

2012欧洲杯数据 - 数据过滤与排序



```
1 import pandas as pd
```

1. 导入数据

```
1 euro12=pd.read_csv('data/Euro2012_stats.csv')  
2 euro12
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Shots on target</th>
6   <th>Shots off target</th>
7   <th>Shooting Accuracy</th>
8   <th>% Goals-to-shots</th>
9   <th>Total shots (inc. Blocked)</th>
10  <th>Hit Woodwork</th>
11  <th>Penalty goals</th>
12  <th>Penalties not scored</th>
13  <th>...</th>
14  <th>Saves made</th>
15  <th>Saves-to-shots ratio</th>
16  <th>Fouls Won</th>
17  <th>Fouls Conceded</th>
18  <th>Offsides</th>
19  <th>Yellow Cards</th>
20  <th>Red Cards</th>
21  <th>Subs on</th>
22  <th>Subs off</th>
23  <th>Players Used</th>
24 </tr>
```

```
1 <tr>
2   <th>0</th>
3   <td>Croatia</td>
4   <td>4</td>
5   <td>13</td>
6   <td>12</td>
7   <td>51.9%</td>
8   <td>16.0%</td>
9   <td>32</td>
10  <td>0</td>
11  <td>0</td>
12  <td>0</td>
13  <td>...</td>
14  <td>13</td>
15  <td>81.3%</td>
16  <td>41</td>
17  <td>62</td>
18  <td>2</td>
19  <td>9</td>
20  <td>0</td>
21  <td>9</td>
22  <td>9</td>
23  <td>16</td>
24 </tr>
25 <tr>
26   <th>1</th>
27   <td>Czech Republic</td>
28   <td>4</td>
29   <td>13</td>
30   <td>18</td>
31   <td>41.9%</td>
32   <td>12.9%</td>
33   <td>39</td>
34   <td>0</td>
```

```
35 <td>0</td>
36 <td>0</td>
37 <td>...</td>
38 <td>9</td>
39 <td>60.1%</td>
40 <td>53</td>
41 <td>73</td>
42 <td>8</td>
43 <td>7</td>
44 <td>0</td>
45 <td>11</td>
46 <td>11</td>
47 <td>19</td>
48 </tr>
49 <tr>
50 <th>2</th>
51 <td>Denmark</td>
52 <td>4</td>
53 <td>10</td>
54 <td>10</td>
55 <td>50.0%</td>
56 <td>20.0%</td>
57 <td>27</td>
58 <td>1</td>
59 <td>0</td>
60 <td>0</td>
61 <td>...</td>
62 <td>10</td>
63 <td>66.7%</td>
64 <td>25</td>
65 <td>38</td>
66 <td>8</td>
67 <td>4</td>
68 <td>0</td>
```

69	<td>7</td>
70	<td>7</td>
71	<td>15</td>
72	</tr>
73	<tr>
74	<th>3</th>
75	<td>England</td>
76	<td>5</td>
77	<td>11</td>
78	<td>18</td>
79	<td>50.0%</td>
80	<td>17.2%</td>
81	<td>40</td>
82	<td>0</td>
83	<td>0</td>
84	<td>0</td>
85	<td>...</td>
86	<td>22</td>
87	<td>88.1%</td>
88	<td>43</td>
89	<td>45</td>
90	<td>6</td>
91	<td>5</td>
92	<td>0</td>
93	<td>11</td>
94	<td>11</td>
95	<td>16</td>
96	</tr>
97	<tr>
98	<th>4</th>
99	<td>France</td>
100	<td>3</td>
101	<td>22</td>
102	<td>24</td>

103	<td>37.9%</td>
104	<td>6.5%</td>
105	<td>65</td>
106	<td>1</td>
107	<td>0</td>
108	<td>0</td>
109	<td>...</td>
110	<td>6</td>
111	<td>54.6%</td>
112	<td>36</td>
113	<td>51</td>
114	<td>5</td>
115	<td>6</td>
116	<td>0</td>
117	<td>11</td>
118	<td>11</td>
119	<td>19</td>
120	</tr>
121	<tr>
122	<th>5</th>
123	<td>Germany</td>
124	<td>10</td>
125	<td>32</td>
126	<td>32</td>
127	<td>47.8%</td>
128	<td>15.6%</td>
129	<td>80</td>
130	<td>2</td>
131	<td>1</td>
132	<td>0</td>
133	<td>...</td>
134	<td>10</td>
135	<td>62.6%</td>
136	<td>63</td>

```
137     <td>49</td>
138     <td>12</td>
139     <td>4</td>
140     <td>0</td>
141     <td>15</td>
142     <td>15</td>
143     <td>17</td>
144 </tr>
145 <tr>
146     <th>6</th>
147     <td>Greece</td>
148     <td>5</td>
149     <td>8</td>
150     <td>18</td>
151     <td>30.7%</td>
152     <td>19.2%</td>
153     <td>32</td>
154     <td>1</td>
155     <td>1</td>
156     <td>1</td>
157     <td>...</td>
158     <td>13</td>
159     <td>65.1%</td>
160     <td>67</td>
161     <td>48</td>
162     <td>12</td>
163     <td>9</td>
164     <td>1</td>
165     <td>12</td>
166     <td>12</td>
167     <td>20</td>
168 </tr>
169 <tr>
170     <th>7</th>
```

