team matches\_played wins draws losses goals\_scored goals\_against goal\_difference points expected\_goa

```
import pandas as pd
import numpy as np

# 2. Masala. https://www.kaggle.com/datasets
# shu link orqali FIFA Jahon chempionati 2022 oʻyin ma'lumotlarini
# yuklab oling va team ustunini indexlariga oʻtkazing bundan
# tashqari ma'lumotlarni qayta ishlovchi mutaxasis Ingliz tilini bilmasligi
# sababli bu DataSet ni ustunlarini va qatorlari sonini aniqlab oʻning ustunlarini
# nomini oʻzbek tiliga tarjima qilib qayta nomlang va oʻzingizning logikangizdan
# kelib chiqib DataSetga ishlov bering (qanchalik yaxshi ishlov berilganligiga
# qarab baxoni yaxshi olishingiz mumkun.)
```

df=pd.read\_csv('group\_stats.csv')
df

group rank

0	1	1	Netherlands		3	2	1	0	5	1	4	7
1	1	2	Senegal		3	2	0	1	5	4	1	6
2	1	3	Ecuador		3	1	1	1	4	3	1	4
3	1	4	Qatar		3	0	0	3	1	7	-6	0
4	2	1	England		3	2	1	0	9	2	7	7
5	2	2	United States		3	1	2	0	2	1	1	5
6	2	3	IR Iran		3	1	0	2	4	7	-3	3
ибка авт	оматич	еског	о сохранения. З	Этот файл бы	л обно	овлен у,	даленно і	или на другой	вкладке. По	оказать различия	-5	1
8	3	1	Argentina		3	2	0	1	5	2	3	6
9	3	2	Poland		3	1	1	1	2	2	0	4
10	3	3	Mexico		3	1	1	1	2	3	-1	4
11	3	4	Saudi Arabia		3	1	0	2	3	5	-2	3
12	4	1	France		3	2	0	1	6	3	3	6
13	4	2	Australia		3	2	0	1	3	4	-1	6
14	4	3	Tunisia		3	1	1	1	1	1	0	4
15	4	4	Denmark		3	0	1	2	1	3	-2	1
16	5	1	Japan		3	2	0	1	4	3	1	6
17	5	2	Spain		3	1	1	1	9	3	6	4
18	5	3	Germany		3	1	1	1	6	5	1	4
19	5	4	Costa Rica		3	1	0	2	3	11	-8	3
20	6	1	Morocco		3	2	1	0	4	1	3	7
21	6	2	Croatia		3	1	2	0	4	1	3	5
22	6	3	Belgium		3	1	1	1	1	2	-1	4
23	6	4	Canada		3	0	0	3	2	7	-5	0
24	7	1	Brazil		3	2	0	1	3	1	2	6
25	7	2	Switzerland		3	2	0	1	4	3	1	6
26	7	3	Cameroon		3	1	1	1	4	4	0	4
27	7	4	Serbia		3	0	1	2	5	8	-3	1
28	8	1	Portugal		3	2	0	1	6	4	2	6
29	8	2	Korea Republic		3	1	1	1	4	4	0	4
30	8	3	Uruguay		3	1	1	1	2	2	0	4
31	8	4	Ghana		3	1	0	2	5	7	-2	3
7.												

