

# Ex2 - Filtering and Sorting Data

## Step 1. Import the necessary libraries

In [1]:

## Step 2. Read from Euro\_2012\_stats\_TEAM.csv and assign it to a variable called euro12.

In [2]:

Out[2]:

	Team	Goals	Shots on target	Shots off target	Shooting Accuracy	% Goals-to-shots	Total shots (inc. Blocked)	Hit Woodwork	Penalty goals	Percentage
0	Croatia	4	13	12	51.9%	16.0%	32	0	0	
1	Czech Republic	4	13	18	41.9%	12.9%	39	0	0	
2	Denmark	4	10	10	50.0%	20.0%	27	1	0	
3	England	5	11	18	50.0%	17.2%	40	0	0	
4	France	3	22	24	37.9%	6.5%	65	1	0	
5	Germany	10	32	32	47.8%	15.6%	80	2	1	
6	Greece	5	8	18	30.7%	19.2%	32	1	1	
7	Italy	6	34	45	43.0%	7.5%	110	2	0	
8	Netherlands	2	12	36	25.0%	4.1%	60	2	0	
9	Poland	2	15	23	39.4%	5.2%	48	0	0	
10	Portugal	6	22	42	34.3%	9.3%	82	6	0	
11	Republic of Ireland	1	7	12	36.8%	5.2%	28	0	0	
12	Russia	5	9	31	22.5%	12.5%	59	2	0	
13	Spain	12	42	33	55.9%	16.0%	100	0	1	
14	Sweden	5	17	19	47.2%	13.8%	39	3	0	
15	Ukraine	2	7	26	21.2%	6.0%	38	0	0	

16 rows x 35 columns

## Step 3. Select only the "Goals" column.

In [3]:

```
Out[3]: 0      4
        1      4
        2      4
        3      5
        4      3
        5     10
        6      5
        7      6
        8      2
        9      2
       10      6
       11      1
       12      5
       13     12
       14      5
       15      2
      Name: Goals, dtype: int64
```

#### Step 4. How many team participated in the Euro2012?

```
In [4]:
```

```
Out[4]: 16
```

#### Step 5. What is the number of columns in the dataset?

```
In [5]:
```

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16 entries, 0 to 15
Data columns (total 35 columns):
#   Column                                     Non-Null Count  Dtype
---  -
0   Team                                       16 non-null     object
1   Goals                                    16 non-null     int64
2   Shots on target                          16 non-null     int64
3   Shots off target                         16 non-null     int64
4   Shooting Accuracy                        16 non-null     object
5   % Goals-to-shots                         16 non-null     object
6   Total shots (inc. Blocked)               16 non-null     int64
7   Hit Woodwork                             16 non-null     int64
8   Penalty goals                           16 non-null     int64
9   Penalties not scored                     16 non-null     int64
10  Headed goals                             16 non-null     int64
11  Passes                                   16 non-null     int64
12  Passes completed                         16 non-null     int64
13  Passing Accuracy                         16 non-null     object
14  Touches                                 16 non-null     int64
15  Crosses                                 16 non-null     int64
16  Dribbles                                16 non-null     int64
17  Corners Taken                           16 non-null     int64
18  Tackles                                 16 non-null     int64
19  Clearances                              16 non-null     int64
20  Interceptions                           16 non-null     int64
21  Clearances off line                     15 non-null     float64
22  Clean Sheets                             16 non-null     int64
23  Blocks                                  16 non-null     int64
24  Goals conceded                          16 non-null     int64
25  Saves made                              16 non-null     int64
26  Saves-to-shots ratio                    16 non-null     object
27  Fouls Won                               16 non-null     int64
28  Fouls Conceded                          16 non-null     int64
29  Offsides                                16 non-null     int64
30  Yellow Cards                             16 non-null     int64
31  Red Cards                               16 non-null     int64
32  Subs on                                 16 non-null     int64
33  Subs off                                16 non-null     int64
34  Players Used                             16 non-null     int64
dtypes: float64(1), int64(29), object(5)
memory usage: 4.5+ KB

```

**Step 6. View only the columns Team, Yellow Cards and Red Cards and assign them to a dataframe called discipline**

In [6]:

Out[6]:

	Team	Yellow Cards	Red Cards
0	Croatia	9	0
1	Czech Republic	7	0
2	Denmark	4	0
3	England	5	0
4	France	6	0
5	Germany	4	0
6	Greece	9	1
7	Italy	16	0
8	Netherlands	5	0
9	Poland	7	1
10	Portugal	12	0
11	Republic of Ireland	6	1
12	Russia	6	0
13	Spain	11	0
14	Sweden	7	0
15	Ukraine	5	0

## Step 7. Sort the teams by Yellow Cards

In [7]:

Out[7]:

	Team	Yellow Cards	Red Cards
2	Denmark	4	0
5	Germany	4	0
3	England	5	0
8	Netherlands	5	0
15	Ukraine	5	0
4	France	6	0
11	Republic of Ireland	6	1
12	Russia	6	0
1	Czech Republic	7	0
9	Poland	7	1
14	Sweden	7	0
0	Croatia	9	0
6	Greece	9	1
13	Spain	11	0
10	Portugal	12	0
7	Italy	16	0

## Step 8. Calculate the mean Yellow Cards given per Team

In [8]:

Out[8]: 7.4375

## Step 9. Filter teams that scored more than 6 goals

In [9]:

Out[9]:

	Team	Goals	Shots on target	Shots off target	Shooting Accuracy	% Goals-to-shots	Total shots (inc. Blocked)	Hit Woodwork	Penalty goals	Penalty score
5	Germany	10	32	32	47.8%	15.6%	80	2	1	
13	Spain	12	42	33	55.9%	16.0%	100	0	1	

2 rows × 35 columns

## Step 10. Select the teams that start with G

In [10]:

Out[10]:

	Team	Goals	Shots on target	Shots off target	Shooting Accuracy	% Goals- to- shots	Total shots (inc. Blocked)	Hit Woodwork	Penalty goals	Penalti n scor
5	Germany	10	32	32	47.8%	15.6%	80	2	1	
6	Greece	5	8	18	30.7%	19.2%	32	1	1	

2 rows × 35 columns

Step 11. Select the 5th to 10th rows

In [11]:

Out[11]:

	Team	Goals	Shots on target	Shots off target	Shooting Accuracy	% Goals- to- shots	Total shots (inc. Blocked)	Hit Woodwork	Penalty goals	Pe
5	Germany	10	32	32	47.8%	15.6%	80	2	1	
6	Greece	5	8	18	30.7%	19.2%	32	1	1	
7	Italy	6	34	45	43.0%	7.5%	110	2	0	
8	Netherlands	2	12	36	25.0%	4.1%	60	2	0	
9	Poland	2	15	23	39.4%	5.2%	48	0	0	
10	Portugal	6	22	42	34.3%	9.3%	82	6	0	

6 rows × 35 columns