171	<td>Italy</td>
172	<td>6</td>
173	<td>34</td>
174	<td>45</td>
175	<td>43.0%</td>
176	<td>7.5%</td>
177	<td>110</td>
178	<td>2</td>
179	<td>0</td>
180	<td>0</td>
181	<td>...</td>
182	<td>20</td>
183	<td>74.1%</td>
184	<td>101</td>
185	<td>89</td>
186	<td>16</td>
187	<td>16</td>
188	<td>0</td>
189	<td>18</td>
190	<td>18</td>
191	<td>19</td>
192	</tr>
193	<tr>
194	<th>8</th>
195	<td>Netherlands</td>
196	<td>2</td>
197	<td>12</td>
198	<td>36</td>
199	<td>25.0%</td>
200	<td>4.1%</td>
201	<td>60</td>
202	<td>2</td>
203	<td>0</td>
204	<td>0</td>

205	<td>...</td>
206	<td>12</td>
207	<td>70.6%</td>
208	<td>35</td>
209	<td>30</td>
210	<td>3</td>
211	<td>5</td>
212	<td>0</td>
213	<td>7</td>
214	<td>7</td>
215	<td>15</td>
216	</tr>
217	<tr>
218	<th>9</th>
219	<td>Poland</td>
220	<td>2</td>
221	<td>15</td>
222	<td>23</td>
223	<td>39.4%</td>
224	<td>5.2%</td>
225	<td>48</td>
226	<td>0</td>
227	<td>0</td>
228	<td>0</td>
229	<td>...</td>
230	<td>6</td>
231	<td>66.7%</td>
232	<td>48</td>
233	<td>56</td>
234	<td>3</td>
235	<td>7</td>
236	<td>1</td>
237	<td>7</td>
238	<td>7</td>

```
239     <td>17</td>
240 </tr>
241 <tr>
242     <th>10</th>
243     <td>Portugal</td>
244     <td>6</td>
245     <td>22</td>
246     <td>42</td>
247     <td>34.3%</td>
248     <td>9.3%</td>
249     <td>82</td>
250     <td>6</td>
251     <td>0</td>
252     <td>0</td>
253     <td>...</td>
254     <td>10</td>
255     <td>71.5%</td>
256     <td>73</td>
257     <td>90</td>
258     <td>10</td>
259     <td>12</td>
260     <td>0</td>
261     <td>14</td>
262     <td>14</td>
263     <td>16</td>
264 </tr>
265 <tr>
266     <th>11</th>
267     <td>Republic of Ireland</td>
268     <td>1</td>
269     <td>7</td>
270     <td>12</td>
271     <td>36.8%</td>
272     <td>5.2%</td>
```

273	<td>28</td>
274	<td>0</td>
275	<td>0</td>
276	<td>0</td>
277	<td>...</td>
278	<td>17</td>
279	<td>65.4%</td>
280	<td>43</td>
281	<td>51</td>
282	<td>11</td>
283	<td>6</td>
284	<td>1</td>
285	<td>10</td>
286	<td>10</td>
287	<td>17</td>
288	</tr>
289	<tr>
290	<th>12</th>
291	<td>Russia</td>
292	<td>5</td>
293	<td>9</td>
294	<td>31</td>
295	<td>22.5%</td>
296	<td>12.5%</td>
297	<td>59</td>
298	<td>2</td>
299	<td>0</td>
300	<td>0</td>
301	<td>...</td>
302	<td>10</td>
303	<td>77.0%</td>
304	<td>34</td>
305	<td>43</td>
306	<td>4</td>

```
307     <td>6</td>
308     <td>0</td>
309     <td>7</td>
310     <td>7</td>
311     <td>16</td>
312 </tr>
313 <tr>
314     <th>13</th>
315     <td>Spain</td>
316     <td>12</td>
317     <td>42</td>
318     <td>33</td>
319     <td>55.9%</td>
320     <td>16.0%</td>
321     <td>100</td>
322     <td>0</td>
323     <td>1</td>
324     <td>0</td>
325     <td>...</td>
326     <td>15</td>
327     <td>93.8%</td>
328     <td>102</td>
329     <td>83</td>
330     <td>19</td>
331     <td>11</td>
332     <td>0</td>
333     <td>17</td>
334     <td>17</td>
335     <td>18</td>
336 </tr>
337 <tr>
338     <th>14</th>
339     <td>Sweden</td>
340     <td>5</td>
```