pip install translators

```
Looking in indexes: <a href="https://pypi.org/simple">https://us-python.pkg.dev/colab-wheels/public/simple/</a>
        Collecting translators
           Downloading translators-5.5.5-py3-none-any.whl (32 kB)
        Collecting requests>=2.28.1
           Downloading requests-2.28.1-py3-none-any.whl (62 kB)
                                                 62 kB 1.1 MB/s
        Collecting pathos>=0.2.9
           Downloading pathos-0.3.0-py3-none-any.whl (79 kB)
                                                                 | 79 kB 7.2 MB/s
        Collecting cryptography>=38.0.1
           Downloading cryptography-38.0.4-cp36-abi3-manylinux_2_24_x86_64.whl (4.0 MB)
                                                                   4.0 MB 52.6 MB/s
        Requirement already satisfied: lxml>=4.9.1 in /usr/local/lib/python3.8/dist-packages (from translators) (4.9.1)
        Collecting PyExecJS>=1.5.1
           Downloading PyExecJS-1.5.1.tar.gz (13 kB)
        Requirement already satisfied: cffi>=1.12 in /usr/local/lib/python3.8/dist-packages (from cryptography>=38.0.1->translators) (1.15
        Requirement already satisfied: pycparser in /usr/local/lib/python3.8/dist-packages (from cffi>=1.12->cryptography>=38.0.1->translat
        Requirement already satisfied: dill>=0.3.6 in /usr/local/lib/python3.8/dist-packages (from pathos>=0.2.9->translators) (0.3.6)
        Collecting multiprocess>=0.70.14
           Downloading multiprocess-0.70.14-py38-none-any.whl (132 kB)
                                                                  132 kB 49.3 MB/s
        Collecting ppft>=1.7.6.6
           Downloading ppft-1.7.6.6-py3-none-any.whl (52 kB)
                                                                  52 kB 1.1 MB/s
        Collecting pox>=0.3.2
           Downloading pox-0.3.2-py3-none-any.whl (29 kB)
         Requirement already satisfied: six>=1.10.0 in /usr/local/lib/python3.8/dist-packages (from PyExecJS>=1.5.1->translators) (1.15.0)
        Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.8/dist-packages (from requests>=2.28.1->translators) (2.10)
        Requirement already satisfied: charset-normalizer<3,>=2 in /usr/local/lib/python3.8/dist-packages (from requests>=2.28.1->translatc
        Requirement already satisfied: urllib3<1.27,>=1.21.1 in /usr/local/lib/python3.8/dist-packages (from requests>=2.28.1->translators)
        Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.8/dist-packages (from requests>=2.28.1->translators) (2
        Building wheels for collected packages: PyExecJS
           Building wheel for PyExecJS (setup.py) ... done
           \texttt{Created wheel for PyExecJS: filename=PyExecJS-1.5.1-py3-none-any.whl size=14596 sha256=16b0bebdedcb6f4939aa3308d154eb6b131c26dc8atalloops and the size of the 
  Ошибка автоматического сохранения. Этот файл был обновлен удаленно или на другой вкладке. Показать различия
                                                                                                                                                                               tors
           Attempting uninstall: requests
              Found existing installation: requests 2.23.0
              Uninstalling requests-2.23.0:
                 Successfully uninstalled requests-2.23.0
        Successfully installed PyExecJS-1.5.1 cryptography-38.0.4 multiprocess-0.70.14 pathos-0.3.0 pox-0.3.2 ppft-1.7.6.6 requests-2.28.1
from pandas import DataFrame
from pandas import Series
import translators as ts
def trans(s):
   return ts.translate_text(s,to_language='uz')
        Using state Iowa server backend.
df.drop(df.columns[0],axis=1,inplace=True)
df = df.rename axis('iamoa')
df.set_axis([trans(str(i).replace('_',' ').replace('exp','expected')) for i in df.columns], axis=1)
df.columns
        exp_goal_conceded', 'exp_goal_difference',
                    exp_goal_difference_per_90'],
                  dtype='object')
df
```

	team	matches_played	wins	draws	losses	<pre>goals_scored</pre>	<pre>goals_against</pre>	<pre>goal_difference</pre>	points	expected_goal_scored
jamoa										
0	Netherlands	3	2	1	0	5	1	4	7	2.4
1	Senegal	3	2	0	1	5	4	1	6	3.8
2	Ecuador	3	1	1	1	4	3	1	4	3.
3	Qatar	3	0	0	3	1	7	-6	0	1.4
4	England	3	2	1	0	9	2	7	7	5.:
5	United States	3	1	2	0	2	1	1	5	2.
6	IR Iran	3	1	0	2	4	7	-3	3	3.2
7	Wales	3	0	1	2	1	6	-5	1	2.7
8	Argentina	3	2	0	1	5	2	3	6	6.0
9	Poland	3	1	1	1	2	2	0	4	2.8
10	Mexico	3	1	1	1	2	3	-1	4	3.3
11	Saudi Arabia	3	1	0	2	3	5	-2	3	3.0
12	France	3	2	0	1	6	3	3	6	7.2
13	Australia	3	2	0	1	3	4	-1	6	1.7
14	Tunisia	3	1	1	1	1	1	0	4	2.3
15	Denmark	3	0	1	2	1	3	-2	1	2.
іибка авто	матического	сохранения. Этот (	файл бі	ыл обно	влен удал	пенно или на дру	гой вкладке.	<u> Токазать различия</u>	6	3.8
17	Spain	3	1	1	1	9	3	6	4	5.2
18	Germany	3	1	1	1	6	5	1	4	10.7
19	Costa Rica	3	1	0	2	3	11	-8	3	1.4
20	Morocco	3	2	1	0	4	1	3	7	2.4
21	Croatia	3	1	2	0	4	1	3	5	3.8
22	Belgium	3	1	1	1	1	2	-1	4	4.
23	Canada	3	0	0	3	2	7	-5	0	4.
24	Brazil	3	2	0	1	3	1	2	6	5.9

