	
491	85979	Photo	3	1	6	3	1.0	6184	10228	956	901	
492	85979	Link	1	1	5	11	0.0	45920	5808	753	655	
493	85093	Photo	3	1	1	2	0.0	8412	13960	1179	1111	
494	85093	Photo	3	1	7	10	0.0	5400	9218	810	756	

252 rows × 19 columns

```
new_data = []

for index, row in df.iterrows():
  flag = False
  for val in row.values:
    if val == 2752:
      flag = True
      break
  if flag:
    new_data.append(row)

new_df = pd.DataFrame(new_data);
```

```
temp1 = df[df['Post Month'] > 10]
temp2 = df[df['like'] > 120]
```

```
temp1
```

	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
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	

```
temp2
```

	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	C
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	
5	139441	Status	2	12	1	9	0.0	10472	20849	1191	1073	
6	139441	Photo	3	12	1	3	1.0	11692	19479	481	265	
...	...	...	...	...	...	...	...	...	...	...	...	
482	86491	Photo	3	1	3	10	0.0	66784	9456	2969	2833	
488	85979	Photo	3	1	7	10	0.0	9700	17442	1407	1271	
492	85979	Link	1	1	5	11	0.0	45920	5808	753	655	
493	85093	Photo	3	1	1	2	0.0	8412	13960	1179	1111	
494	85093	Photo	3	1	7	10	0.0	5400	9218	810	756	

217 rows × 19 columns

```
temp3 = pd.concat([temp1, temp2])
```

```
temp3
```

	Page total	Type	Category	Post	Post	Post	Paid	Lifetime Post	Lifetime Post Total	Lifetime Engaged	Lifetime Post

```
temp4 = pd.merge(temp1, temp2, left_index=True, right_index=True);
```

```
temp4
```

6	139441	Photo	3	12	1	3	1.0	11692	19479	4
7	139441	Photo	3	12	7	9	1.0	13720	24137	5
8	139441	Status	2	12	7	3	0.0	11844	22538	15
10	139441	Status	2	12	5	10	0.0	21744	42334	42
13	139441	Photo	2	12	5	3	0.0	2549	4896	2
14	138414	Photo	2	12	4	5	1.0	22784	39941	8
17	138414	Photo	1	12	2	12	1.0	53264	111785	17
26	138458	Status	2	12	5	11	0.0	19552	34143	28

```
temp5 = df[(df['Post Month'] > 10) & (df['like'] > 120)]
```

```
temp5
```

6	139441	Photo	3	12	1	3	1.0	11692	19479	481	265
7	139441	Photo	3	12	7	9	1.0	13720	24137	537	232
8	139441	Status	2	12	7	3	0.0	11844	22538	1530	1407
10	139441	Status	2	12	5	10	0.0	21744	42334	4258	4100
13	139441	Photo	2	12	5	3	0.0	2549	4896	249	134
14	138414	Photo	2	12	4	5	1.0	22784	39941	887	337
17	138414	Photo	1	12	2	12	1.0	53264	111785	1706	1103
26	138458	Status	2	12	5	11	0.0	19552	34143	2806	2531
28	138895	Photo	2	12	5	3	0.0	9560	18264	973	559

```
sorted_data = df.sort_values( ['Page total likes', 'comment'], ascending=False)
```

```
sorted_data.head(20)
```

	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
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	
13	139441	Photo	2	12	5	3	0.0	2549	4896	249	134	
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	
6	139441	Photo	3	12	1	3	1.0	11692	19479	481	265	
9	139441	Photo	3	12	6	10	0.0	4694	8668	280	183	
5	139441	Status	2	12	1	9	0.0	10472	20849	1191	1073	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	
7	139441	Photo	3	12	7	9	1.0	13720	24137	537	232	
8	139441	Status	2	12	7	3	0.0	11844	22538	1530	1407	
10	139441	Status	2	12	5	10	0.0	21744	42334	4258	4100	
11	139441	Photo	2	12	5	10	0.0	3112	5590	208	127	
12	139441	Photo	2	12	5	10	0.0	2847	5133	193	115	
28	138895	Photo	2	12	5	3	0.0	9560	18264	973	559	
30	138895	Photo	2	12	4	2	0.0	4940	9390	385	306	
29	138895	Video	1	12	4	11	1.0	36208	61262	1141	1068	
37	138895	Photo	1	12	7	10	1.0	19800	28663	479	424	
38	138895	Status	2	12	7	9	0.0	17576	33058	5352	5202	
40	138895	Status	2	12	6	11	0.0	13280	24198	2055	1912	

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

```
transpose_data
```

Type	Photo	Status	Photo	Photo	Photo	Status	Photo	Photo	St
Category	2	2	3	2	2	2	3	3	
Post Month	12	12	12	12	12	12	12	12	
Post Weekday	4	3	3	2	2	1	1	7	
Post Hour	3	10	3	10	3	9	3	9	
Paid	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	
Lifetime Post Total Reach	2752	10460	2413	50128	7244	10472	11692	13720	1
Lifetime Post Total Impressions	5091	19057	4373	87991	13594	20849	19479	24137	2
Lifetime Engaged Users	178	1457	177	2211	671	1191	481	537	
Lifetime Post Consumers	109	1361	113	790	410	1073	265	232	
Lifetime Post Consumptions	159	1674	154	1119	580	1389	364	305	
Lifetime Post Impressions by people who have liked your Page	3078	11710	2812	61027	6228	16034	15432	19728	15
Lifetime Post reach by people who like your Page	1640	6112	1503	32048	3200	7852	9328	11056	
Lifetime People who have liked your Page and engaged with your post	119	1108	132	1386	396	1016	379	422	
comment	4	5	0	58	19	1	3	0	
like	79.0	130.0	66.0	1572.0	325.0	152.0	249.0	325.0	1
share	17.0	29.0	14.0	147.0	49.0	33.0	27.0	14.0	
Total Interactions	100	164	80	1777	393	186	279	339	

19 rows × 500 columns

```
reshape_data = pd.pivot_table(df, index=['Category'], values=['comment'])
```

```
reshape_data
```

Category	comment
1	5.804651
2	11.100000
3	6.774194

```
import numpy as np

reshaping_arr= np.array([1,2,3,4,5,6])
reshaping_arr.reshape(3,2)
```

```
array([[1, 2],
       [3, 4],
       [5, 6]])
```