341	<td>17</td>
342	<td>19</td>
343	<td>47.2%</td>
344	<td>13.8%</td>
345	<td>39</td>
346	<td>3</td>
347	<td>0</td>
348	<td>0</td>
349	<td>...</td>
350	<td>8</td>
351	<td>61.6%</td>
352	<td>35</td>
353	<td>51</td>
354	<td>7</td>
355	<td>7</td>
356	<td>0</td>
357	<td>9</td>
358	<td>9</td>
359	<td>18</td>
360	</tr>
361	<tr>
362	<th>15</th>
363	<td>Ukraine</td>
364	<td>2</td>
365	<td>7</td>
366	<td>26</td>
367	<td>21.2%</td>
368	<td>6.0%</td>
369	<td>38</td>
370	<td>0</td>
371	<td>0</td>
372	<td>0</td>
373	<td>...</td>
374	<td>13</td>

```
375 <td>76.5%</td>
376 <td>48</td>
377 <td>31</td>
378 <td>4</td>
379 <td>5</td>
380 <td>0</td>
381 <td>9</td>
382 <td>9</td>
383 <td>18</td>
384 </tr>
```

16 rows × 35 columns

该数组集中有多少列？

```
1 euro12.info()
2 # len(euro12.columns)
```

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

```
35 Red Cards 16 non-null int64
36 Subs on 16 non-null int64
37 Subs off 16 non-null int64
38 Players Used 16 non-null int64
39 dtypes: float64(1), int64(29), object(5)
40 memory usage: 4.5+ KB
```

将数据集中的列Team, Yellow Cards和Red Cards单独存为一个名叫discipline的DataFrame

```
1 discipline = euro12[['Team', 'Yellow Cards', 'Red Cards']]
2 discipline.head(3)
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Yellow Cards</th>
5   <th>Red Cards</th>
6 </tr>
```



```
1 <tr>
2   <th>0</th>
3   <td>Croatia</td>
4   <td>9</td>
5   <td>0</td>
6 </tr>
7 <tr>
8   <th>1</th>
9   <td>Czech Republic</td>
10  <td>7</td>
11  <td>0</td>
12 </tr>
13 <tr>
14  <th>2</th>
15  <td>Denmark</td>
16  <td>4</td>
17  <td>0</td>
18 </tr>
```

红黄牌最多的球队排序

```
1 discipline.sort_values(['Red Cards'],
   ascending=False).head(3)
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Yellow Cards</th>
5   <th>Red Cards</th>
6 </tr>
```

```
1 <tr>
2   <th>6</th>
3   <td>Greece</td>
4   <td>9</td>
5   <td>1</td>
6 </tr>
7 <tr>
8   <th>9</th>
9   <td>Poland</td>
10  <td>7</td>
11  <td>1</td>
12 </tr>
13 <tr>
14  <th>11</th>
15  <td>Republic of Ireland</td>
16  <td>6</td>
17  <td>1</td>
18 </tr>
```

计算每个球队拿到的黄牌数的平均值

```
1 round(discipline['Yellow Cards'].mean())
```

```
1 | 7
```