	matches_played	wins	draws	losses	<pre>goals_scored</pre>	<pre>goals_against</pre>	<pre>goal_difference</pre>	points	<pre>expected_goal_scored</pre>
count	32.0	32.000000	32.000000	32.000000	32.000000	32.00000	32.000000	32.000000	32.000000
mean	3.0	1.187500	0.625000	1.187500	3.750000	3.75000	0.000000	4.187500	3.850000
std	0.0	0.692704	0.609071	0.780302	2.079082	2.44949	3.282407	1.990907	1.750944
min	3.0	0.000000	0.000000	0.000000	1.000000	1.00000	-8.000000	0.000000	1.400000
25%	3.0	1.000000	0.000000	1.000000	2.000000	2.00000	-2.000000	3.000000	2.700000
50%	3.0	1.000000	1.000000	1.000000	4.000000	3.00000	0.000000	4.000000	3.700000
75%	3.0	2.000000	1.000000	2.000000	5.000000	5.00000	2.000000	6.000000	4.450000
max	3.0	2.000000	2.000000	3.000000	9.000000	11.00000	7.000000	7.000000	10.100000
<b>%</b>									

4

bins=[0,3,6,10]
qiymat=['kam','ortacha','kop']

guruh=pd.cut(df.goals\_scored,bins,labels=qiymat)

df['gol\_reytingi']=guruh
df

2.2022, 21:5						Untitled2.ipynb	- Colaboratory			
ა	Qatai	3	U	U	3	1	/	<del>-</del> 0	U	
4	England	3	2	1	0	9	2	7	7	
5	United States	3	1	2	0	2	1	1	5	:
6	IR Iran	3	1	0	2	4	7	-3	3	;
7	Wales	3	0	1	2	1	6	-5	1	
8	Argentina	3	2	0	1	5	2	3	6	
9	Poland	3	1	1	1	2	2	0	4	
10	Mexico	3	1	1	1	2	3	-1	4	
11	Saudi Arabia	3	1	0	2	3	5	-2	3	
12	France	3	2	0	1	6	3	3	6	
13	Australia	3	2	0	1	3	4	-1	6	
14	Tunisia	3	1	1	1	1	1	0	4	
15	Denmark	3	0	1	2	1	3	<del>-</del> 2	1	
16	Japan	3	2	0	1	4	3	1	6	
17	Spain	3	1	1	1	9	3	6	4	
18	Germany	3	1	1	1	6	5	1	4	1
19	Costa Rica	3	1	0	2	3	11	-8	3	
20	Morocco	3	2	1	0	4	1	3	7	
^-	•	^	4	^	^		•	^	5	
Ошибка авт	оматического сохран	ения. Этот фа	айл был	і обновле	ен удаленно	или на другой вк	ладке. <u>Показат</u>	<u>ь различия</u>	4	
23	Canada	3	0	0	3	2	7	-5	0	
24	Brazil	3	2	0	1	3	1	2	6	
25	Switzerland	3	2	0	1	4	3	1	6	
26	Cameroon	3	1	1	1	4	4	0	4	
27	Serbia	3	0	1	2	5	8	-3	1	
28	Portugal	3	2	0	1	6	4	2	6	
29	Korea Republic	3	1	1	1	4	4	0	4	
30	Uruguay	3	1	1	1	2	2	0	4	

```
bins=[0,4,8,12]
qiymat=['kam','ortacha','kop']
guruh=pd.cut(df.goals_against,bins,labels=qiymat)
guruh
df['avtogol_reytingi']=guruh
df
```

