Ex2 - Filtering and Sorting Data

This time we are going to pull data directly from the internet.

Step 1. Import the necessary libraries

```
import pandas as pd
```

Step 2. Import the dataset from this address.

Step 3. Assign it to a variable called euro12.

```
euro12 = pd.read_csv('euro.tsv', sep=',')
```

Step 4. Select only the Goal column.

```
step4 = euro12['Goals']
print(step4)
```

```
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 5. How many team participated in the Euro2012?

```
step5 = len(euro12)
print(step5)
```

```
16
```

Step 6. What is the number of columns in the dataset?

```
step6 = len(euro12.columns)
print(step6)
```

```
35
```

Step 7. View only the columns Team, Yellow Cards and Red Cards and assign them to a dataframe called discipline

```
step7 = euro12[['Team', 'Yellow Cards', 'Red Cards']]
print(step7)
```

```
                  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 8. Sort the teams by Red Cards, then to Yellow Cards

```
step8 = step7.sort_values(by=['Red Cards', 'Yellow Cards'], ascending=[False, False])
print(step8)
```

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

Step 9. Calculate the mean Yellow Cards given per Team

```
step9 = euro12['Yellow Cards'].mean()
print(step9)
```

```
7.4375
```

Step 10. Filter teams that scored more than 6 goals

```
step10 = euro12[euro12['Goals'] > 6][['Team', 'Goals']]
print(step10)
```

```
        Team  Goals
5   Germany     10
13    Spain     12
```

Step 11. Select the teams that start with G

```
step11 = euro12[euro12['Team'].str.startswith('G')][['Team']]
print(step11)
```

```
       Team
5  Germany
6   Greece
```

Step 12. Select the first 7 columns

```
step12 = euro12.iloc[:, :7]
print(step12)
```

```
                   Team  Goals  Shots on target  Shots off target  \
0               Croatia      4               13                12
1         Czech Republic      4               13                18
2               Denmark      4               10                10
```

```
3              England      5              11               18
4               France      3              22               24
5              Germany     10              32               32
6               Greece      5               8               18
7                Italy      6              34               45
8          Netherlands      2              12               36
9               Poland      2              15               23
10            Portugal      6              22               42
11  Republic of Ireland      1               7               12
12              Russia      5               9               31
13               Spain     12              42               33
14              Sweden      5              17               19
15             Ukraine      2               7               26

   Shooting Accuracy % Goals-to-shots  Total shots (inc. Blocked)
0              51.9%            16.0%                          32
1              41.9%            12.9%                          39
2              50.0%            20.0%                          27
3              50.0%            17.2%                          40
4              37.9%             6.5%                          65
5              47.8%            15.6%                          80
6              30.7%            19.2%                          32
7              43.0%             7.5%                         110
8              25.0%             4.1%                          60
9              39.4%             5.2%                          48
10             34.3%             9.3%                          82
11             36.8%             5.2%                          28
12             22.5%            12.5%                          59
13             55.9%            16.0%                         100
14             47.2%            13.8%                          39
15             21.2%             6.0%                          38
```

Step 13. Select all columns except the last 3.

```
step13 = euro12.iloc[:, :-3]
print(step13)
```

```
                   Team  Goals  Shots on target  Shots off target  \
0               Croatia      4               13                12
1        Czech Republic      4               13                18
2               Denmark      4               10                10
3               England      5               11                18
4                France      3               22                24
5               Germany     10               32                32
6                Greece      5                8                18
7                 Italy      6               34                45
8           Netherlands      2               12                36
9                Poland      2               15                23
10             Portugal      6               22                42
11  Republic of Ireland      1                7                12
12               Russia      5                9                31
13                Spain     12               42                33
14               Sweden      5               17                19
15              Ukraine      2                7                26

   Shooting Accuracy % Goals-to-shots  Total shots (inc. Blocked)  \
0              51.9%            16.0%                          32
1              41.9%            12.9%                          39
2              50.0%            20.0%                          27
3              50.0%            17.2%                          40
4              37.9%             6.5%                          65
5              47.8%            15.6%                          80
6              30.7%            19.2%                          32
7              43.0%             7.5%                         110
8              25.0%             4.1%                          60
9              39.4%             5.2%                          48
10             34.3%             9.3%                          82
11             36.8%             5.2%                          28
12             22.5%            12.5%                          59
13             55.9%            16.0%                         100
14             47.2%            13.8%                          39
15             21.2%             6.0%                          38

    Hit Woodwork  Penalty goals  Penalties not scored  ...  Clean Sheets  \
0              0              0                     0  ...             0
1              0              0                     0  ...             1
2              1              0                     0  ...             1
3              0              0                     0  ...             2
4              1              0                     0  ...             1
5              2              1                     0  ...             1
6              1              1                     1  ...             1
```

```
7             2             0                   0  ...            2
8             2             0                   0  ...            0
9             0             0                   0  ...            0
10            6             0                   0  ...            2
11            0             0                   0  ...            0
12            2             0                   0  ...            0
13            0             1                   0  ...            5
14            3             0                   0  ...            1
15            0             0                   0  ...            0

    Blocks  Goals conceded Saves made  Saves-to-shots ratio  Fouls Won  \
0       10               3         13                 81.3%         41
1       10               6          9                 60.1%         53
```

Step 14. Present only the Shooting Accuracy from England, Italy and Russia

```
step14 = euro12[euro12['Team'].isin(['England', 'Italy', 'Russia'])][['Team', 'Shooting Accuracy']]
print(step14)
```

```
        Team Shooting Accuracy
3    England             50.0%
7      Italy             43.0%
12    Russia             22.5%
```