找到进球数Goals超过6个的球队数据

```
1 | euro12[euro12['Goals'] > 6]
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Shots on target</th>
6   <th>Shots off target</th>
7   <th>Shooting Accuracy</th>
8   <th>% Goals-to-shots</th>
9   <th>Total shots (inc. Blocked)</th>
10  <th>Hit Woodwork</th>
11  <th>Penalty goals</th>
12  <th>Penalties not scored</th>
13  <th>...</th>
14  <th>Saves made</th>
15  <th>Saves-to-shots ratio</th>
16  <th>Fouls Won</th>
17  <th>Fouls Conceded</th>
18  <th>Offsides</th>
19  <th>Yellow Cards</th>
20  <th>Red Cards</th>
21  <th>Subs on</th>
22  <th>Subs off</th>
23  <th>Players Used</th>
24 </tr>
```

```
1 <tr>
2   <th>5</th>
3   <td>Germany</td>
4   <td>10</td>
5   <td>32</td>
6   <td>32</td>
7   <td>47.8%</td>
8   <td>15.6%</td>
9   <td>80</td>
10  <td>2</td>
11  <td>1</td>
12  <td>0</td>
13  <td>...</td>
14  <td>10</td>
15  <td>62.6%</td>
16  <td>63</td>
17  <td>49</td>
18  <td>12</td>
19  <td>4</td>
20  <td>0</td>
21  <td>15</td>
22  <td>15</td>
23  <td>17</td>
24 </tr>
25 <tr>
26   <th>13</th>
27   <td>Spain</td>
28   <td>12</td>
29   <td>42</td>
30   <td>33</td>
31   <td>55.9%</td>
32   <td>16.0%</td>
33   <td>100</td>
34   <td>0</td>
```

```
35 <td>1</td>
36 <td>0</td>
37 <td>...</td>
38 <td>15</td>
39 <td>93.8%</td>
40 <td>102</td>
41 <td>83</td>
42 <td>19</td>
43 <td>11</td>
44 <td>0</td>
45 <td>17</td>
46 <td>17</td>
47 <td>18</td>
48 </tr>
```

2 rows × 35 columns

选取以字母G开头的球队数据

```
1 # euro12[euro12['Team'].str[0] == 'G']
2 euro12[euro12.Team.str.startswith('G')]
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Shots on target</th>
6   <th>Shots off target</th>
7   <th>Shooting Accuracy</th>
8   <th>% Goals-to-shots</th>
9   <th>Total shots (inc. Blocked)</th>
10  <th>Hit Woodwork</th>
11  <th>Penalty goals</th>
12  <th>Penalties not scored</th>
13  <th>...</th>
14  <th>Saves made</th>
15  <th>Saves-to-shots ratio</th>
16  <th>Fouls Won</th>
17  <th>Fouls Conceded</th>
18  <th>Offsides</th>
19  <th>Yellow Cards</th>
20  <th>Red Cards</th>
21  <th>Subs on</th>
22  <th>Subs off</th>
23  <th>Players Used</th>
24 </tr>
```

```
1 <tr>
2   <th>5</th>
3   <td>Germany</td>
4   <td>10</td>
5   <td>32</td>
6   <td>32</td>
7   <td>47.8%</td>
8   <td>15.6%</td>
9   <td>80</td>
10  <td>2</td>
11  <td>1</td>
12  <td>0</td>
13  <td>...</td>
14  <td>10</td>
15  <td>62.6%</td>
16  <td>63</td>
17  <td>49</td>
18  <td>12</td>
19  <td>4</td>
20  <td>0</td>
21  <td>15</td>
22  <td>15</td>
23  <td>17</td>
24 </tr>
25 <tr>
26   <th>6</th>
27   <td>Greece</td>
28   <td>5</td>
29   <td>8</td>
30   <td>18</td>
31   <td>30.7%</td>
32   <td>19.2%</td>
33   <td>32</td>
34   <td>1</td>
```



```
35 <td>1</td>
36 <td>1</td>
37 <td>...</td>
38 <td>13</td>
39 <td>65.1%</td>
40 <td>67</td>
41 <td>48</td>
42 <td>12</td>
43 <td>9</td>
44 <td>1</td>
45 <td>12</td>
46 <td>12</td>
47 <td>20</td>
48 </tr>
```