bins=[0,1,2,3]
qiymat=['kam','ortacha','kop']
guruh=pd.cut(df.goals\_against,bins,labels=qiymat)
guruh
df['yutish\_reytingi']=guruh
df

```
15.12.2022, 21:57
                                                                           Untitled2.ipynb - Colaboratory
                        Qatai
                                                    υ
                                                           υ
                                                                    J
                                                                                                                     -0
                                                                                                                              υ
                                                                                                                                                     1.4
             4
                      England
                                             3
                                                    2
                                                                    0
                                                                                   9
                                                                                                   2
                                                                                                                      7
                                                                                                                              7
                                                                                                                                                     5.:
                       United
             5
                                             3
                                                           2
                                                                    0
                                                                                   2
                                                                                                                              5
                                                                                                                                                     2.1
                                                                                                                      1
                       States
                                             3
                                                                    2
                                                                                                                     -3
             6
                       IR Iran
                                                    1
                                                           0
                                                                                   4
                                                                                                                              3
                                                                                                                                                     3.:
             7
                       Wales
                                             3
                                                    0
                                                                    2
                                                                                                   6
                                                                                                                     -5
                                                                                                                                                     2.
             8
                                             3
                                                    2
                                                           0
                                                                                                   2
                                                                                                                     3
                                                                                                                                                     6.1
                    Argentina
                                                                    1
                                                                                   5
                                                                                                                              6
             9
                                             3
                                                    1
                                                           1
                                                                                   2
                                                                                                   2
                                                                                                                      0
                                                                                                                              4
                                                                                                                                                     2.1
                       Poland
            10
                      Mexico
                                             3
                                                    1
                                                           1
                                                                    1
                                                                                   2
                                                                                                   3
                                                                                                                     -1
                                                                                                                              4
                                                                                                                                                     3.:
                        Saudi
            11
                                             3
                                                    1
                                                           0
                                                                    2
                                                                                   3
                                                                                                   5
                                                                                                                     -2
                                                                                                                              3
                                                                                                                                                     3.1
                       Arabia
            12
                       France
                                             3
                                                    2
                                                           0
                                                                                   6
                                                                                                   3
                                                                                                                      3
                                                                                                                              6
                                                                                                                                                     7.:
                                                    2
            13
                     Australia
                                             3
                                                           0
                                                                                                   4
                                                                                                                     -1
                                                                    1
                                                                                   3
                                                                                                                              6
                                                                                                                                                     1.
            14
                                             3
                                                    1
                                                                                                                      0
                                                                                                                              4
                                                                                                                                                     2.:
                      Tunisia
                                                           1
            15
                     Denmark
                                             3
                                                    0
                                                           1
                                                                    2
                                                                                                   3
                                                                                                                     -2
                                                                                                                                                     2.
            16
                                             3
                                                    2
                                                           0
                                                                    1
                                                                                   4
                                                                                                   3
                                                                                                                      1
                                                                                                                              6
                                                                                                                                                     3.1
                       Japan
            17
                        Spain
                                             3
                                                    1
                                                                                   9
                                                                                                   3
                                                                                                                      6
                                                                                                                              4
            18
                                             3
                                                                                                   5
                                                                                                                      1
                     Germany
                                                                                   6
                                                                                                                              4
                                                                                                                                                    10.
            19
                   Costa Rica
                                             3
                                                           0
                                                                    2
                                                                                   3
                                                                                                  11
                                                                                                                     -8
                                                                                                                              3
                                                                                                                                                     1.4
                                                                                                                              7
            20
                     Morocco
                                             3
                                                    2
                                                                    0
                                                                                   4
                                                                                                                      3
                                                                                                                                                     2.4
                                                                                                                              5
                                                                                                                                                     3.1
     Ошибка автоматического сохранения. Этот файл был обновлен удаленно или на другой вкладке.
                                                                                                    Показать различия
                                                                                                                              4
                                                                                                                                                     4.
    df['reyting']=(((df.yutish_reytingi=='kop') | (df.yutish_reytingi=='ortacha'))
                    & (df.avtogol_reytingi=='kam')
                    & ((df.gol_reytingi=='kop') | (df.gol_reytingi=='ortacha')))
    df[df.reyting==True]
    print(df[df.reyting==True].team+" jamoaning yutish ehtimoli katta")
          jamoa
          2
                    Ecuador jamoaning yutish ehtimoli katta
         4
                    England jamoaning yutish ehtimoli katta
         8
                  Argentina jamoaning yutish ehtimoli katta
         12
                      France jamoaning yutish ehtimoli katta
         16
                       Japan jamoaning yutish ehtimoli katta
          17
                       Spain jamoaning yutish ehtimoli katta
                Switzerland jamoaning yutish ehtimoli katta
         Name: team, dtype: object
    df.count(axis=0)
    df.count(axis=1)
          jamoa
          0
                17
          1
                16
          2
                17
          3
```

