Pandas Challenge 2

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Weekly Pandas Challenge 2 - Data In Motion

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Dataset :

https://raw.githubusercontent.com/guipsamora/pandas_exercises/master/02_Filtering_%26_So

Challenge Questions

1) How many teams participated in the Euro2012?
2) What is the number of columns in the dataset?
3) View only the columns Team, Yellow Cards and Red Cards and assign them to a dataframe called discipline
4) Sort the teams by Red Cards, then to Yellow Cards.
5) Calculate the mean Yellow Cards given per Team.
6) Filter teams that scored more than 6 goals.
7) Select the teams that start with the letter G.
8) Select the first 7 columns.
9) Select all columns except the last 3.
10) Present only the Shooting Accuracy from England, Italy and Russia

[89]:
```
import pandas as pd
data = pd.read_csv('https://raw.githubusercontent.com/guipsamora/
 ↪pandas_exercises/master/02_Filtering_%26_Sorting/Euro12/Euro_2012_stats_TEAM.
 ↪csv', sep=',')
data.head(5)
```

[89]:

	Team	Goals	Shots on target	Shots off target	Shooting Accuracy	\
0	Croatia	4	13	12	51.9%	
1	Czech Republic	4	13	18	41.9%	
2	Denmark	4	10	10	50.0%	
3	England	5	11	18	50.0%	
4	France	3	22	24	37.9%	

```
  % Goals-to-shots  Total shots (inc. Blocked)  Hit Woodwork  Penalty goals  \
0            16.0%                          32             0              0
1            12.9%                          39             0              0
2            20.0%                          27             1              0
3            17.2%                          40             0              0
4             6.5%                          65             1              0

   Penalties not scored  …  Saves made  Saves-to-shots ratio  Fouls Won  \
0                     0  …          13                 81.3%         41
1                     0  …           9                 60.1%         53
2                     0  …          10                 66.7%         25
3                     0  …          22                 88.1%         43
4                     0  …           6                 54.6%         36

  Fouls Conceded  Offsides  Yellow Cards  Red Cards  Subs on  Subs off  \
0             62         2             9          0        9         9
1             73         8             7          0       11        11
2             38         8             4          0        7         7
3             45         6             5          0       11        11
4             51         5             6          0       11        11

   Players Used
0            16
1            19
2            15
3            16
4            19

[5 rows x 35 columns]
```

1)

[13]:
```
df1=data['Team'].value_counts()
df1
```

[13]:
```
Croatia               1
Czech Republic        1
Denmark               1
England               1
France                1
Germany               1
Greece                1
Italy                 1
Netherlands           1
Poland                1
Portugal              1
Republic of Ireland   1
```

```
Russia                 1
Spain                  1
Sweden                 1
Ukraine                1
Name: Team, dtype: int64
```

2)

[16]:
```
print(len(data.columns))
```

```
35
```

3)

[34]:
```
discipline = data[["Team","Red Cards","Yellow Cards"]]
discipline
```

[34]:

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

4)

[95]:
```
discipline.sort_values(by=['Red Cards','Yellow Cards'])
```

[95]:

	Team	Red Cards	Yellow Cards
2	Denmark	0	4
5	Germany	0	4
3	England	0	5
8	Netherlands	0	5
15	Ukraine	0	5
4	France	0	6
12	Russia	0	6
1	Czech Republic	0	7
14	Sweden	0	7

```
0               Croatia          0             9
13                Spain          0            11
10             Portugal          0            12
7                 Italy          0            16
11  Republic of Ireland          1             6
9                Poland          1             7
6                Greece          1             9
```

5)

[44]:
```
discipline['Yellow Cards'].mean()
```

[44]:
```
7.4375
```

6)