2 rows × 35 columns

选取前7列

```
1 euro12.iloc[:, :7]
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Shots on target</th>
6   <th>Shots off target</th>
7   <th>Shooting Accuracy</th>
8   <th>% Goals-to-shots</th>
9   <th>Total shots (inc. Blocked)</th>
10 </tr>
```

```
1 <tr>
2   <th>0</th>
3   <td>Croatia</td>
4   <td>4</td>
5   <td>13</td>
6   <td>12</td>
7   <td>51.9%</td>
8   <td>16.0%</td>
9   <td>32</td>
10 </tr>
11 <tr>
12   <th>1</th>
13   <td>Czech Republic</td>
14   <td>4</td>
15   <td>13</td>
16   <td>18</td>
17   <td>41.9%</td>
18   <td>12.9%</td>
19   <td>39</td>
20 </tr>
21 <tr>
22   <th>2</th>
23   <td>Denmark</td>
24   <td>4</td>
25   <td>10</td>
26   <td>10</td>
27   <td>50.0%</td>
28   <td>20.0%</td>
29   <td>27</td>
30 </tr>
31 <tr>
32   <th>3</th>
33   <td>England</td>
34   <td>5</td>
```

```
35      <td>11</td>
36      <td>18</td>
37      <td>50.0%</td>
38      <td>17.2%</td>
39      <td>40</td>
40 </tr>
41 <tr>
42     <th>4</th>
43     <td>France</td>
44     <td>3</td>
45     <td>22</td>
46     <td>24</td>
47     <td>37.9%</td>
48     <td>6.5%</td>
49     <td>65</td>
50 </tr>
51 <tr>
52     <th>5</th>
53     <td>Germany</td>
54     <td>10</td>
55     <td>32</td>
56     <td>32</td>
57     <td>47.8%</td>
58     <td>15.6%</td>
59     <td>80</td>
60 </tr>
61 <tr>
62     <th>6</th>
63     <td>Greece</td>
64     <td>5</td>
65     <td>8</td>
66     <td>18</td>
67     <td>30.7%</td>
68     <td>19.2%</td>
```

69	<td>32</td>
70	</tr>
71	<tr>
72	<th>7</th>
73	<td>Italy</td>
74	<td>6</td>
75	<td>34</td>
76	<td>45</td>
77	<td>43.0%</td>
78	<td>7.5%</td>
79	<td>110</td>
80	</tr>
81	<tr>
82	<th>8</th>
83	<td>Netherlands</td>
84	<td>2</td>
85	<td>12</td>
86	<td>36</td>
87	<td>25.0%</td>
88	<td>4.1%</td>
89	<td>60</td>
90	</tr>
91	<tr>
92	<th>9</th>
93	<td>Poland</td>
94	<td>2</td>
95	<td>15</td>
96	<td>23</td>
97	<td>39.4%</td>
98	<td>5.2%</td>
99	<td>48</td>
100	</tr>
101	<tr>
102	<th>10</th>

103	<td>Portugal</td>
104	<td>6</td>
105	<td>22</td>
106	<td>42</td>
107	<td>34.3%</td>
108	<td>9.3%</td>
109	<td>82</td>
110	</tr>
111	<tr>
112	<th>11</th>
113	<td>Republic of Ireland</td>
114	<td>1</td>
115	<td>7</td>
116	<td>12</td>
117	<td>36.8%</td>
118	<td>5.2%</td>
119	<td>28</td>
120	</tr>
121	<tr>
122	<th>12</th>
123	<td>Russia</td>
124	<td>5</td>
125	<td>9</td>
126	<td>31</td>
127	<td>22.5%</td>
128	<td>12.5%</td>
129	<td>59</td>
130	</tr>
131	<tr>
132	<th>13</th>
133	<td>Spain</td>
134	<td>12</td>
135	<td>42</td>
136	<td>33</td>

```
137     <td>55.9%</td>
138     <td>16.0%</td>
139     <td>100</td>
140 </tr>
141 <tr>
142     <th>14</th>
143     <td>Sweden</td>
144     <td>5</td>
145     <td>17</td>
146     <td>19</td>
147     <td>47.2%</td>
148     <td>13.8%</td>
149     <td>39</td>
150 </tr>
151 <tr>
152     <th>15</th>
153     <td>Ukraine</td>
154     <td>2</td>
155     <td>7</td>
156     <td>26</td>
157     <td>21.2%</td>
158     <td>6.0%</td>
159     <td>38</td>
160 </tr>
```