29 30 17 31 16 dtype: int64

#3-masala

# Masala. 1-masalada yaratgan repositoryangizni yuklab oling va

# uning ichidagi excel va csv fayillaridan bittadan yuklab oling va ularga ishlov

# bering (index, ustunlarini tartiblang) va bu DataSetlarni HDF5 obyektiga birma

# bir .h5 fayl kengaytmasida saqlang va obyektni yoping.

!git clone https://github.com/ShuhratGaniyev/shuhrat\_file

Cloning into 'shuhrat\_file'... remote: Enumerating objects: 43, done.

remote: Counting objects: 100% (43/43), done. remote: Compressing objects: 100% (41/41), done.

remote: Total 43 (delta 1), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (43/43), done.

## excel=pd.read\_excel('shuhrat\_file/uzbekistan.xlsx') excel

	Boʻlinishi	Maydoni (kv.km)	Aholisi	1
0	Andijon viloyati	4200	1899000	
1	Buxoro viloyati	39400	1384700	
2	Fargʻona viloyati	6800	2597000	

Ошибка автоматического сохранения. Этот файл был обновлен удаленно или на другой вкладке. Показать различия

5	Namangan viloyati	7900	1862000	
6	Navoiy viloyati	110800	767500	
7	Qashqadaryo viloyati	28400	2029000	
8	Qoraqalpogʻiston Respublikasi	160000	1200000	
9	Samarqand viloyati	16400	2322000	
10	Sirdaryo viloyati	5100	648100	
11	Surxondaryo viloyati	20800	1676000	
12	Toshkent viloyati	15300	4450000	

excel.sort index(ascending=True,axis=1,inplace=True)

excel

	Aholisi	Boʻlinishi	Maydoni (kv.km)
0	1899000	Andijon viloyati	4200
1	1384700	Buxoro viloyati	39400
2	2597000	Fargʻona viloyati	6800
3	910500	Jizzax viloyati	20500
4	1200000	Xorazm viloyati	6300
5	1862000	Namangan viloyati	7900
6	767500	Navoiy viloyati	110800
7	2029000	Qashqadaryo viloyati	28400
8	1200000	Qoraqalpogʻiston Respublikasi	160000
9	2322000	Samarqand viloyati	16400
10	648100	Sirdaryo viloyati	5100
11	1676000	Surxondaryo viloyati	20800
12	4450000	Toshkent viloyati	15300

excel.sort\_index(ascending=False,axis=0,inplace=True) excel

1



excel.sort\_values(by=['Aholisi', 'Bo'linishi'],inplace=True)

hdf\_obj=pd.HDFStore("shuhrat\_file.h5")
hdf\_obj.put("uzbekistan\_info",excel)
hdf\_obj.close()

csv=pd.read\_csv('shuhrat\_file/world\_population.csv')