[96]:
```
highest_goals = data[data['Goals'] > 6]
highest_goals
```

[96]:
```
       Team  Goals  Shots on target  Shots off target Shooting Accuracy  \
5   Germany     10               32                32             47.8%
13    Spain     12               42                33             55.9%

   % Goals-to-shots  Total shots (inc. Blocked)  Hit Woodwork  Penalty goals  \
5             15.6%                          80             2              1
13            16.0%                         100             0              1

    Penalties not scored  …  Saves made  Saves-to-shots ratio  Fouls Won  \
5                      0  …          10                62.6%         63
13                     0  …          15                93.8%        102

   Fouls Conceded  Offsides  Yellow Cards  Red Cards  Subs on  Subs off  \
5              49        12             4          0       15        15
13             83        19            11          0       17        17

    Players Used
5             17
13            18

[2 rows x 35 columns]
```

7)

[97]:
```
data[data.Team.str.startswith('G')]
```

[97]:
```
       Team  Goals  Shots on target  Shots off target Shooting Accuracy  \
5   Germany     10               32                32             47.8%
6    Greece      5                8                18             30.7%
```

```
  % Goals-to-shots  Total shots (inc. Blocked)  Hit Woodwork  Penalty goals  \
5            15.6%                          80             2              1
6            19.2%                          32             1              1

   Penalties not scored  …  Saves made  Saves-to-shots ratio  Fouls Won  \
5                     0  …          10                 62.6%         63
6                     1  …          13                 65.1%         67

  Fouls Conceded  Offsides  Yellow Cards  Red Cards  Subs on  Subs off  \
5             49        12             4          0       15        15
6             48        12             9          1       12        12

   Players Used
5            17
6            20

[2 rows x 35 columns]
```

8)

[101]:
```
df_new = data.iloc[:, 0:7]
df_new.head(5)
```

[101]:
```
             Team  Goals  Shots on target  Shots off target Shooting Accuracy  \
0         Croatia      4               13                12              51.9%
1  Czech Republic      4               13                18              41.9%
2         Denmark      4               10                10              50.0%
3         England      5               11                18              50.0%
4          France      3               22                24              37.9%

  % Goals-to-shots  Total shots (inc. Blocked)
0            16.0%                          32
1            12.9%                          39
2            20.0%                          27
3            17.2%                          40
4             6.5%                          65
```

9)

[100]:
```
df_new1 = data.iloc[:, 0:32]
df_new1.head(5)
```

[100]:
```
             Team  Goals  Shots on target  Shots off target Shooting Accuracy  \
0         Croatia      4               13                12              51.9%
1  Czech Republic      4               13                18              41.9%
2         Denmark      4               10                10              50.0%
3         England      5               11                18              50.0%
4          France      3               22                24              37.9%
```

```
  % Goals-to-shots  Total shots (inc. Blocked)  Hit Woodwork  Penalty goals  \
0            16.0%                          32             0              0
1            12.9%                          39             0              0
2            20.0%                          27             1              0
3            17.2%                          40             0              0
4             6.5%                          65             1              0

   Penalties not scored  …  Clean Sheets  Blocks  Goals conceded Saves made  \
0                     0  …             0      10               3          13
1                     0  …             1      10               6           9
2                     0  …             1      10               5          10
3                     0  …             2      29               3          22
4                     0  …             1       7               5           6

   Saves-to-shots ratio  Fouls Won  Fouls Conceded  Offsides  Yellow Cards  \
0                 81.3%         41              62         2             9
1                 60.1%         53              73         8             7
2                 66.7%         25              38         8             4
3                 88.1%         43              45         6             5
4                 54.6%         36              51         5             6

   Red Cards
0          0
1          0
2          0
3          0
4          0

[5 rows x 32 columns]
```

10)

[87]:
```
data.loc[data.Team.isin(['England', 'Italy', 'Russia']), ['Team','Shooting␣
↪Accuracy']]
```

[87]:
```
      Team Shooting Accuracy
3  England              50.0%
7    Italy              43.0%
12  Russia              22.5%
```

[ ]:
```

```