选取除了最后3列之外的全部列

```
1 | euro12.iloc[:, :-3]
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Shots on target</th>
6   <th>Shots off target</th>
7   <th>Shooting Accuracy</th>
8   <th>% Goals-to-shots</th>
9   <th>Total shots (inc. Blocked)</th>
10  <th>Hit Woodwork</th>
11  <th>Penalty goals</th>
12  <th>Penalties not scored</th>
13  <th>...</th>
14  <th>Clean Sheets</th>
15  <th>Blocks</th>
16  <th>Goals conceded</th>
17  <th>Saves made</th>
18  <th>Saves-to-shots ratio</th>
19  <th>Fouls Won</th>
20  <th>Fouls Conceded</th>
21  <th>Offsides</th>
22  <th>Yellow Cards</th>
23  <th>Red Cards</th>
24 </tr>
```



```
1 <tr>
2   <th>0</th>
3   <td>Croatia</td>
4   <td>4</td>
5   <td>13</td>
6   <td>12</td>
7   <td>51.9%</td>
8   <td>16.0%</td>
9   <td>32</td>
10  <td>0</td>
11  <td>0</td>
12  <td>0</td>
13  <td>...</td>
14  <td>0</td>
15  <td>10</td>
16  <td>3</td>
17  <td>13</td>
18  <td>81.3%</td>
19  <td>41</td>
20  <td>62</td>
21  <td>2</td>
22  <td>9</td>
23  <td>0</td>
24 </tr>
25 <tr>
26   <th>1</th>
27   <td>Czech Republic</td>
28   <td>4</td>
29   <td>13</td>
30   <td>18</td>
31   <td>41.9%</td>
32   <td>12.9%</td>
33   <td>39</td>
34   <td>0</td>
```

```
35 <td>0</td>
36 <td>0</td>
37 <td>...</td>
38 <td>1</td>
39 <td>10</td>
40 <td>6</td>
41 <td>9</td>
42 <td>60.1%</td>
43 <td>53</td>
44 <td>73</td>
45 <td>8</td>
46 <td>7</td>
47 <td>0</td>
48 </tr>
49 <tr>
50 <th>2</th>
51 <td>Denmark</td>
52 <td>4</td>
53 <td>10</td>
54 <td>10</td>
55 <td>50.0%</td>
56 <td>20.0%</td>
57 <td>27</td>
58 <td>1</td>
59 <td>0</td>
60 <td>0</td>
61 <td>...</td>
62 <td>1</td>
63 <td>10</td>
64 <td>5</td>
65 <td>10</td>
66 <td>66.7%</td>
67 <td>25</td>
68 <td>38</td>
```

69	<td>8</td>
70	<td>4</td>
71	<td>0</td>
72	</tr>
73	<tr>
74	<th>3</th>
75	<td>England</td>
76	<td>5</td>
77	<td>11</td>
78	<td>18</td>
79	<td>50.0%</td>
80	<td>17.2%</td>
81	<td>40</td>
82	<td>0</td>
83	<td>0</td>
84	<td>0</td>
85	<td>...</td>
86	<td>2</td>
87	<td>29</td>
88	<td>3</td>
89	<td>22</td>
90	<td>88.1%</td>
91	<td>43</td>
92	<td>45</td>
93	<td>6</td>
94	<td>5</td>
95	<td>0</td>
96	</tr>
97	<tr>
98	<th>4</th>
99	<td>France</td>
100	<td>3</td>
101	<td>22</td>
102	<td>24</td>

103	<td>37.9%</td>
104	<td>6.5%</td>
105	<td>65</td>
106	<td>1</td>
107	<td>0</td>
108	<td>0</td>
109	<td>...</td>
110	<td>1</td>
111	<td>7</td>
112	<td>5</td>
113	<td>6</td>
114	<td>54.6%</td>
115	<td>36</td>
116	<td>51</td>
117	<td>5</td>
118	<td>6</td>
119	<td>0</td>
120	</tr>
121	<tr>
122	<th>5</th>
123	<td>Germany</td>
124	<td>10</td>
125	<td>32</td>
126	<td>32</td>
127	<td>47.8%</td>
128	<td>15.6%</td>
129	<td>80</td>
130	<td>2</td>
131	<td>1</td>
132	<td>0</td>
133	<td>...</td>
134	<td>1</td>
135	<td>11</td>
136	<td>6</td>

```
137     <td>10</td>
138     <td>62.6%</td>
139     <td>63</td>
140     <td>49</td>
141     <td>12</td>
142     <td>4</td>
143     <td>0</td>
144 </tr>
145 <tr>
146     <th>6</th>
147     <td>Greece</td>
148     <td>5</td>
149     <td>8</td>
150     <td>18</td>
151     <td>30.7%</td>
152     <td>19.2%</td>
153     <td>32</td>
154     <td>1</td>
155     <td>1</td>
156     <td>1</td>
157     <td>...</td>
158     <td>1</td>
159     <td>23</td>
160     <td>7</td>
161     <td>13</td>
162     <td>65.1%</td>
163     <td>67</td>
164     <td>48</td>
165     <td>12</td>
166     <td>9</td>
167     <td>1</td>
168 </tr>
169 <tr>
170     <th>7</th>
```