Ошибка автоматического сохранения. Этот файл был обновлен удаленно или на другой вкладке. Показать различия

	rank	country	density	densityMi	pop2021	area	
0	1	Macau	21946.4667	56841.3487	658.394	30	
1	2	Monaco	19755.5000	51166.7450	39.511	2	
2	3	Singapore	8305.1915	21510.4461	5896.686	710	
3	4	Hong Kong	6841.3134	17719.0017	7552.810	1104	
4	5	Gibraltar	5616.3333	14546.3033	33.698	6	
227	228	Namibia	3.1338	8.1166	2587.344	825615	
228	229	Western Sahara	2.3003	5.9577	611.875	266000	
229	230	Mongolia	2.1286	5.5129	3329.289	1564110	
230	231	Falkland Islands	0.2902	0.7517	3.533	12173	
231	232	Greenland	0.0263	0.0680	56.877	2166086	

232 rows × 6 columns

csv.sort\_index(ascending=True,axis=1,inplace=True)
csv

	area	country	density	densityMi	pop2021	rank	1
0	30	Macau	21946.4667	56841.3487	658.394	1	
1	2	Monaco	19755.5000	51166.7450	39.511	2	
2	710	Singapore	8305.1915	21510.4461	5896.686	3	
3	1104	Hong Kong	6841.3134	17719.0017	7552.810	4	
4	6	Gibraltar	5616.3333	14546.3033	33.698	5	
227	825615	Namibia	3.1338	8.1166	2587.344	228	
228	266000	Western Sahara	2.3003	5.9577	611.875	229	
229	1564110	Mongolia	2.1286	5.5129	3329.289	230	
230	12173	Falkland Islands	0.2902	0.7517	3.533	231	
231	2166086	Greenland	0.0263	0.0680	56.877	232	

232 rows × 6 columns

csv.sort\_index(ascending=False,axis=0,inplace=True) CSV

	area	country	density	densityMi	pop2021	rank
231	2166086	Greenland	0.0263	0.0680	56.877	232
230	12173	Falkland Islands	0.2902	0.7517	3.533	231
229	1564110	Mongolia	2.1286	5.5129	3329.289	230
228	266000	Western Sahara	2.3003	5.9577	611.875	229
227	825615	Namibia	3.1338	8.1166	2587.344	228
4	6	Gibraltar	5616.3333	14546.3033	33.698	5
3	1104	Hong Kong	6841.3134	17719.0017	7552.810	4
2	710	Singapore	8305.1915	21510.4461	5896.686	3
1	2	Monaco	19755.5000	51166.7450	39.511	2
0	30	Macau	21946.4667	56841.3487	658.394	1

232 rows × 6 columns

csv.sort\_values(by=['country','density','densityMi'],inplace=True)

hdf\_obj=pd.HDFStore("shuhrat\_file.h5") hdf\_obj.put("population\_info",csv)

hdf obi.close()

Ошибка автоматического сохранения. Этот файл был обновлен удаленно или на другой вкладке. Показать различия

- Timasara Tuqoritua yaracgan .... rayi kengayimari ooyektingiznii elimentiarini enaqirto ofing # va DataFrame ning ichidagi takrorlanuvchi va keraksiz malumotlarni olib tashlang
- enga asosiy ustunni tanlab uni indexlariga oʻtkazing va qayta saqlang.

hdf\_obj=pd.HDFStore('shuhrat\_file.h5') hdf\_obj.keys()

['/population\_info', '/uzbekistan\_info']

df3=hdf\_obj["population\_info"] df3

	area	country	density	densityMi	pop2021	rank	1
148	652230	Afghanistan	61.0757	158.1862	39835.428	149	
110	28748	Albania	99.9351	258.8318	2872.933	111	
197	2381741	Algeria	18.7328	48.5179	44616.624	198	
49	199	American Samoa	276.8844	717.1307	55.100	50	
77	468	Andorra	165.2885	428.0971	77.355	78	
130	142	Wallis and Futuna	78.1268	202.3483	11.094	131	
228	266000	Western Sahara	2.3003	5.9577	611.875	229	
150	527968	Yemen	57.7509	149.5749	30490.640	151	
187	752612	Zambia	25.1400	65.1125	18920.651	188	
172	390757	Zimbabwe	38.6229	100.0333	15092.171	173	

232 rows × 6 columns

d=df3[['country','area'][::1]]