171	<td>Italy</td>
172	<td>6</td>
173	<td>34</td>
174	<td>45</td>
175	<td>43.0%</td>
176	<td>7.5%</td>
177	<td>110</td>
178	<td>2</td>
179	<td>0</td>
180	<td>0</td>
181	<td>...</td>
182	<td>2</td>
183	<td>18</td>
184	<td>7</td>
185	<td>20</td>
186	<td>74.1%</td>
187	<td>101</td>
188	<td>89</td>
189	<td>16</td>
190	<td>16</td>
191	<td>0</td>
192	</tr>
193	<tr>
194	<th>8</th>
195	<td>Netherlands</td>
196	<td>2</td>
197	<td>12</td>
198	<td>36</td>
199	<td>25.0%</td>
200	<td>4.1%</td>
201	<td>60</td>
202	<td>2</td>
203	<td>0</td>
204	<td>0</td>

205	<td>...</td>
206	<td>0</td>
207	<td>9</td>
208	<td>5</td>
209	<td>12</td>
210	<td>70.6%</td>
211	<td>35</td>
212	<td>30</td>
213	<td>3</td>
214	<td>5</td>
215	<td>0</td>
216	</tr>
217	<tr>
218	<th>9</th>
219	<td>Poland</td>
220	<td>2</td>
221	<td>15</td>
222	<td>23</td>
223	<td>39.4%</td>
224	<td>5.2%</td>
225	<td>48</td>
226	<td>0</td>
227	<td>0</td>
228	<td>0</td>
229	<td>...</td>
230	<td>0</td>
231	<td>8</td>
232	<td>3</td>
233	<td>6</td>
234	<td>66.7%</td>
235	<td>48</td>
236	<td>56</td>
237	<td>3</td>
238	<td>7</td>

239	<td>1</td>
240	</tr>
241	<tr>
242	<th>10</th>
243	<td>Portugal</td>
244	<td>6</td>
245	<td>22</td>
246	<td>42</td>
247	<td>34.3%</td>
248	<td>9.3%</td>
249	<td>82</td>
250	<td>6</td>
251	<td>0</td>
252	<td>0</td>
253	<td>...</td>
254	<td>2</td>
255	<td>11</td>
256	<td>4</td>
257	<td>10</td>
258	<td>71.5%</td>
259	<td>73</td>
260	<td>90</td>
261	<td>10</td>
262	<td>12</td>
263	<td>0</td>
264	</tr>
265	<tr>
266	<th>11</th>
267	<td>Republic of Ireland</td>
268	<td>1</td>
269	<td>7</td>
270	<td>12</td>
271	<td>36.8%</td>
272	<td>5.2%</td>

273	<td>28</td>
274	<td>0</td>
275	<td>0</td>
276	<td>0</td>
277	<td>...</td>
278	<td>0</td>
279	<td>23</td>
280	<td>9</td>
281	<td>17</td>
282	<td>65.4%</td>
283	<td>43</td>
284	<td>51</td>
285	<td>11</td>
286	<td>6</td>
287	<td>1</td>
288	</tr>
289	<tr>
290	<th>12</th>
291	<td>Russia</td>
292	<td>5</td>
293	<td>9</td>
294	<td>31</td>
295	<td>22.5%</td>
296	<td>12.5%</td>
297	<td>59</td>
298	<td>2</td>
299	<td>0</td>
300	<td>0</td>
301	<td>...</td>
302	<td>0</td>
303	<td>8</td>
304	<td>3</td>
305	<td>10</td>
306	<td>77.0%</td>

```
307     <td>34</td>
308     <td>43</td>
309     <td>4</td>
310     <td>6</td>
311     <td>0</td>
312 </tr>
313 <tr>
314     <th>13</th>
315     <td>Spain</td>
316     <td>12</td>
317     <td>42</td>
318     <td>33</td>
319     <td>55.9%</td>
320     <td>16.0%</td>
321     <td>100</td>
322     <td>0</td>
323     <td>1</td>
324     <td>0</td>
325     <td>...</td>
326     <td>5</td>
327     <td>8</td>
328     <td>1</td>
329     <td>15</td>
330     <td>93.8%</td>
331     <td>102</td>
332     <td>83</td>
333     <td>19</td>
334     <td>11</td>
335     <td>0</td>
336 </tr>
337 <tr>
338     <th>14</th>
339     <td>Sweden</td>
340     <td>5</td>
```

341	<td>17</td>
342	<td>19</td>
343	<td>47.2%</td>
344	<td>13.8%</td>
345	<td>39</td>
346	<td>3</td>
347	<td>0</td>
348	<td>0</td>
349	<td>...</td>
350	<td>1</td>
351	<td>12</td>
352	<td>5</td>
353	<td>8</td>
354	<td>61.6%</td>
355	<td>35</td>
356	<td>51</td>
357	<td>7</td>
358	<td>7</td>
359	<td>0</td>
360	</tr>
361	<tr>
362	<th>15</th>
363	<td>Ukraine</td>
364	<td>2</td>
365	<td>7</td>
366	<td>26</td>
367	<td>21.2%</td>
368	<td>6.0%</td>
369	<td>38</td>
370	<td>0</td>
371	<td>0</td>
372	<td>0</td>
373	<td>...</td>
374	<td>0</td>

```
375 <td>4</td>
376 <td>4</td>
377 <td>13</td>
378 <td>76.5%</td>
379 <td>48</td>
380 <td>31</td>
381 <td>4</td>
382 <td>5</td>
383 <td>0</td>
384 </tr>
```

16 rows × 32 columns

找到英格兰(England)、意大利(Italy)和俄罗斯(Russia)的射正率(Shooting Accuracy)

```
1 euro12.loc[euro12.Team.isin(['England', 'Italy', 'Russia']),
  ['Shooting Accuracy']]
```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Shooting Accuracy</th>
4 </tr>
```

```

1 <tr>
2     <th>3</th>
3     <td>50.0%</td>
4 </tr>
5 <tr>
6     <th>7</th>
7     <td>43.0%</td>
8 </tr>
9 <tr>
10    <th>12</th>
11    <td>22.5%</td>
12 </tr>

```

求所有球队的进球总数(Goals)和失球总数(Goals conceded)

```

1 goals = euro12['Goals'].sum()
2 goals_conceded = euro12['Goals conceded'].sum()
3 print ('进球数:', goals)
4 print ('失球数:', goals_conceded)

```

```

1 进球数: 76
2 失球数: 76

```

对球队的进球数进行排序

```

1 euro12[['Team', 'Goals', 'Goals
  conceded']].sort_values(['Goals'], ascending=False)

```

```
1 <tr style="text-align: right;">
2   <th></th>
3   <th>Team</th>
4   <th>Goals</th>
5   <th>Goals conceded</th>
6 </tr>
```

```
1 <tr>
2   <th>13</th>
3   <td>Spain</td>
4   <td>12</td>
5   <td>1</td>
6 </tr>
7 <tr>
8   <th>5</th>
9   <td>Germany</td>
10  <td>10</td>
11  <td>6</td>
12 </tr>
13 <tr>
14  <th>7</th>
15  <td>Italy</td>
16  <td>6</td>
17  <td>7</td>
18 </tr>
19 <tr>
20  <th>10</th>
21  <td>Portugal</td>
22  <td>6</td>
23  <td>4</td>
24 </tr>
25 <tr>
26  <th>3</th>
27  <td>England</td>
28  <td>5</td>
29  <td>3</td>
30 </tr>
31 <tr>
32  <th>6</th>
33  <td>Greece</td>
34  <td>5</td>
```

```
35     <td>7</td>
36 </tr>
37 <tr>
38     <th>12</th>
39     <td>Russia</td>
40     <td>5</td>
41     <td>3</td>
42 </tr>
43 <tr>
44     <th>14</th>
45     <td>Sweden</td>
46     <td>5</td>
47     <td>5</td>
48 </tr>
49 <tr>
50     <th>0</th>
51     <td>Croatia</td>
52     <td>4</td>
53     <td>3</td>
54 </tr>
55 <tr>
56     <th>1</th>
57     <td>Czech Republic</td>
58     <td>4</td>
59     <td>6</td>
60 </tr>
61 <tr>
62     <th>2</th>
63     <td>Denmark</td>
64     <td>4</td>
65     <td>5</td>
66 </tr>
67 <tr>
68     <th>4</th>
```



```
69     <td>France</td>
70     <td>3</td>
71     <td>5</td>
72 </tr>
73 <tr>
74     <th>8</th>
75     <td>Netherlands</td>
76     <td>2</td>
77     <td>5</td>
78 </tr>
79 <tr>
80     <th>9</th>
81     <td>Poland</td>
82     <td>2</td>
83     <td>3</td>
84 </tr>
85 <tr>
86     <th>15</th>
87     <td>Ukraine</td>
88     <td>2</td>
89     <td>4</td>
90 </tr>
91 <tr>
92     <th>11</th>
93     <td>Republic of Ireland</td>
94     <td>1</td>
95     <td>9</td>
96 </tr>
```